

Welfare Programs for the Workforce, Families and the Elderly

Accidents will happen in the best-regulated families.

Mr Micawber, in Charles Dickens, *David Copperfield*

Welfare for the Workforce ♦ Welfare for Families ♦ Welfare for the Elderly

In this chapter we discuss the major welfare programs for the three social groups that receive most support in Australia and most other OECD economies: persons of workforce age with little or no employment, families and the elderly (see Table 22.1). Although the three groups are quite different, similar issues arise in each case. These are the identification of needs, how to support those in need while minimising adverse incentives and inefficient outcomes, and the roles of government and the private sector.

Welfare for the Workforce

In this discussion of workforce welfare, we consider five programs: wage-rate subsidies for employing low-income earners, employment promotion policies, unemployment benefits, injury compensation and disability pensions.

Wage-rate subsidies for low-income workers

In previous chapters we have discussed three strategies to support low income workers: minimum wage regulation, earned income tax credits and the low-income tax offset. Wage-rate subsidies are another strategy. A **wage rate subsidy** involves payments to an employer for all or, more usually, part of the wage paid to low-wage employees. The aim is to increase both employment and wages.

This is usually achieved to some extent.¹ Figure 23.1 overleaf shows a simple scenario with a fixed (unit) dollar employment subsidy (s) per hour of labour employed. This raises the demand for labour from schedule D_1 to D_2 . Given the upward sloping labour supply curve (S), labour employment rises from L_1 to L_2 and the take-home wage from w_1 to w_2 . On the other hand, the cost to the employer falls from w_1 to $(w_2 - s)$. Thus, labour receives only part of the employment subsidy. The outcome depends on the relative elasticities of labour demand and supply. Employment and wages rise by more when labour demand is elastic. Employment rises when labour supply is elastic. Wages rise when labour supply is inelastic.

¹ A wage rate subsidy increases take-home wages and employment providing the substitution effect of the wage on labour supply is greater than the income effect (the labour supply curve is not vertical or backward bending).

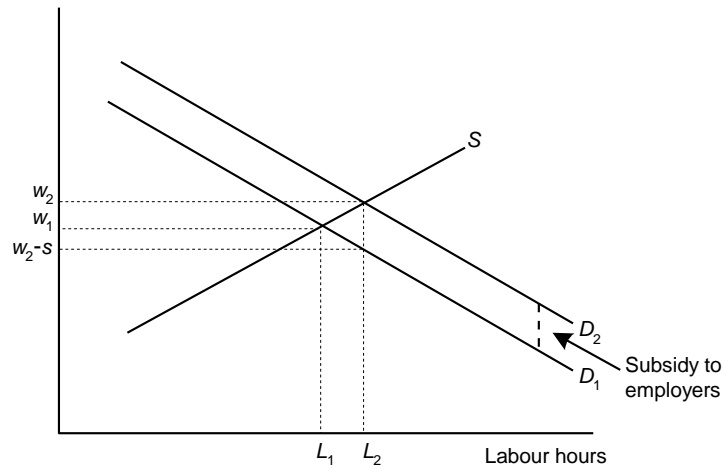


Figure 23.1 Effects of an employer wage-rate subsidy on wages and labour supply

As the discussion of tax incidence in Chapter 26 shows, the outcome is independent of whether the public subsidy goes to the employer or employee.²

However, wage-rate subsidies are not without complications. To be effective, subsidies must be targeted at marginal employment. Otherwise, the government simply pays part of the wage bill that a firm would incur in any case. Alternatively, to obtain the subsidy, employers may replace higher paid and more efficient workers by lower paid and less efficient workers.

OECD experience. Many OECD nations have adopted wage-rate subsidies to try to improve labour outcomes. In Canada, Germany, France and Spain employers have received wage subsidies for over a decade employing several hundred thousand young employees. In Australia, wage subsidies are available to encourage employment among vulnerable groups. Up to \$10,000 is available to businesses hiring new employees between 15-25, or over 50 years of age and Indigenous Australians. Evaluations have found mixed results.

Studies in Ireland by Denny and Harmon (2000), the UK by Van Reenan (2001), and Sweden by Carling and Richardson (2001) found that wage subsidies increased youth employment at low cost. In Australia, Stromback and Dockery (2000) found that the temporary wage subsidy program in the mid-1990s had a high net job impact at a low cost per job created (see Table 23.1). An estimated 60 per cent of participants in wage subsidy programs were in unassisted employment three months after leaving the program compared with less than 20 per cent in the control group.

Other studies have found that wage subsidies result in subsidised workers displacing other workers and in deadweight losses. Martin and Grubb (2001) reported that studies in Belgium, Ireland and the Netherlands found that for every 100 jobs subsidised only 10 were net gains in employment. A DWL occurs when an efficient worker is displaced by a less efficient worker.

² Take simple labour demand and supply functions, $Q_d = a - bw$ and $Q_s = -c + dw$, where Q_d and Q_s are labour hours demanded and supplied, w is the wage rate and a, b, c and d are parameters. Assuming equilibrium, $w = (a + c)/(b + d)$. If employees receives a wage rate subsidy (s), the labour supply equation becomes $Q_s = -c + d(w + s)$. Solving out, the wage rate paid to the worker before the subsidy is received equals $(a + c - ds)/(b + d)$. If the employer receives the wage subsidy, the demand equation becomes $Q_d = a - b(w - s)$. Solving out, the gross wage paid by the employer to the employee equals $(a + c - bs)/(b + d)$. It can readily be shown that the pre-subsidy wage to the worker plus the subsidy is equal to the gross wage paid by the employer.

Table 23.1 Estimated net impacts of Australian labour market programs in mid-1990s (%)

Program	Net unit cost (\$)	Net impact ^a				
		1995/1	1995/2	1996/1	1996/2	1997
Wage subsidy	1263	11.8	-0.3	38.3	42.8	44.3
Job creation	7105-10 000	8.5	13.6	15.3	13.7	19.0
Training	970-1170	3.7	1.3	2.9	3.6	1.4
Job assistance / search	625	8.7	1.4	4.5	7.7	8.0

(a) Percentage increase in unassisted employment 3 months after exit from program cf. control group.

Source: Stromback and Dockery (2000).

These studies found that the wage subsidies produced small net employment gains and that they determined mainly who was employed rather than how many people were employed.

Employment support policies

Unemployment may be frictional, structural or cyclical. Frictional unemployment occurs when workers are between jobs. Structural unemployment occurs when workers lack the skills or desire to work at market rates. Cyclical unemployment occurs when aggregate demand is low. We are concerned here with frictional and structural unemployment and policies to reduce these forms of unemployment. We examine training programs, job search assistance and job creation programs.³

Training programs include general traineeship and apprenticeship schemes for school leavers lacking workplace skills and special programs for persons with learning problems.

OECD (2000) cites considerable evidence that apprenticeship systems reduce unemployment. NCVER (2001) reported that 93 per cent of those who completed a New Apprenticeship in 2000 were in an unsubsidised job three months later. However, only a half of all those enrolled in apprenticeships complete the course and the drop-out rates for general traineeships are still higher (NCVER, 2010). In Australia, mid-2017, about 269,000 individuals hold apprenticeships or traineeships, a decrease of 4.7% from the previous year, usually involving on-the-job training part-time for two to four years, funded principally by the Commonwealth government, while apprentices also receive relatively low wages.

Most OECD countries also run special training programs for young persons who lack basic literacy and numeracy skills. Unfortunately, evaluations of these programs are not very positive. Heckman *et al.* (1999) found little evidence that such programs increased youth employment, especially for more disadvantaged youth. Martin and Grubb (2001) found that labour market training courses have little benefit for young people who leave school with inadequate reading, writing and numeracy. In Australia, Stromback and Dockery (2000) found that the special training programs in the mid-1990s had only a small impact on employment (see Table 23.1). Given the importance of employment for disadvantaged youth for themselves and for society, it must be hoped that effective training programs can be found.

Job assistance programs include help with job searches, job interviews, counselling, training in job search techniques and so on. They are designed to assist unemployed job seekers who are poorly informed about the availability and nature of jobs or their suitability for them.

Martin and Grubb (2001) report that job assistance schemes in OECD countries generally provide a small increase in employment at low cost. On the other hand, Van den Berg and Van der Klaauw (2001) found no significant impact of such programs in the Netherlands.

³ We briefly discussed industry assistance policies to promote employment in Chapter 21.

In Australia job placement programs include job seeker assessment (by Centrelink) and job matching, job search training and intensive assistance, which are outsourced under the Job Network program. Government contracts over 200 groups who employ some 15 000 persons to provide services to unemployed persons across Australia. Evaluations of job search programs in the 1990s indicate that they produced a small net employment impact at low cost (see Table 23.1). The Productivity Commission (2002) reported that the Job Network produces similar employment gains to earlier job search programs but at lower cost.

Job creation. Spending on job creation in the public sector has also been significant in many OECD countries. However, these jobs usually have low productivity and often do not create marketable skills. Martin and Grubb (2001) found that such job creation programs had ‘little success in helping unemployed people get permanent jobs in the open labour market’.

In Australia, job creation was a major labour market program in the mid-1990s and appeared to generate net employment (Table 23.1). Stromback and Dockery (2000) reported that 30 per cent of participants were in unassisted employment three months after exit from the job creation program compared with 15 per cent of the control group. Also, the positive net impact was 15 per cent after a year. Piggott and Chapman (1995) found that displacement effects were lower than with wage subsidies. However, the net cost (gross cost less savings in income support payments) of \$7000–\$10 000 per job was high. The Commonwealth government has now stopped supporting job creation programs except for some indigenous Australians schemes, although Work for the Dole has elements of temporary job creation.

In summary, workforce training programs, such as apprenticeship schemes, appear to have promoted employment in many countries. Special purpose training programs for disadvantaged groups have provided much more limited benefits. There appear to be fair returns to job-search assistance programs. Job creation may be helpful in some cases, but it is usually high cost and may not produce long-term productive skills.

Unemployment benefits

In many OECD countries unemployment benefits, for example the United States and the UK, are funded through a compulsory national insurance fund. In Australia, unemployment benefits (called Newstart Allowances) are funded from consolidated revenue.⁴

A Newstart Allowance is paid to unemployed or partly employed people over the age of 21 and under the pension eligibility age, who are Australian residents, who satisfy income and asset tests and enter into an Employment Pathway Plan.⁵ The agreement requires recipients of the allowance to undertake certain activities to increase their opportunities for employment. This may include part-time study or training or Work for the Dole (WFD). Under WFD, people on benefits for six months or longer must provide services for a community organisation to increase their skills and job prospects.

Unemployment benefits vary with household circumstances. At the start of 2018 the maximum benefit was \$486.50 per fortnight for a person in a partnership and \$582.80 per fortnight for a single person with dependent children. The benefits are indexed to the Consumer Price Index and adjusted twice a year. Recipients of Newstart may also receive about \$130 per fortnight in housing rent assistance (depending on family circumstances). As of the beginning of 2018, individuals with an income of less than \$104 per fortnight were

⁴ In many OECD countries, unemployment benefits are provided for a limited period, for example in the United States for six months. In Australia, benefits are provided without a time limit. Also, as we saw in Chapter 22 (Table 22.3, page 391), replacement rates are lower in Australia than in most OECD countries.

⁵ Unemployed young people aged 16 to 20 and full-time students aged 16 to 24 are eligible for the Youth Allowance.

eligible for the full Newstart Allowance. In 2015 this represented a net replacement rate of 28% of the average wage, but significantly higher for unskilled workers. The allowance falls by 50 cents in the dollar for other income between \$104 and \$254 per fortnight and by 60 cents in the dollar for income above \$254 per fortnight. Thus, recipients of Newstart pay an EMTR of 50 to 60 per cent on most of their income. Similar EMTRs apply to earnings of recipients of the Youth Allowance.

Labour supply effects. Unemployment benefits may affect labour supply in various ways. They may increase the probability of unemployment by making it less costly. They may also increase the duration of unemployment. On the other hand, they may increase workforce participation as the benefits are available only to persons in the workforce. Fourth, they may affect the work responses of partners of unemployed workers. Also, high EMTRs as benefits are withdrawn may encourage black market activity.

Several studies have found that the short-term labour supply elasticities with respect to welfare benefits are considerably higher than the long-term labour supply elasticities with respect to after-tax wages reported in Chapters 27 and 30. In an analysis of 20 OECD countries, Nickell (1998) found that the elasticity of unemployment with respect to the replacement rate was close to one. In a review of US and other empirical studies, Krueger and Meyer (2002) concluded that the elasticity of unemployment duration with respect to unemployment benefits was about 0.5 and that the elasticity of unemployment from the combined effects of incidence of unemployment and duration was about 1.0. Krueger and Meyer also report that higher unemployment benefits were associated with less work by wives of unemployed men. Gruber (2016, p. 415) concludes that higher unemployment benefits clearly “have a significant effect on unemployment durations”.

Injury compensation

In most OECD countries, payments to injured workers are a separate category of benefit with high replacement rates. In Australia, the state governments require employers to take out insurance, known as workers’ compensation, against workplace injury. Requirements vary across the states but usually involve a public–private arrangement. For example, in New South Wales, the government determines the annual premium payable by each firm as a percentage of its annual wage turnover inclusive of pension contributions. Premiums vary for several hundred types of business, from mining and farming businesses to all kinds of service businesses. It then contracts a private insurer to collect the premium from each firm and to forward this to a government agency (NSW Workcover). When claims are made, NSW Workcover reimburses the claimant via the private insurer according to various rules governing payouts. Generally, payouts replace a high proportion of lost wages, with replacement rates higher than for unemployment benefits. Proponents of this system argue that it is cost-effective because it achieves economies of scale and operates generally on a no-fault basis which minimises legal disputes, although firms are liable for damages if they ignore workplace safety regulations. On the other hand, regulation of premiums regardless of the safety record of the insured business provides little incentive to firms to minimise injuries. Also, the lack of competition between insurers, who are simply outsourced administrators for regulated premiums, is not cost-efficient.

Krueger and Myer (2002) note four potential effects of workers’ compensation insurance. Firms may under-invest in worker safety. The likelihood of claims for injury may increase. Also, the duration of time out from work due to injury may increase. On the other hand, the availability of insurance may make some jobs more attractive and increase labour supply. Most work has been done on the effects of insurance on claims for, and duration of, injury. Reviewing these studies, Krueger and Myer report that combining the effects for injury claims and duration produces a total elasticity of lost work time with respect to insurance

benefits of between 0.5 and 1.0. This is slightly lower than the elasticity for unemployment benefits. However, because workers' compensation replacement rates in many countries are close to 100 per cent of earnings net of tax, the loss of working time associated with workers' compensation is large.

Disability pensions

Persons of workforce age who are deemed unable to work due to chronic incapacity are generally eligible for disability pensions. In Australia eligibility conditions are that the person must be 16 years or over but under pension eligibility age, have a physical, intellectual or psychiatric impairment rating assessed at 20 or more points, be unable to work for at least 15 hours a week for at least the next two years due to this impairment and meet residence requirements. Like unemployment benefits, disability pensions vary with household type. However, disability pensions are higher than unemployment benefits and the income and asset tests are less stringent. In addition, persons eligible for a disability pension may receive rent assistance and mobility allowances. Carers of persons with a disability also receive allowances.

In Australia, the number of people receiving a disability pension rose from 135 000 in 1979 to nearly 760,000 at the start of 2018. This is about 5.8 per cent of the workforce population, compared to an unemployment rate of 5.5 per cent. The trend elsewhere is similar. In many OECD countries the proportion of the workforce claiming disability payments trebled between 1970 and 2000 (Haveman and Wolfe, 2000). From a recipient perspective, disability pensions have several advantages. They are usually more generous than unemployment benefits. There is often no activity requirement. Disability benefits are conditional on the level of disability and not on looking for work. Once established, a disability pension is rarely taken away.

The relative generosity of disability benefits creates a significant incentive (moral hazard in US literature) to individuals to transfer from the unemployed category to the disabled category. Haveman and Wolfe (*ibid.*) reported on various attempts to estimate the relationship between the number of claimants of disability pensions and the size and accessibility of disability benefits. They found much variability but concluded that the median elasticity of disability claimants to disability benefits is about 0.6. Gruber (2016, p.420) suggests that the figure is closer to 0.3. These results suggest that a 10 per cent increase in disability benefits increases the disability roll by between 3 and 6 per cent.

Disability is a complex policy area. It is hard to design policies that simultaneously provide an adequate safety net for severely disabled persons and encourage work by those capable of some work. Identifying and monitoring needs are subjective tasks. They are made harder when persons with disabilities have a strong incentive to maximise their perceived disability. The substantial growth in recipients of disability benefits has reflected mainly a widening of the definition of disability (Krueger and Meyer, 2002). Indeed, Autor and Duggan (2006) argue that disability pensions in the United States have become a *de facto* unemployability insurance program rather than a medical insurance program. In response to these trends, many OECD governments are now considering stronger conditions on disability and part-time work requirements for persons with milder disabilities (Carcillo and Grubb, 2006). This is also current Australian government policy.

Welfare for Families

Most welfare for families revolves around children. In this section we examine welfare and market failure reasons for supporting families and various policy options. We also discuss Australian family policies along with some international policies and outcomes.

Welfare objectives

Households with children have greater needs than those without children but less ability to meet these needs as parenting reduces workforce participation. Ideally, we would have measures of need. But a family's need for assistance is neither readily observable nor a simple function of income. Need depends on the number and age of persons in the family, the employment and maternity status of the parents and the functional or dysfunctional nature of the family itself. The need for assistance rises with single-parent families. Need is also greater for younger children, especially for pre-school children who require more home care. And need rises greatly with the incidence of childbirth, which imposes substantial extra burdens on families, especially on mothers.

A common approach to estimating these needs is to estimate the expenditure (and hence income) required for a minimum acceptable level of welfare (see Chapter 20). Expenditure requirements may be estimated for each child by age group inclusive of child care costs. Single-parent income earners with limited opportunity to supply household services as well as earn income are often viewed as especially disadvantaged and, accordingly, generally receive the highest level of assistance.

Mothers are particularly disadvantaged by loss of employment prospects and may not be compensated by their partner. Accordingly, many family programs provide support directly to mothers at the time of childbirth and after. Again, measurement of equivalent need is complex when families, and indirectly mothers, enjoy different levels of income. Government must decide whether to condition support for mothers on family or individual income tests.

On the other hand, having children is largely a matter of choice. If children enhance the utility of a family, the principle of equivalent welfare across families implies that child subsidies should be less than the sum of the extra household expenditure plus income forgone. The proportion of incremental family costs that should be met by other taxpayers, including those who chose not to have children, is a normative judgement.

Finally, it may also be contended that assistance should focus on child need rather than family need. Unfortunately, there are huge differences in the emotional and practical support that children receive in the first 12 months of their life which may have enormous implications for their futures. This implies that social assistance should be tied as closely as possible to the child and / or to family support services.

Market failures may provide additional reasons for supporting families. Externalities are one possible market failure. Both families *per se* and high-quality early childhood education may provide positive social externalities. Intact families may contribute to social cohesion. On the other hand, children from non-intact families may perform less well on average in school and be more prone to anti-social activities. Various studies (for example, Heckman *et al.*, 2010) report evidence of positive externalities from early quality childhood care. However, the policy conclusions are ambivalent. It may be inferred both that intact families should be encouraged and that children of single parents should receive extra support.

The fertility rate may also be viewed as an externality. As people live longer, the ratio of workers to dependants falls and the tax burden of supporting the elderly rises. This burden may be reduced by increasing birth rates encouraged by policies that reduce the cost of having children. But after 20 years, the standard of living is likely to be higher than today. It is not clear that current fertility rates should be subsidised to raise living standards in 20 years' time.

Conclusions. Welfare is the primary motivation for supporting families. In this case, the amount of support is a normative decision. Market failures provide some extra justification for family policies. However, as we will see below, family policies can distort economic choices, primarily labour supply and sometimes household formation. As usual, the public policy aim is to provide the desired amount of welfare benefits with minimum distortions.

Family policies and instruments

Government can assist families directly by income grants, assistance tied to services or tax relief. It may also assist families indirectly by subsidising child care services or by mandating private employer assistance.

Untied cash payments are a major form of assistance to families. They are transparent and can be targeted to family needs. Anomalies may occur when welfare payments are based on household structure and tax is based on individual income. Also, the separation of welfare payments from tax raises administrative costs

Alternatively, assistance may be tied to the use of specified services, for example registered child care services. As we saw in Chapter 22, tied grants are effectively income grants if they do not alter the composition of household expenditure that would occur with an untied grant. On the other hand, tied grants may require a family to use more of some service than they would with equivalent untied assistance. Accordingly, recipient benefits are usually maximised by income payments rather than by transfers-in-kind. Tied assistance should therefore be justified by an externality or merit good argument, such as the benefits to the children.

Government can also provide support in tax relief, via either tax deductions or rebates. For example, expenses for child care could be deducted from taxable income (a tax deduction) or from income tax liability (a tax rebate). Tax deductions are less equitable because the value of a deduction increases with the MTR and hence with taxable income. A tax rebate can be a constant amount or may vary inversely with the income or other circumstances of the taxpayer. If the rebate exceeds tax owing, the taxpayer may receive a grant.

Government may also subsidise agencies that supply services to families, notably child care services. Child care providers often argue that such a subsidy enables them to provide the quality services that young children should receive. In a competitive market, the distribution of the benefits of the subsidy would depend on the relative elasticities of demand and supply for child care services. However, in the absence of competition suppliers may use the subsidy to increase management and staff remuneration, or inputs per service provided, without necessarily providing a higher quality service.

Finally, government may mandate employer assistance to families. For example, government may require employers to provide maternity (or parental) leave. However, as we saw in Chapter 21, the costs of such regulations are usually borne in part by the employee and have a DWL. If the cost of employment rises, the demand for potential mothers as employees is likely to fall and the employment and wages of potential mothers are also likely to fall. It may also be held that assistance to families is a general taxpayer responsibility and not the responsibility of company shareholders (in so far as they would bear the costs).

Family policies in Australia

The main Australian Government family programs relate to:

- Children—family tax benefit schemes Part A and B.
- Parenting—separate programs for partnered and single parents.
- Childbirth—paid parental leave or baby bonus
- Child care—various subsidies for child care services.
- Various other assistance—for example, housing rental assistance.

Table 23.2 provides a summary of the benefits. In most cases there are several benefit rates depending on household income and other household characteristics.⁶ The largest family assistance program, the ‘family tax benefit’ program, provides untaxed cash grants to families based on the number and age of the children. Part A is intended to assist families with the cost

⁶ The Henry Tax Review (2010) recommended a major rationalisation and simplification of these benefits.

of raising children. Part B provides supplementary grants to single-income families and to families where the second parent stays at home as a child carer. Withdrawal rates for family benefits are quite low at 20 to 30 per cent and families on quite high incomes receive some benefits from Part A. These schemes are administered by the Department of Human Services through Centrelink, which pays most benefits fortnightly. Parenting payments provide extra income support to single and partnered parents with low incomes who have primary care of young dependent children. It is the only family assistance payment that is taxed. Also, withdrawal rates for parenting payments are 30 or 40 per cent.

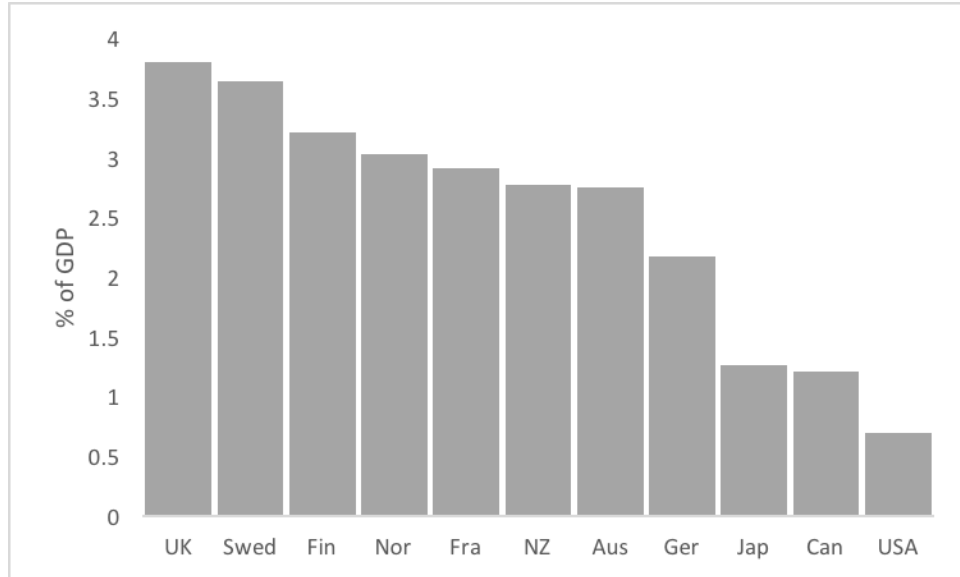
Expenditure on family assistance is about one-third of all social welfare expenditure (see Table 22.1) and about 2.7 per cent of GDP. Figure 23.2 overleaf shows family (cash benefits) assistance as a proportion of GDP for 11 OECD countries. Note however that some countries, including the United States, offer tax credits for family expenditures. Thus, full international comparisons of the generosity of family payments are complex. Box 23.1 (page 409) describes some differences with respect to childbirth assistance payments.

Equity issues. The Australian system is a mixture of highly targeted and less targeted measures. Parenting payments, rent allowances and the dependent spouse rebate are targeted at low-income households. On the other hand, family tax benefits, the childbirth allowances and child care benefits provide substantial benefits to middle-income households. Whether this complex system produces overall vertical and horizontal equity between families or more generally between all households is essentially a normative issue.

Table 23.2 Australian Commonwealth Government family assistance as at 30 June 2017^a

<i>Program</i>	<i>Summary description</i>
Family tax benefit Part A	Part A is paid per child <16 or dependent full-time student aged 16–19. Benefit depends on child age and household income. Full benefits for family income <\$52706. For a child under 13, this is \$5504.20 p.a. Complex withdrawal rates of 20% and then 30% as family income rises depending on number of children.
Family tax benefit Part B	Extra assistance to single-parent families and families when one parent stays at home. Part B is paid per dependent child under 18. Full rate of \$4412.65 for child <6 and \$3190.10 ages 6–18. Single parents are eligible for the maximum rate up until adjusted taxable income of \$100,000, after which they are ineligible. Benefit paid to second earner with <\$5,548 p.a. but are now family income tested also. Withdrawal rate 20%.
Parenting payments	Benefit paid to Australia residents for dependent child <6 if partnered and <8 if single. Single parents receive up to \$19567 p.a. if their income is less than \$54,602.6. Partnered parents receive up to \$12,649 p.a. Withdrawal rules are complex, but 40% for lone parents and 30% for couple families.
Paid parental leave	Primary carer (usually the mother) receives 18 weeks of government funded pay at the rate of the National Minimum Wage \$695 a week before tax providing he or she has a taxable income under \$150 000 in previous year.
Baby bonus	\$540 upfront payment, then a maximum of 1,618.89 per week for 13 weeks for the first child and a maximum of 540.54 per week for 13 weeks for subsequent children. Subject to being eligible for Family Tax Benefit Part A
Child care benefit	Payments for approved or registered child care services. If parent is working at least 30 hours a fortnight, up to 50 hours of approved care allowed per week for non-schoolage child or \$215 per week.
Child care rebate	Payments of 50% of out-of-pocket costs up to \$7613 per annum for approved child care services less any money received under the child care benefit. There is no means test.
Rental assistance	Means-tested rent assistance that depends on number of adults and children in household as well as the level of rent paid. The maximum for a couple with 3 or more children is \$176.54
Dependent spouse rebate	Taxpayers with low-income spouse (no children) obtain maximum rebate on tax of \$2355 when spouse income <\$9702 p.a. Withdrawal rate 25% as income of spouse rises.

(a) It should be noted that the details of assistance programs are frequently changing.



Source: OECD Social Expenditure database.

Figure 23.2 Public expenditure on family cash benefits as share of GDP in 2013

Among many equity issues, two perennials are (1) whether the system of taxes and transfers treats single- and double-income families equitably and (2) whether the lower income earner in a family is treated equitably. In Australia, with rising MTRs, a single-income family pays more tax than a double-income family with the same gross income. For example, in 2014-15 a person earning \$120,000 a year paid nearly \$10,000 more tax than did two people each earning \$60,000 a year. On the other hand, a two-adult family with one worker at home gains significant untaxed household services. In addition, single-income families receive extra benefits from Family Tax Part B and parenting allowances. Because household types vary greatly with respect to income, size and so on, it is dangerous to generalise that single- or double-income families are invariably better treated by the tax-transfer system.

Another effect of government policy is that EMTRs are often higher for second incomes than for primary incomes because the second income attracts tax and results in withdrawals of benefits as total family income or individual income rises. Apps and Rees (2010) estimated that where the primary earner earns \$50 000, then including the low-income tax offset, the Medicare levy and family tax benefits, second incomes between \$5527 and \$14 000 and between \$14 001 and \$19 423 attract EMTRs of 41.5 per cent and 56.5 per cent respectively. They argue that these are unfair (and inefficient) rates of tax on second-income earners.

Efficiency issues. Family payments may change behaviour especially when incentives, replacement rates or EMTRs are high. Gans and Leigh (2006) estimated that the \$3000 baby bonus introduced on 1 July 2004 caused over 1000 births to be delayed so that mothers could obtain the bonus! More generally, the major concern is the impact of family support grants on labour supply.

Net replacement rates (NRRs) are the sum of the various support grants as a proportion of income. They depend on employment allowances as well as various family payments and rent assistance. Whiteford and Angenent (2002) estimated that, including the Newstart Allowance, family and parenting payments and rent assistance, the NRR for single parents was about two-thirds of the minimum wage rate and a half of average weekly earnings. For unemployed

Box 23.1 Childbirth assistance

The Australian government provides (subject to a generous mean test) childbirth payment to mothers in the form of paid parental leave. The payment rate is related to the National Minimum Wage at \$695 per week for a max of 18 weeks. Also, employers pay varying leave entitlements. Australia does not have a separate social insurance scheme.

By contrast, many OECD governments fund maternity leave through a social insurance fund to which employers, employees and government contribute.

The amount paid to mothers varies from half of weekly insurable earnings in some countries to 100 per cent of the basic wage in Austria. Leave entitlements vary from two to thirteen months. In the UK publicly funded maternity leave pays 90 per cent of earnings with no ceiling for the first 6 weeks and mothers can take another 33 weeks of 90% of earnings up to a ceiling of GBP139.58 per week. Some countries (for instance Germany and Sweden) combine employer and social security funded schemes with separate payments by employers and government.

couples with three children, the NRR rose to around 80 per cent of the minimum wage and 67 per cent of the average wage.

Such high NRRs are likely to reduce labour force participation. EMTRs are also high for many Australian families. Individuals can receive income support from several sources without immediately losing income support. However, when the income-free threshold is reached, the interaction of income tax and withdrawal rates often produces a high EMTR. Harding *et al.* (2009) estimated that, in 2006–07, 20 per cent of sole parents and 14 per cent of couples with children experienced EMTRs of over 50 per cent. Given that the labour supply elasticity for second-income earners averages about 0.75, an EMTR of 50 per cent causes a decline in labour supply of about 35 per cent.

On the other hand, some forms of family assistance encourage labour force participation. Child care support reduces the cost of working and so tends to increase labour supply (see below). Also, maternity leave arrangements may increase female participation in the workforce. However, this labour supply effect may be partly offset by reduced demand for female workers.

Empirical evidence. There has been much international research into the impacts of family assistance. We cite examples relating to child care, fertility rates and marriage before drawing some general conclusions.

Kalb (2009) provides a wide-ranging survey of the studies of child care costs and labour supply measured both as participation rates and hours worked. Overall the studies find a small inverse correlation between child care costs and labour supply in OECD countries or conversely a very small positive effect of child care subsidies on labour supply. Many of the studies, including Australian studies (Doiron and Kalb, 2005), estimate elasticities for both workforce participation and hours worked of less than -0.1 with respect to child care costs. However, a more recent study by Gong *et al.* (2011) estimated that, for an average mother with young children, the elasticity of employment with respect to the gross child care price was -0.29 and the elasticity of hours worked was -0.65 .

Turning to maternity assistance and fertility, in a study of 22 industrialised countries, Gauthier and Hatzius (1997) found that maternity leave had no effect on fertility. Fertility rates are high in the United States, which does not have a universal paid maternity scheme, and low in Sweden which has a generous maternity scheme. On the other hand, in France mothers receive generous subsidies for child care and early childhood education and the birth rate has risen from 1.6 to 1.9 per woman.

With regards to marriage, in the United States couples with dissimilar incomes pay less tax in marriage but couples with similar incomes pay more tax. Also, a two-adult family receives lower benefits per adult than a single-adult family. On balance, there are more losers than

winners from marriage. Whether this affects marriage numbers is controversial. Ehrlich and Kim (2007) found that the social security system in the United States significantly reduces incentives for individual workers to form families or to invest in children and that this has contributed substantially to decreasing marriage and increasing divorce. On the other hand, Gruber (2011) concludes that the welfare system has had little effect on single motherhood.

In conclusion, like other welfare programs family assistance involves normative judgement and trade-offs between generosity (equity) and efficiency (labour supply). Analysis of expenditure needs can illustrate the concept of equivalent household need. However, concepts of equivalence also involve value judgements. In any case, almost any program generates deadweight losses. A high tax-free family benefit creates a high NRR for low income earners. And if assistance is withdrawn sharply to medium-income households, high withdrawal rates create a high EMTR. High NRRs and EMTRs reduce labour supply. Gruber (2016, pp. 577-567) shows that no tax system can meet three generally desired goals: progressivity (average tax rates rising with family income), horizontal equity (families with equal income paying equal taxes) and marriage neutrality. However, by describing the implications of the programs, economic analysis may help to make them more equitable and efficient.

Welfare for the Elderly

The Australian Treasurer (2010) forecast that, between 2015 and 2054-55, the proportion of people over 65 will rise from 15 per cent to 22.6 per cent. Structural changes to indexation and age of eligibility in the 2014-15 budget are expected to stabilise age pension payments as a percentage of GDP. But the amount spent per person is going to increase for \$2,000 today to \$3,200 in 2054-55. On the other hand, the report forecast that the ratio of workers to retirees will fall from 4.5 to 2.7. Feldstein and Liebman (2002) estimated that social security payments for the aged in the United States were likely to rise from 4 per cent of GDP today to 8 per cent in 2050. In other OECD countries, such as Germany and Italy, social security retirement programs could rise to twice this amount unless programs are modified.

Clearly, most societies want to protect those in old age who have been unable to provide adequately for their retirement. On the other hand, those who can save for retirement should be encouraged to do so and the elderly who wish to work should not be discouraged from doing so. Another policy goal is intergenerational equity—a fair sharing of the burdens of old age between current and future generations.

In the following sections we discuss whether markets provide adequate retirement incomes, options for retirement pensions and the major pension policies, namely public safety-net pensions and compulsory employment-related pensions.

Markets and savings

As we saw in Chapter 5, competitive markets with rational well-informed participants provide an efficient amount of saving. Markets allow individuals to smooth out their consumption over their lifetime, saving while on relatively high incomes to augment their lower income in later periods.

Individuals can save in many ways. Housing often forms over half of an individual's net assets at the time of retirement. Pension contributions are another major form of saving. Typically, an employer contributes part of an employee's salary to a pension fund, which the employee accesses on retirement. The pensions may be defined or contributory pensions. With a defined pension, a person's pension usually depends upon their earnings and length of time with the firm, regardless of contributions made to the pension fund. With a contributory pension, benefits depend on the amount of the contributions plus investment returns net of expenses. Often an employee can take a lump sum payment in lieu of a pension.

Markets can also allow individuals to convert their financial assets, including the capital value of accumulated pension funds, into annual income by way of annuities. An annuity provides a fixed income from an agreed age until an individual dies, regardless of the length of their life. In some markets, annuities can be purchased against equity in a house. Thus, markets provide a means whereby individuals can spread out their wealth, or some fraction of it, into lifetime consumption.

However, there is a constraint on these market processes—that is government's double taxation of savings (once when income is earned and then the return on savings) that is likely to discourage savings.

Moreover, individuals may not save if government is going to provide a retirement pension. To offset the double taxation and to encourage savings (and avoid calls on public pensions), many governments provide large tax concessions to pension schemes.

Market failures, equity and role of government. Diamond (1977) identified four reasons for government intervention in retirement provision: inadequate saving for retirement, market failure in consumption smoothing and risk management, administrative efficiency in large-scale retirement provision, and redistribution.

Inadequate saving occurs when individuals can save sufficient for retirement but fail to do so because of poor decision making. Bernheim and Rangel (2008) report that many people under-save compared with expected utility-maximising consumption smoothing behaviour.⁷ Individuals may accumulate insufficient wealth because of poor returns on their portfolio. In some countries, though not in Australia, employers choose the pension fund for their employees. Indeed, some large US firms invest over half of the pension funds in themselves. Sometimes such firms go bankrupt. Enron was the seventh largest company in the United States before it went bankrupt in 2001. Pension funds went with it.

Second, markets do not always provide consumption smoothing or manage risk well. Longevity, inflation and returns on investment are difficult to predict. Life annuities with periodic payments indexed for inflation provide some insurance against these risks. However, the market for such insurance is thin and it is difficult to insure against market risk. Annuities are costly and returns on them are generally below market rates of interest because of high transaction costs and adverse selection. Unless insurers can predict longevity, they must offer average premiums. But individuals with short life expectancy have less incentive to take out annuities at average premiums. So, premiums for annuities rise. Adverse selection narrows the market for annuities and raises the cost. Mandatory social insurance resolves this problem by forcing everyone into some form of insurance.

Third, if there are economies of scale in pension management, a national public pension system would minimise administration costs per pension. However, large programs in the public and private sector have x-inefficiency (behavioural) costs that may offset potential technical efficiency gains.

Fourth, and certainly not least, whatever the efficiencies or otherwise of markets, many people will have insufficient means to provide adequately for their retirement.

There are therefore several reasons for government involvement in retirement provision. This may mean tax concessions to encourage saving and to offset its own taxes on savings, policies to encourage annuity markets and the provision of public pensions for low-income retirees. However, provision of public pensions may discourage both saving and labour supply. Also, any shortfall in individual savings places pressure on government to raise taxes or to cut other programs. Government has good reasons therefore to encourage people to provide for their own retirement where they can do so.

⁷ This may be viewed as a merit good argument rather than as market failure. Pigou (1920) argued similarly that many people underestimate the value of future consumption, which he described as myopia.

Retirement policies

Most retirement provision schemes are based on one or more of three pillars:

1. A public age pension based on a means-tested, safety net system funded from consolidated revenue designed to ensure that basic needs are met.
2. Compulsory contributory, employment-based payments to designated retirement funds.
3. Voluntary savings, with or without tax concessions.

Table 23.3 summarises these options. As noted, retirement systems vary in different countries. The Australian system is described in Box 23.2.

Some countries, like Australia, have tax-funded, safety net public pensions (the first pillar) targeted at low-income persons. Payments are generally made on a pay-as-you-go (PAYG) basis out of consolidated revenue. The benefits usually depend on a person's current status and are independent of employment history or contributions to a retirement fund.

Many countries have second-pillar systems—compulsory employment-based payments for retirement provision either to a publicly-owned pension fund or to private funds. Pensions may be related to contributions or earnings (if they are defined benefits) but they may also include basic or minimum pensions. Some funds operate on a PAYG basis, other are fully funded as liabilities occur. Traditionally, public funds usually operated on an unfunded PAYG basis and provided defined benefits. This is still broadly the system in the United States. Other countries have moved towards greater funding of liabilities as they occur and to benefits related to contributions and investment returns.

Alternatively, and increasingly, government may require employers to make payments to private pension funds. Government may also encourage this by tax concessions at three levels: (1) on contributions to retirement funds, (2) on fund earnings and (3) on retirement incomes taken out of the funds. Private pension funds have always been funded more fully than public funds. But, as in the public sector, there has been a move away from defined benefit and towards contribution schemes.

Table 23.3 Taxonomy of main retirement funding options

<i>Basic system</i>	<i>Nature of funding</i>	<i>Nature of benefits</i>	<i>Comments</i>
<i>First pillar</i>			
1 Safety net pensions	PAYG from consolidated revenue	Usually targeted defined benefits; no employment history required	Not common Over 70 per cent of Australian retirees receive the age pension
<i>Second pillar schemes: employment-related contributions</i>			
2a. Compulsory payments to government (usually a national insurance fund)	PAYG. Current workers pay for current retirees. Usually small reserves	Generally defined benefit schemes	Most common pension system, especially in Europe
2b. Compulsory payments to a public authority	Fully or partially funded; payments made as liability is incurred	Mainly defined benefit schemes	Examples: India, Malaysia, Singapore
2c. Mandated payments to private pension funds	Fully or partially funded as liability is incurred	Benefits usually related to contributions and net investment returns	Examples: Australia, Chile, Switzerland, UK
<i>Third pillar</i>			
3. Voluntary savings	Funded by various private savings with or without tax concessions	Benefits usually related to contributions and net investment returns	Many countries provide tax concessions to long-term savings, e.g. Australia, US, UK

Box 23.2 Retirement income provision in Australia

Retirement income provision in Australia comprises elements of all three pillars, including a means-tested public pension financed from consolidated revenue, mandatory superannuation contributions by employers and voluntary saving with tax-preferred concessions.

The public Age Pension provides an income of 27.7 per cent of average male earnings to single people and about 20 per cent of earnings to each of a married couple. The pension is means tested on assets and income. Despite the means tests, three-quarters of retired persons of eligible age (over 65 for men and 63 for women increasing to 65 by 2014) receive some age pension and about 60 per cent are paid the full rate. Retirees who rely fully on the aged pension pay no income tax. This implies a net of tax replacement rate of 37 per cent of average weekly earnings or about 70 per cent of the minimum wage.

The Superannuation Guarantee legislation requires employers to make superannuation contributions of at least 9.5 per cent of gross wages on behalf of their employees to a complying superannuation fund. The maximum amount that employers can provide has varied greatly. In 2017-18, employer contributions are capped at \$25 000 per annum. Also, retirement funds are now capped at \$1.6 million (with exceptions for pre-existing larger funds). The contributions must remain in the fund until statutory age for access is reached (currently 55 rising to 60 by 2025), when employees are entitled to all accrued benefits. Superannuation can be taken as lump sums or as pensions.

Concessionary taxation applies to all stages of the pension process. Employer contributions are tax deductible to the employer but taxed in the hands of the superannuation fund at a rate of only 15 per cent. Fund earnings are also taxed at 15 per cent prior to retirement.

Finally, when the fund starts to pay out a pension, the relevant fund earnings are not taxed and payments to pensioners are tax free.

In addition, in 2017-18 the Australian government contributed 50 cents for each dollar of an individual's after-tax superannuation contribution for persons earning less than \$36,818 up to a maximum co-contribution of \$1000 with smaller co-contributions for incomes up to \$51,813, subject to at least 10% of your income coming from eligible income sources.

To make the superannuation system simpler and more equitable but also to retain the incentives to save, the Henry Tax Review (2010) recommended the following changes to the employer-based pension system.

- Employer contributions should be treated and taxed as employee income at marginal tax rates but with an offset making an effective progressive tax rate of zero, 15 and 25 per cent. Contributions in the fund would not be taxed.
- The government's co-contribution for low income earners and the superannuation spouse contribution offset would be abolished.
- The rate of tax on superannuation fund earnings should be halved to 7.5 per cent.
- The restriction on workers aged 75 and over from making contributions should be removed.
- The government should also consider offering annuity products.

However, the Review did not recommend any increase in the then 9 per cent superannuation contribution. As Guest (2010) notes, there is dispute whether this is sufficient to ensure an adequate standard of living in retirement. But Rothman (2007) contends that there will be no savings gap for cohorts who have contributed 9 per cent over most of their working life.

The third pillar is voluntary saving. This may also be supported by tax concessions to super funds to encourage savings. Typically, these savings would complement a mandated employer-based pension scheme.

We consider below some key issues including financing of public pensions, the role of public versus private schemes, the design and effects of tax concessions, and impacts on labour supply and savings.

Funding for public pensions

The key funding issue is whether to employ pay-as-you-go (PAYG) or to fund liabilities when they occur. This issue arises principally with defined contribution (DC) pensions including public pensions rather than with contributed pensions where the retiree takes the risk of poor pension fund performance. There are three main funding questions. Is PAYG or

full funding fairer? Is PAYG sustainable? And, what are the efficiency implications, if any, of the funding alternatives?

Before responding to these questions, we should note that there is no fiscal difference between a PAYG scheme run with balanced budgets and a fully funded insurance scheme combined with budget deficits. The two strategies have the same effect on public liabilities and net public worth. To differentiate PAYG and fully funded systems, we must assume that fully funded pensions are not funded by increasing debt.

With PAYG, taxes on existing workers are paying for the pensions. With rising income per capita and pensions linked to current earnings (for example to average weekly earnings as in Australia), each retiree receives more consumption goods than he or she pays for. Current taxpayers also gain because they in turn make lower contributions towards their pensions than they would make under a fully funded system. Thus, there is constant inter-generational redistribution. If per capita income rises, this outcome is consistent with vertical equity.

However, the sustainability of a PAYG system depends on the growth in the workforce. If the proportion of aged in the population rises with declining birth rates and rising life expectancy, PAYG systems may not be sustainable without increases in tax rates. This can be demonstrated as follows. In a PAYG system the benefits received by retirees must equal payments by current workers. Thus,

$$N_r \times B = N_w \times W \times t \quad (23.1)$$

where N_r is the number of retirees, B is the benefit per retiree, N_w is the number of workers, W is the wage and t is the tax rate to pay for the pension. This can be rearranged as:

$$t = (N_r / N_w) \times (B / W) \quad (23.2)$$

The term (N_r / N_w) is the ratio of retirees to workers (the dependency ratio). (B / W) is the ratio of average benefits to average wages (the replacement ratio). The tax rate, which is a function of these two ratios, can remain stable so long as the aim is simply to maintain the real level of pensions and the real wage rises fast enough to offset any rise in the dependency ratio. However, tax rates must rise if pensions rise with average earnings and the dependency ratio rises.

Turning to efficiency issues, if real pension values are always rising, at any point in time a PAYG system will result in lower tax rates on existing workers and so distort labour supply by less than would a fully funded system. On the other hand, Feldstein and Liebman (2002) note that full funding of pensions could increase the present value of consumption over time if it increases savings and investment and the marginal product of capital exceeds the social time preference rate.

Mandated employment-based pensions

Under a market-based contribution insurance system everyone receives a return on their contributions and the earnings of these contributions. Benefits are independent of family structures and earnings tests. In a mandated private insurance system, like the Australian one, there is no redistribution as a function of individual needs other than longevity. This means that a complementary public pension system is required for people who cannot finance their own retirement.

Under most state-funded retirement systems, however funded, there is some redistribution. Ignoring variations with longevity, high earners receive less, and low earners receive more, than they contribute. Even the national insurance systems in the UK and the United States combine some redistribution with contribution-related pensions.

The chosen channel (public or private) for retirement funds can have significant impacts on fund management and the operations of asset markets. Traditionally managers of public funds were required to invest prudently, mainly in bonds and little or nothing in equities or property.

Managers of private funds can make a wider range of investments and offer clients a wider range of risk–return options. They also compete more vigorously than public funds, especially those funded through taxation. Although returns are more volatile and market risks are higher with private funds, given competition and adequate choice private funds can replicate the security of public funds if the market wishes.

On the other hand, management costs and fees tend to be higher in private funds than in a publicly administered scheme either because of aggressive fund managers or diseconomies of small size in some cases. This has led the Australian Government to mandate that all private funds must offer a default ‘My-Super’ pension based on safe and simple investments with a low management fee.

Taxation concessions

Table 23.4 summarises how the Australian taxation system treats the major avenues of saving quite differently. As seen in Box 23.2, savings in retirement funds are treated favourably at each main point: on entry, on earnings and on exit. Owner-occupied housing is also treated very favourably with no tax on imputed rents (earnings) or on capital gains (on exit). On the other hand, investment in property and in equities is fully income taxed on entry and on earnings and attracts capital gains tax. Thus, the tax system encourages allocation of savings to superannuation funds. The concessions to earnings in super funds also reduce the effective tax rates on super fund investments in financial assets, equities and property. Arguably, these concessions reduce the distortions that otherwise occur in investment decisions.

Most countries provide substantial tax concessions on contributions to retirement funds (such as tax-free contributions up to a maximum amount) as well as on the earnings of these funds, but tax income when exiting the funds (when income is consumed). Systems where tax is wholly exempt in the first two stages (contributions and earnings) but retirement income is taxed are known as EET systems. The Australian system is the reverse: a TTE system. The EET approach is more consistent with the notion that consumption should be taxed and savings should not be taxed. It is also more equitable to tax income at MTRs (when it is consumed) rather than to levy flat tax rates on contributions and earnings.

Household saving

Do the tax concessions for superannuation affect the total amount of savings? In general, the answer depends on the relative strength of the income and substitution effects. A higher after-tax return on savings reduces the need for saving (the income effect) but increases the value of savings relative to current consumption (the substitution effect). Also, tax concessions for retirement funds may have little effect on total savings as savers may substitute savings in lower taxed retirement funds for other savings.

Turning to forced retirement saving, this may not increase total saving as people can reduce their other savings. This may occur even if the forced saving exceeds a person’s voluntary saving! Suppose that Clare has an income of \$50 000 a year and would save \$5000 by investing in shares or repaying the house mortgage, but that the government mandates her to contribute \$7000 to a pension fund. Clare could reduce her personal investments by \$5000

Table 23.4 Australian taxation and forms of saving

<i>Form of saving</i>	<i>Taxed on entry</i>	<i>Taxed on earnings</i>	<i>Taxed on exit</i>
Retirement fund	Partially income taxed	Partially income taxed	Not taxed
Own housing	Fully income taxed	Not taxed	Not taxed
Term deposits / bonds	Fully income taxed	Fully income taxed	Not taxed
Investment in property	Fully income taxed	Fully income taxed	Capital gain taxed
Equities	Fully income taxed	Fully income taxed	Capital gain taxed

and increase her total savings by only \$2000. But, more than this, in a competitive capital market Clare could borrow \$2000 to finance the consumption forgone and so end up with no net change in savings. It follows that forced saving could be fully offset by a decline in private saving and social security saving would have no effect on aggregate saving in the community.⁸

In practice, it appears that forced saving does increase total saving, but not by the full amount because of falls in private saving. Feldstein and Liebman (2002) review the extensive time series and cross-sectional studies in the United States. In the time series studies, per capita consumption is typically estimated as a function of disposable income, per capita wealth and per capita social security wealth. Drawing on Feldstein (1996), they estimate that a dollar increase in social security wealth reduces private saving (and increases consumption) by 56 cents. In cross-sectional studies, the financial wealth of individuals at the time of retirement is typically estimated as a function of lifetime income, demographic variables and the present discounted value of future social security benefits. The results are variable. Feldstein and Liebman (*ibid.*) conclude that each dollar of social security benefit is likely to reduce private savings by between zero and 50 cents, with the most likely estimate lying near the middle of the range. On the other hand, Gruber (2011) concludes that studies of the effects of tax concessions for employer-provided pensions on savings in the United States are inconclusive.

In Australia, the ratio of household saving of GDP fell significantly both in the 1980s when the superannuation guarantee was introduced and in the 1990s when the government mandated that employer contributions to employee superannuation rise from 6 to 9 per cent of gross wages. However, conclusions about cause and effect must be drawn cautiously. Other factors, for example an increasing proportion of elderly in society, may have contributed to the changes in the national household saving ratio.

There is less ambiguity about the impact of the age pension on savings. The Australian Age Pension is currently about \$18 000 per person and a retiree loses 50 cents in the dollar for each dollar of private income over about \$4000 up to about \$40 000 at which point there is no public age pension. Thus, retirees have little incentive to save \$100 000 or \$200 000 (outside the untaxed family home) as returns on investments will attract an implicit 50 per cent tax rate.

Labour supply

Retirement benefits can affect labour supply in various ways. The benefits may reduce both the need for income (the income effect) and the net income from work (the substitution effect). This is especially the case for the public age pension. As just noted, publicly supported retirees are discouraged from earning up to \$40 000 per annum because there is an implicit tax of 50 per cent on each dollar earned. Put another way, the price of leisure has fallen by 50 per cent. Naturally this increases the demand for leisure. Retirement benefits may also affect the labour supply of spouses.

Various time series studies have examined the effects of changes in social security payments on labour supply over time. Cross-sectional studies have examined how variations in social security payments within, or across, countries affect labour supply. Studies that draw on longitudinal data draw on both time series and cross-sectional variations in benefits.

There can be no doubt that increasing wealth has reduced the labour force participation of the aged. In most European countries labour force participation of males aged 65 and over has fallen from around 60 per cent to under 10 per cent (Feldstein and Liebman, 2002).

⁸ This is known as Ricardian equivalence. See Barro (1978) and Chapter 24.

However, the effect of retirement benefits on labour supply is debated. The cross-country studies in Gruber and Wise (1999) suggested that social security systems do affect labour supply. The level of implicit tax rates on continued work above retirement age explained an estimated 80 per cent of the variation in unused labour capacity of 55 to 65-year persons. Also, a high proportion of people retire at ages around 62 to 65 as they are eligible for social security benefits. On the other hand, Krueger and Meyer (2002) concluded from their review of US studies that social security wealth has only a modest impact on labour supply in the United States.

Conclusions

The major policy objectives of retirement policies are (1) to ensure that individuals who can provide for their retirement do so and (2) to protect those who cannot. Government has a financial interest in (1) and a social welfare interest in (2). Objective (1) presumes that retirement assistance is not an entitlement due to previous tax contributions, which is how it is sometimes viewed. In addition, the provision of retirement savings may be viewed as part of the objective of adequate aggregate saving for the economy. However, this begs the question as to whether aggregate domestic savings matter in an open economy where foreign savings are readily available.

To achieve objective (1), most governments allow substantial tax concessions to pensions. The Australian government allows major tax concessions to both contributions to pensions and to earnings of pension funds and pensions are themselves tax-free. To achieve objective (2) the government provides means-tested public pensions to about 80 per cent of retirees on a pay-as-you-go (PAYG) basis from consolidated revenue.

PAYG funding introduces issues of sustainability and intergenerational equity. In many countries, including Australia, the cost of public pensions as a proportion of GDP is forecast to rise significantly and the share of workers available to fund it to fall significantly. Therefore, future generations will pay some of the costs of current workers. This may be regarded as equitable because future generations are likely to be better off than the present one. Guest and McDonald (2002) estimated that, with realistic assumptions about growth in labour productivity and demographic changes, living standards per capita are likely to be 75 per cent higher in 2042 than they were in 2002. It is, of course, a value judgment as to how much current pension liabilities can fairly be passed on to future generations, who may turn out to be less affluent than this forecast. The move towards contributed pensions and away from defined benefits will significantly reduce the costs for future generations.

Turning to efficiency issues, the main concerns are the impacts of retirement policies on labour supply, private savings and the allocation of capital. Both theory and most evidence suggest that retirement benefits significantly affect labour supply. A large proportion of workers retire fully once pensions become available. The impact of retirement policies on savings is less clear. Tax concessions for saving in retirement funds probably increase savings and may reduce the inter-temporal distortion of consumption caused by income taxation. On the other hand, forced retirement savings reduce private savings significantly so that the net savings effect may be small. Public age pensions certainly reduce savings. Finally, the tax concessions to super may distort saving avenues but they probably have little final effect on capital allocation.

Summary

- Welfare programs of any kind raise three general issues: the measurement of needs; how to provide generous support to households with needs without distorting behaviour; and the roles of the government and the private sector.
- Welfare programs for persons of workforce age include wage-rate subsidies, training and job assistance programs, unemployment benefits, injury compensation and disability pensions.
- Wage-rate subsidies have a modest effect on employment and wage rates, with some benefits accruing to employers and existing workers rather than new workers.
- Training and job assistance programs can improve employment, but job creation specifically for unemployed workers appears to have limited benefits.
- Unemployment benefits, injury compensation and disability benefits create disincentives: the levels of unemployment, injury and disability are responsive to some extent to the levels of benefit provided.
- Family needs are a function of income, the number of children, mothers working outside the home and single-headed families. Quantification of these needs is generally based on expenditure requirements but is ultimately a normative decision.
- In Australia family assistance payments exceed 2.5 per cent of GDP. Some assistance is heavily means tested and some much less so. Benefit withdrawal rates vary from 20 cents to 60 cents in the dollar. The higher withdrawal rates have significant labour supply effects.
- Provisions for retirement include public age pensions funded from consolidated revenue, compulsory employment-based payments to accredited pension funds and voluntary saving. Tax concessions are an important complementary policy.
- Government has a major welfare role in retirement provision primarily to protect low-income households as well as households that make inadequate personal saving for retirement.
- Theory and most evidence suggest that all forms of retirement schemes reduce labour supply.
- Tax concessions and mandated retirement schemes tend to increase household saving, but not necessarily by a large amount. Public pensions reduce household savings.

Questions

1. Suppose that the government is considering whether to provide income support to low-income workers by minimum wage regulation, earned income tax credits or employment subsidies. Which method would you recommend and why?
2. What is the evidence that unemployment benefits reduce labour supply?
3. Given that disability is often a matter of degree, how can government distinguish between those people who have a disability and those who do not? And how can government establish adequate benefits for people with minor disability without destroying the incentive to work?
4. Should family assistance be means tested on the family income or the income of the second earner?
5. Do children provide utility to parents? If so, should people who do not have children be required to subsidise families with children?
6. Who benefits from governments subsidies to suppliers of child care services? Explain the reasons for your answer.
7. What does full funding of a pension mean? Should public pensions be funded by a pay-as-you-go system or fully funded?
8. Tax concessions may be applied to contributions to pension funds, to earnings of funds or income from funds. Are some tax concessions more equitable or efficient than others?
9. In Australia employers are responsible for paying the 9 per cent Superannuation Guarantee for employees. Does this mean that the employer bears the cost of the superannuation payments? If not, how are the payments borne?
10. The Superannuation Guarantee requires that employees save 9 per cent of their gross wage in a superannuation account. Does this mean that employees will save a minimum of 9 per cent of their wage each year?
11. What are the major impacts of alternative retirement schemes on (i) labour supply and (ii) household savings?

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