Middle Class Welfare in Australia?

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by Bruce Bradbury

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Foreword

In recent years the welfare state has come under closer scrutiny than ever before, not least because its continued existence in its present form is under question from a number of sources. Some analysts have postulated that support for the welfare state has been maintained because the middle classes benefit from some of its elements. However, others have been concerned that benefits to the middle classes are not justified within the context of the highly targeted welfare state that exists in Australia.

The debates surrounding these issues raise economic, social and political questions that are central to the role of the welfare state, as well as to the size and incidence of its benefits and costs, and to the degree of legitimacy and support it attracts in the community. The fiscal imperatives of government, in conjunction with the 'new individualism' are raising issues about the respective roles of government and non-government agencies (including households) in the provision, finance and delivery of the entire range of welfare state activity.

This report, commissioned by the Department of Social Security, addresses these issues by attempting to measure the extent of government support in cash or kind provided to individuals and households in Australia that is directed towards the middle classes. It includes a general discussion of the meaning of welfare and an operational definition of 'middle class', before presenting an analysis of the extent of 'middle class welfare' itself.

The research on which the report is based provides a useful analysis of the distributional effects of government-funded welfare services and adds to the body of research undertaken by the Social Policy Research Centre on issues of equity, equality and other aspects of living standards for Australian families. As such, it should contribute to discussion in areas of interest to welfare groups, other researchers and the general community.

Peter Saunders
Director

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1 Introduction

Australia has one of the most targeted welfare states in the developed world.[1] Yet in spite of this, or perhaps as a natural extension of the social forces that have led to this, concerns are often advanced that too much of the welfare effort has been 'captured' by the middle class.

In the 1980s, the idea of middle class capture was used by the New Zealand Treasury as part of a justification for a retrenchment of the welfare state (Bertram, 1988). More recently in Australia, Saul Eslake (the chief economist for the ANZ bank, 1996), in a widely publicised analysis examining fiscal options for the 1996-97 Budget, pointed to the fact that high income households receive substantial support from government welfare transfers and services. He argued that substantial savings could be made by denying the top 20 per cent of households access to these benefits. As well as helping reduce the Budget deficit, private saving might also increase as high income households saved to provide these welfare services for themselves.

These middle class benefits, moreover, are not only in the form of direct payments. Many commentators have drawn attention to the substantial tax concessions available to middle-income families – particularly through superannuation.

The main focus of this report is thus the question 'To what extent are welfare transfers and services in Australia directed towards the "middle class"'? However, this question makes most sense when understood in the context of the wider debate about whether such middle class welfare is desirable.

Consequently, the report commences with a discussion of the role of the state in providing or funding 'welfare services' in mixed economy societies like Australia. 'Welfare' is defined here to include government support in cash or kind provided to individuals and households. This includes education, health, social security and welfare, housing and community services, as well as the tax expenditures in these areas. The report focuses upon the most important components of these: education, health, and social security, together with superannuation tax expenditures.

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1 For example, Atkinson, Rainwater and Smeeding (1995, Table 7.5) examine the proportion of cash transfers paid to different quintiles of the equivalent income distribution. They find that, of 14 OECD countries, Australia directed the largest share of transfers to the bottom quintile, and the smallest share to the top quintile.

At the outset, it should be emphasised that this functional definition of 'welfare' goes beyond some uses of the term, and not as far as others. The root meaning of the word is closely associated with the concept of 'well-being', and this usage continues in terms such the discipline of 'welfare economics'. At the other extreme, in the North American literature, 'welfare' often refers only to a particular income support program directed at families in poverty (Aid to Families with Dependent Children). This narrow definition does not encompass the range of government programs which have been included in the debates over middle class welfare in Australia.

Nonetheless, one of the key goals of welfare services is distributional: to maintain the living standards of the disadvantaged and to reduce social inequality. Many commentators, on both the left and right, have criticised welfare state institutions for providing too many benefits to the well-off. However, the institutions of the welfare state also have other, efficiency-related, goals which are often overlooked in this debate. These stem from failures of capital and insurance markets in the fields of health, education and within-lifetime income distribution. This means that 'churning' – the same people both receiving services and paying the taxes to finance them – should not necessarily be considered undesirable.

Nonetheless it is important for welfare services to be evaluated in terms of their distributional outcomes, and this is the focus of the remainder of the report. Section 3 begins with an initial overview of the distributional incidence of government-funded welfare services in Australia in the early 1990s. This is based upon the results of the ABS (1996a) study *The Effects of Government Benefits and Taxes on Household Income.* This study shows significant cash and non-cash benefits being received by middle-income and higher income households (though the benefits still tend to equalise living standards). However, some of these patterns are due to the way in which households are ranked.

Section 4, therefore, examines the most appropriate indicators for identifying which households have high and low standards of living. These indicators are then employed in Section 5 to describe the overall distributional impact of cash and non-cash benefits in Australia. Section 6 then examines the impact of education and health benefits in 1993-94, whilst Section 7 examines in more detail the trends in the distribution of cash benefits from 1984 to 1993-94. Section 8 then examines the distributional impact of superannuation. The results and conclusions of the report are summarised in Section 9.

2 Welfare and the Role of the State

Modern justifications for state activity always involve an assertion that the specified state activity will increase individual and/or social welfare. Whilst normative economic theory places great stock in the ability of markets to achieve these goals, there are many instances where unregulated markets will fail on either efficiency or equity grounds. The most fundamental form of intervention required of the state in capitalist societies is the management of the marketplace, ensuring the viability of market agreements. In addition, under certain circumstances markets are known to be inefficient at allocating resources. The existence of externalities, public goods, information asymmetry, and the 'animal spirits' of market participants all provide efficiency rationales for state intervention in the market. Finally, to these efficiency arguments for state intervention, can be added equity objectives of reducing inequality and poverty.

Countering these efficiency and equity arguments for state intervention are another set of arguments pointing to the efficiency (and sometimes equity) costs of state intervention. These include both the distortion of individual behaviour as a result of taxes or benefits, and some types of institutional failure, whereby narrow interest groups are able to exercise undue control over the operations of the state.

Whilst these points about the role of the state in the capitalist market are relevant to all areas of state activity, the term 'welfare state' is typically used in a much narrower sense to include those areas of state activity which provide services directly to individuals and households. This includes health care, education, income support and a range of other personal services provided or financed by the state. State programs directed at industry, or for the provision of public goods such as defence and security are usually excluded.

At various times, all the normative reasons for state intervention summarised above have been used to justify these 'welfare state' activities. Externality arguments have been used to justify health and education spending and macroeconomic stabilisation arguments to justify unemployment benefits and housing policy.

The most important rationales for the welfare state, however, stem from two key issues. The first is equity and redistribution. This is most commonly formulated in one of two ways, either as an objective to ensure a relatively equal distribution of resources (inequality reduction), or as a goal of minimising the gap between the

most disadvantaged and the modal living standard of the community (poverty alleviation).[2]

The second key issue is the need for state-provided insurance and within-lifetime redistribution because of information and agency failures in capital markets (Barr, 1987, Le Grand, 1995). 'Social insurance' was the first goal of the welfare state, and remains important to this day, even though the welfare states of Australia and New Zealand have never really adopted this as a central objective.

One way of quantifying the relative importance of the different components of state welfare is shown in Table 2.1. This shows the allocation of expenditures across different functional areas of state activity in Australia in the early 1990s. The shaded region of the table – expenditures on education, health, social security and (to a lesser extent) housing and social welfare – represents the focus of this present study.

In addition to expenditures, the table includes selected 'tax expenditures': deviations from a 'benchmark' tax system which lead to benefits for particular individuals or business entities. These are particularly important in the functional area of social security, where they are equivalent to 23 per cent of direct expenditure. The main tax expenditure in this area is superannuation, with an estimated value of $5.8b in 1994-95 (increasing to $8.7b in 1998-99). The remaining tax expenditures in this area mainly comprise concessions associated with the receipt of income support payments and dependent spouse and low income earner concessions.

There are, however, some tax concessions for families with dependent spouses and for families with children which apply across the income distribution. The recently introduced Family Tax Initiative has expanded the latter in particular, so that by 1998-99, these two concessions will amount to around $1b per annum.[3] In addition, the government has recently introduced a health insurance rebate ($113m in 1998-99) and a savings rebate ($350m in 1998-99, rising steeply thereafter) which will apply to a wide range of middle-income households.

The goal of this report is to undertake a broad overview of welfare activity (with a focus on the mid-1990s), and so only the most important category of tax expenditure, superannuation, is examined in any detail. However, it needs to be

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2 This is a relative formulation of poverty. An alternative formulation is to have an objective of increasing the absolute living standard of the most disadvantaged.

3 The Family Tax Initiative is expected to cost $591m and the Dependent Spouse Rebate $432m (Treasury, *Tax Expenditures Statement, 1996-97*).

Table 2.1: Government Expenditures and Tax Expenditures by Purpose: 1994-95

Purpose	Expenditures $b	Tax Expenditures $b	Combined %
General public services	13.3	0.1	7.8
Defence	9.1	0.0	5.3
Public order and safety	6.3	-	3.7
Education	22.6	0.0	13.1
Health	25.1	0.5	14.9
Social security and welfare	46.2	10.8	33.2
Housing and Community services	5.3	0.2	3.2
Recreation and Culture	3.5	0.0	2.0
Fuel and Energy	3.4	0.4	2.2
Agriculture, forestry, fishing and hunting	2.1	0.2	1.3
Mining, manufacturing and construction	0.5	1.5	1.2
Transport and communications	14.4	0.0	8.4
Other economic affairs	5.2	1.0	3.6
Total (excludes interest)	157.0	14.9	100.0

Notes: Expenditures include current and capital expenditure and are for Commonwealth, State, Territory and local governments combined. Tax expenditures are for Commonwealth only. Both exclude 'other purposes' expenditure (mainly interest). Tax expenditures exclude 'not allocated to function' categories.

Source: ABS (1995) *Government Finance Statistics Australia 1994-95* (Catalogue No. 5512.0) and Department of Treasury (1997) *Tax Expenditures Statement 1995-96.*

remembered that, for many purposes tax and direct expenditures are entirely equivalent, and either mechanism can be used with equivalent distributional impact. In Australia, this is most evident in the field of family policy where programs to assist middle-income families have moved back and forth between the tax and social security systems over time. An example of this is discussed in Section 7 below.

Even though Table 2.1 does include tax expenditures, as a summary of the role of the state in Australian society, it has many limitations. General revenue raising measures (the other side of the balance sheet) are not identified. To some extent the focus on the expenditure side of the budget is sensible, as the main goal of taxes is to raise revenue for expenditure purposes. Nonetheless, many taxes (e.g. tariffs and progressive tax scales) do have important policy purposes other than revenue raising (protection and inequality reduction respectively). More significantly, some state activities – particularly those associated with the

regulation of civil life – have impacts much greater than their associated expenditures.[4]

These limitations notwithstanding, it is interesting to note that the 'welfare state' does comprise a very significant part of the modern Australian state. Health, education, social security and housing encompass almost two-thirds (64.4 per cent) of total expenditures and tax expenditures. This amounts to just under one-quarter of GDP.[5]

It is this narrower concept of the 'welfare state' that will be the focus as we consider whether welfare does or should benefit the middle class. However, the overall picture of state activity summarised in Table 2.1 does also tell another story. Broadly speaking, the remaining one-third of state expenditures comprises two components. These are public goods (such as regulation, defence, public order) and payments to particular industries. In both cases, the benefits of these activities accrue widely across the economy, and in many cases, disproportionately to the middle class and less disadvantaged households.[6] A significant proportion of the activity of the modern state is therefore explicitly intended to apply widely across the community.

However, many critics have singled out the welfare activities of the state, and criticised them for their poor distributive outcomes. The work of Julian Le Grand and colleagues in the 1980s has been particularly prominent in this respect (e.g. Le Grand, 1982, Goodin and Le Grand, 1987).

In the latter volume, Goodin and Le Grand survey a range of social welfare programs in several countries, and conclude that:

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4 Other limitations include the omission of many tax expenditures which are not tied to particular purposes and the omission of State Government provided concessions. The latter, however, comprise less than two per cent of budgeted non-cash benefits (Johnson, Manning and Hellwig, 1995: 164).

5 This does not mean that one-quarter of economic production is directed towards the consumption of welfare services, as social security expenditures involve transfers of resources between different individuals rather than the actual production of goods or services.

6 In the case of public goods provided at a uniform (possibly zero) price to all individuals, it can be shown that, under plausible assumptions, the wealthy will benefit more than the poor from the availability of the good (see Aaron and McGuire, 1970; Goodin and Le Grand, 1987, Chapter 2). The key assumption required is that the marginal utility gained from the public good is higher (or at least remains constant) for people with higher income levels. One oft-cited example where the wealthy may benefit more than the poor is in the protection of private property by public police services.

- the non-poor benefit extensively from the welfare state;
- this has arisen in part because their interests were directly served by the setting up of certain 'universalist' programmes and in part because they have infiltrated programmes originally designed for the benefit of the poor;
- they will defend those parts of the welfare state from which they see themselves as benefiting or likely to benefit, while supporting reductions in those parts from which they do not. (Goodin and Le Grand, 1987: 203)

The non-poor, they argue, have more private resources (such as education and cars) which give them better access to services, they are better able to manipulate bureaucratic rules, and they have the political weight to ensure the broadening of the boundaries of welfare programs. Whilst there are some potential areas where welfare state services can be more accurately targeted to the most needy, they conclude that some middle class involvement in the welfare state is probably inevitable.

For those with concern for the equity goals of the welfare state, whether this middle class involvement is desirable depends upon the alternative. If it were possible to target services more accurately, and if this would not lead to a large reduction in the total volume of resources, then the poor would be better off without middle class involvement. On the other hand, if the middle class have a stake in the activities of the welfare state, this may increase political support for programs which also benefit the poor, though Goodin and Le Grand at least do not find this argument convincing.

Similar concerns about middle class welfare have also been voiced by more conservative critics. The Australian National Commission of Audit (1996), for example, pointed to the wastefulness of 'churning': the process by which middle class households both pay taxes and receive substantial benefits. Eslake (1996; see next section) and the New Zealand Treasury have made similar points. These commentators see a reduction in middle class welfare as permitting a corresponding reduction in the distortionary impact of the state without removing the framework of poverty alleviation policy. For them, middle class welfare leads to excessive taxes, whilst for more radical critics it leads to insufficient assistance to the poor. Both agree, though, that there should be an accurate targeting of welfare to the most disadvantaged in society.

However, it can be argued that both these conservative and radical critiques pay insufficient attention to *efficiency* rationales for welfare state activity. In particular, failures of capital and insurance markets in the fields of health,

education and within-lifetime income distribution provide a major rationale for welfare state policies (Barr, 1987, Bradbury 1996a).

For example, private health care insurance faces many well-known problems, with limited mechanisms for ensuring control over expenditure and with people suffering poor health more likely to insure. Both these features drive up health costs.[7] State intervention in health service provision thus has the potential to provide efficiency gains which more than outweigh the taxation burden on middle and higher income households which is required to finance this provision. It is important to understand that this rationale for state involvement is quite separate to, and in addition to, equity arguments that all income groups should have equal access to health care.

Similarly, family payments paid to middle class families with children can be justified as efficient responses to the imperfections in capital markets which restrict families in moving resources across their lifetime to periods when their expenditure needs are greatest (Bradbury, 1996a, 1997). In addition, these payments (and services such as child care) also address other equity issues (such as gender equity, and the within-household distribution of resources) which exist independently of class or income-based equity concerns.

We thus should not simply dismiss middle class welfare as unproductive 'churning', even though the state may be providing services to the same middle class groups that provide tax revenue. Rather, individual policies need to be evaluated against alternatives using the criteria of both efficiency and equity. As Barr argues:

> ... public involvement in institutions of the general sort which comprise the welfare state (i.e. income support, health care, education and housing) can, for the most part, be justified rather strongly in efficiency terms, quite independent of debates about social justice. To the extent to which this is so, it is no longer public involvement per se which is controversial but only its precise form and the choice of its distributional objectives. (Barr, 1987: xii)

Nonetheless, whilst many welfare programs might be justified on efficiency grounds alone, these outcomes need to be evaluated in the light of equity outcomes also. It is these equity outcomes that are the main focus of this report. A broad-brush overview of these outcomes is described in the next section.

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7 Managed care programs such as health maintenance organisations (HMOs) provide a partial solution to these problems. However, the information asymmetry between the organisation and the recipients means that people may be reluctant to join such schemes (i.e. they do not trust the HMO to provide adequate services).

3 The Distribution of Welfare: An Initial Overview

A broad overview of the distributional impact of government expenditure policies on household living standards can be obtained from the ABS (1996) study *The Effects of Government Benefits and Taxes on Household Income*. This 'Fiscal Incidence' study assigns most government 'welfare' expenditure to those households which receive transfers or services via these programs. The expenditure items allocated include cash benefits (pensions, benefits and allowances), as well as non-cash benefits in the form of health, education and other welfare expenditures. These areas correspond to the shaded rows in Table 2.1, with the important exception that tax expenditures such as superannuation and family-related concessions are not included. (Superannuation is considered in Section 8 of this report).

When using these data to examine the distributional impact of government expenditures, there are a number of limitations that need to be considered. The key assumptions of fiscal incidence studies are that government expenditures are assumed to benefit those households which receive the relevant services, and that the value of this benefit is equal to the government expenditure on the service. Thus, no account is taken of the shifting of benefits (or taxes) onto other households,[8] nor is direct evaluation made of the benefit of a given service to a particular household.

In addition, the methodology only considers the benefits that a particular household receives (or the taxes they pay) at one point in time. For example, only some households are observed to be receiving education benefits, but almost all people attend school when they are young. These life-cycle considerations are particularly important when we wish to compare the receipt of benefits against other indicators of well-being such as income. For some (but not all) purposes, it would be preferable if we could compare benefit receipt with lifetime income. However, even if such data existed they would be of limited policy relevance since they would be based primarily on historical rather than current circumstances. One solution to this can be found in simulation methods (e.g. Falkingham and Harding, 1996). An alternative approach, and that used here, is to

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8 One example of shifting is that middle-aged households may have to provide less support to their parents if there is an Age Pension. The pension thus provides benefits to a wider range of households than assumed in a fiscal incidence study. See Piggott (1987) for a review of the methodological limitations of fiscal incidence studies.

examine the association between well-being and benefit receipt within life-cycle categories.

In addition to these general limitations associated with fiscal incidence studies, there are always practical limitations in the extent to which distributional elements of particular policies can be incorporated. Whilst receipt of cash benefits was directly collected in the Household Expenditure Survey (HES) which forms the basis of the fiscal incidence study, receipt of non-cash services was imputed on the basis of available information. Some features of the modelling procedure of particular relevance to distributional questions are as follows. More detail can be found in ABS (1996b).

- *Education* expenditure is generally allocated to those households containing students studying in the respective institutions. School expenditure is allocated separately to government and non-government students (the former receive greater per capita government support). However, no account is taken of the different allocation levels to different types of private schools. Pre-school expenditure is allocated according to average usage patterns by child age, rather than according to actual usage of particular households. Tertiary education expenditure has liability for Higher Education Contribution Scheme (HECS) deducted.

- *Child care* benefits are allocated according to patterns of usage by labour force status of parents and age of child. The calculation of child care subsidy takes account of the income test.

- *Health care* expenditure is generally allocated to individuals on the basis of age/sex/state utilisation rates for government funded services. Pharmaceutical concessions are allocated so as to take account of higher benefits received by health care card holders. Public health and health research expenditure is allocated equally to each person in the population. No account is taken of the impact of private health care insurance on expenditures, nor are any differences in usage patterns or health needs within each of the age/sex/state groups.

- *Housing* benefits include implicit rent subsidies to public housing renters, but not the tax subsidies to owner-occupiers implicit via the non-taxation of imputed rent.

Whilst these points reveal some limitations of the ABS methodology, the data available do provide our best estimate of the types of households that benefit most from the whole range of government welfare expenditure (at least in terms of 'first round' benefits). Some limitations of the modelling procedure mean that there may be an over-estimation of the extent of benefits received by higher

income households. Students attending wealthy private schools receive less government subsidy than the modelled average, and private health insurance may mean that rich households consume less public health resources (see Section 6.2). On the other hand, high-income people may consume more health resources relative to their health needs than low-income people of the same age. These issues are considered further below.

In addition, we do not consider in this report the tax expenditures arising from the income tax concessions associated with family and other needs. The much larger taxation concessions associated with superannuation are considered however, in Section 8.

Some key patterns shown in the data assembled by the ABS study are summarised in Table 3.1. The top panel of the table shows average income for households in different gross income quintiles. These quintiles are formed by placing the 20 per cent of households with the lowest gross income (i.e. total cash income) in the bottom quintile, the 20 per cent with the next lowest incomes in the second quintile and so on. Several different income components are shown. 'Private income' is all regular income receipts other than government benefits. 'Cash benefits' are government benefits, pensions and allowances.[9] 'Gross income' is the sum of these two income sources, and 'disposable income' is gross income less income tax. 'Non-cash' benefits are an estimate of the value of welfare services provided by government directly to consumers. These include health care, education, housing, child care and other welfare services.

Notable in this table is that middle and high-income households receive significant amounts of cash and non-cash benefits (particularly the latter). On average, the top quintile receives $23 per week in cash benefits, and $132 per week in non-cash benefits. Saul Eslake noted that these weekly incomes imply significant aggregate annual expenditures on high income households (Eslake, 1996). Table 3.1 implies that households in the top 20 per cent of the income distribution received a total of $1.6bn in cash benefits, and $9.1bn in non-cash benefits (or $6.1bn if school education is excluded as in Eslake's paper).[10] Eslake noted that:

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9 This terminology is different to that used by ABS. See the note to Table 3.1 for the concordance with ABS terminology.

10 These aggregates can be obtained by multiplying the weekly expenditures in Table 3.1 by 52 and the number of households (shown in Table 4.1). Note that these aggregates are less than those shown in Table 2.1 due to recording and coverage limitations of the Household Expenditure Survey data.

> Superficially, therefore, the Commonwealth could achieve virtually all of its $8 billion target simply by denying the most affluent 20% of households access to any direct or indirect government benefits, without in any way adversely affecting those in need of community support. (Eslake, 1996: 10)

Table 3.1: Income, Benefits and Taxes by Gross Income Quintile: 1993-94[a]

	Household Gross Income Quintile					
	Bottom	2nd	Middle	4th	Top	All
Quintile lower bound ($ pw)	-2 130	267	459	741	1 101	-2 130
	Mean Household Income ($ pw)					
Private Income	15	166	504	861	1 589	627
Cash Benefits[b]	136	187	88	49	23	97
Gross Income	151	354	593	910	1 612	724
Income Tax[b]	2	18	81	171	414	137
Disposable Income	149	336	512	738	1 198	586
Non-Cash Benefits[b]	112	157	140	133	132	135
	Relative to Disposable Income (%)					
Private Income	9.8	49.5	98.5	116.6	132.6	106.9
Cash Benefits[b]	91.6	55.8	17.3	6.6	1.9	16.5
Gross Income	101.4	105.3	115.8	123.2	134.5	123.4
Income Tax[b]	1.4	5.3	15.8	23.2	34.5	23.4
Disposable Income	100.0	100.0	100.0	100.0	100.0	100.0
Non-Cash Benefits[b]	75.3	46.9	27.4	18.0	11.0	23.0

Notes: (a) Estimates in this, and subsequent, tables have minor differences to those shown in ABS (1996) due to data perturbation to ensure confidentiality.

(b) This terminology is different from that of the ABS. They use 'direct benefits', 'direct tax', and 'indirect benefits' instead of 'cash benefits', 'income tax' and 'non-cash benefits' respectively.

Source: 1993-94 Household Expenditure Survey, Confidentialised Unit Record File

Whilst recognising that such savings could not be achieved in practice because payments are not income tested on a household basis, some payments are state responsibilities, and there may be other grounds for maintaining some subsidies, he nonetheless concluded that 'it is clear that a more rigorous approach to determining the eligibility for Commonwealth benefits would produce substantial saving' (Eslake, 1996: 10). As well as reducing the government deficit, such expenditure reductions would further increase national savings rates by forcing individuals to save for services previously provided by government.

Implicit in these comments is a view that the prime role of these welfare programs is to address equity rather than efficiency issues. What does Table 3.1 reveal about the equity impact of these programs?

A first point to note is that, while many higher income households receive cash benefits, the average amount received is much less than for lower income households. Though top quintile households receive an average of $23 per week, the average amount received across all households is $97 per week. Nonetheless, this pattern does not hold for non-cash benefits. In this case the amount received by top quintile households is close to the overall average of $135 per week.

However, if we are interested in the redistributive impact of government benefits, this absolute measure is of limited relevance. We can define a benefit as 'redistributive' if the distribution of income including this benefit is more equal than the distribution without it. If we then adopt the conventional assumption that inequality depends upon income ratios (and ignore re-ranking), a benefit will be redistributive if it amounts to a smaller proportion of the income of high income families. This is certainly the case with respect to disposable income, as is shown in the lower panel of Table 3.1. Whilst non-cash benefits were equal to 75 per cent of disposable income for the bottom quintile, they were only 11 per cent of income for the top quintile (23 per cent overall). Hence, unless there was extreme re-ranking of households, the distribution including non-cash benefits must be more equal than the disposable income distribution alone.

This conclusion, that non-cash benefits lead to a more equal distribution of living standards, is a standard result evident from previous studies (examples include Smeeding et al., 1993; Johnson, Manning and Hellwig, 1995).

However, it could be argued that the income ratio model of inequality is unduly restrictive, and indeed it is possible to define inequality in terms of income differences rather than ratios. Using this perspective, adding the same dollar value of benefits to every household leaves inequality unaltered. Whilst such a conception of inequality is defensible,[11] if not conventional, a consistent application does imply some features which might make this undesirable. In particular, the application of this perspective to income taxation implies that any income tax which increases in dollar terms as income increases will reduce inequality. This includes many tax schedules where the average tax rate decreases with income. Such taxes are most typically defined as 'regressive' since they lead to an increase in inequality defined in a ratio sense. Since progressivity is

11 See Amiel and Cowell (1997) for a discussion of these issues (and an approach to measuring inequality which is between these two approaches).

conventionally defined in proportionate terms when considering taxes, the same basis is used here when considering benefits.[12]

From this perspective, both the cash and non-cash welfare benefits shown in Table 3.1 are progressive. The question to be considered here is thus whether the benefits are *sufficiently* progressive. One way of addressing this question is to consider changes over time in the distribution of benefits. Table 3.2 and Figure 3.1 show the distribution of cash and non-cash benefits as calculated in the ABS Fiscal Incidence studies for 1984, 1988-89 and 1993-94.

For both cash and non-cash benefits, both real and relative benefits going to the top quintile have declined since 1984. For the middle three quintiles, however, there has been a substantial increase in real and relative cash benefits (matched by a smaller increase in non-cash benefits). Does this dramatic increase in cash benefits for the middle quintiles reflect a growth in middle class welfare?

Addressing this question requires a clearer understanding of 'middle class' and 'welfare'. It should be clear from the outset that the notion of 'class' encapsulated in Tables 3.1 and 3.2 is not unambiguous. Whilst gross income is an important contributor to living standards and hence closely related to most conceptions of class (or 'advantage' more generally) there are limitations with this measure. Some problems are apparent in these tables. For example, given the targeted nature of income support payments in Australia, it may appear surprising that in 1993-94 both cash and non-cash benefits are higher for the second quintile than for the first.

The lower level of benefits in the first quintile is mainly due to the smaller average household size of low-income households, but also because of a significant number of self-employed households in the bottom quintile. For many reasons, such families may have very low measured incomes, but substantially better actual living standards (Eardley and Bradbury, 1996).

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12 'Progressive' and 'redistributive' are closely related but not identical concepts, even if attention is confined to ratio-based inequality measures. They can differ because of both re-ranking and average tax effects. A progressive tax is typically defined as one where the average tax rate increases with income (Lambert, 1989). (This definition can apply equally to the negative effective tax rates due to benefits). Re-ranking can occur when a very high benefit given to individuals with low private incomes gives them a higher disposable income than that of high-income individuals. In this case, a progressive benefit can increase inequality. In the absence of re-ranking, a progressive tax or benefit will reduce inequality. However, the degree of inequality reduction will depend both on the degree of progressivity and the average tax rate (Kakwani, 1986).

Table 3.2: Cash and Non-cash Benefits: 1984 to 1993-94[a]

	Household Gross Income Quintile					
	Bottom	2nd	Middle	4th	Top	All
	Real Incomes ($1993-94 per week)					
Cash Benefits						
1984	160	147	54	42	33	87
1988-89	144	132	51	32	23	76
1993-94	142	185	88	48	23	97
Non-Cash Benefits						
1984	106	139	138	145	163	138
1988-89	138	156	146	151	167	152
1993-94	125	160	149	146	152	146
	Relative to Disposable Income (%)					
Cash Benefits						
1984	83.3	40.1	10.0	5.6	2.8	14.4
1988-89	79.9	36.8	9.6	4.3	1.9	12.5
1993-94	81.0	54.6	17.1	6.5	1.9	16.2
Non-Cash Benefits						
1984	55.4	38.2	25.5	19.3	13.8	22.9
1988-89	76.6	43.8	27.3	20.1	13.7	24.9
1993-94	71.3	47.2	28.9	19.7	12.6	24.5

Notes: (a) Estimates for 1993-94 in this table differ from those in other tables because of the differences between published and unit record data, and the different methodology used for time series publications. See notes to Table 3.1 and ABS (1996).

Source: ABS (1996).

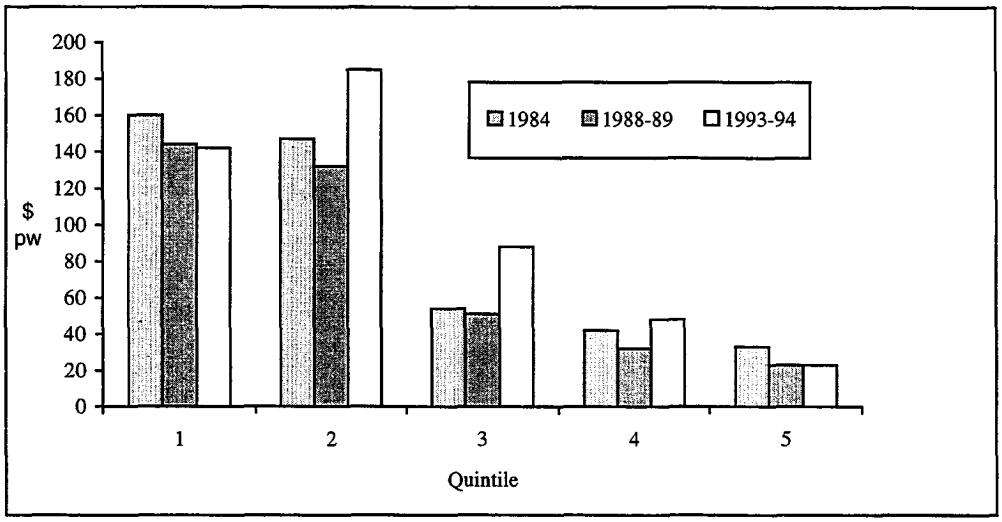
Perhaps even more striking to the readers of this report may be the low level of household income overall. Table 3.1 shows that, in 1993-94, households were in the top quintile if their total gross income exceeded $57 350 per annum (or $65 400 in 1996-97 dollars[13]). This can be compared with average wages. In the same year, a household containing a male earning average weekly male earnings, and a female with average weekly female earnings had a gross income of $54 020 per annum ($59 700 in February 1997). If both the man and the woman were adults earning average full-time wages, their household income would be $65 400 per annum ($74 200 in February 1997).[14]

13 This is inflated by average weekly ordinary time earnings for full-time employed adults, which rose by 14 per cent between February 1994 and February 1997.

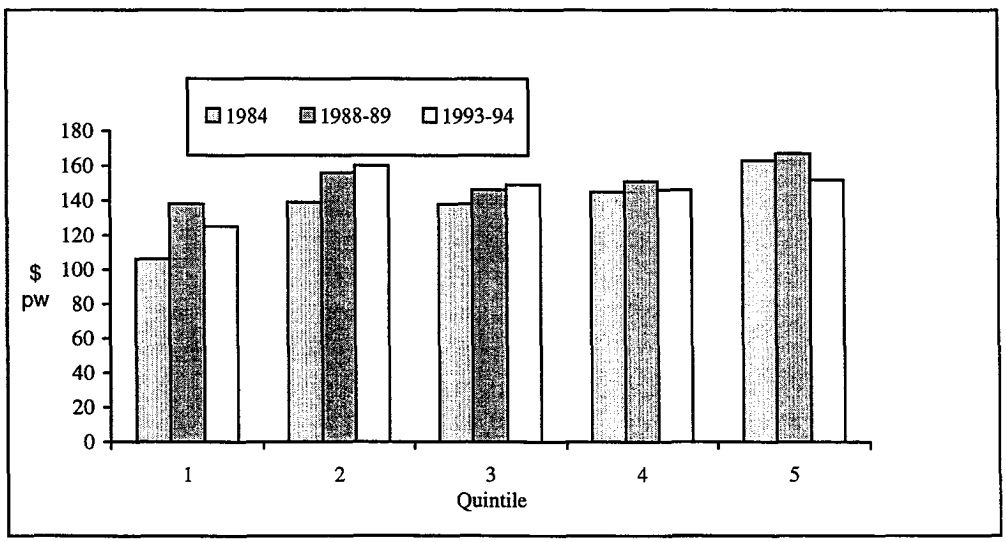
14 Data from ABS, *Average Weekly Earnings, Australia, Preliminary, February 1997* Catalogue No. 6301.0. Estimates are seasonally adjusted total earnings (February quarter).

Figure 3.1: Real Cash and Non-cash Benefits by Gross Income Quintile: 1984 to 1993-94

A. Cash Benefits



B. Non-cash Benefits



Source: Table 3.2.

The reason these 'average' households are placed in the top quintile of the overall income distribution is because many other households have no or only one wage earner. In large part, this reflects variations in employment with household size and across the life cycle. For example, if attention is restricted to work force age households containing more than just a single adult or a couple, then the gross income cut-off in 1993-94 was $66 560 per annum for the top quintile. A gross income of $48 724 was required to place such a household in the top two income quintiles. At the same time, however, such households may have much greater expenditure needs than smaller households.

The description of 'middle' or 'upper' class may therefore depend very much on the observer's point of reference. In addition, other indicators of resources such as wealth and after-tax rather than gross income may be better indicators of living standards. Because of these considerations, it is important to test the robustness of the distributional results shown in Tables 3.1 and 3.2 to alternative ways of measuring economic well-being, and alternative definitions of the 'middle class'. This is the subject of the next section.

4 Defining the 'Middle Class'

What do we mean by 'middle class' and how can we operationalise such a concept? Whilst there are many concepts of social class, the concept which is closest to the debate considered here might be summarised as 'people who have a relatively high level of access to economic resources and opportunities'. There is no emphasis on 'middle' in this definition. However this parallels common usage in this debate, and unless otherwise specified, 'middle class' here includes 'upper class'. A more succinct definition might be thus 'the not-disadvantaged' or simply 'the not-poor'.

Because of the range of meanings associated with the term, this report does not attempt to define a specific group as 'middle class'. Rather the substance of the debate is best served by a number of measures which indicate the extent of access to economic resources and opportunities. This section of the report outlines the rationale for the particular indicators used in the remainder of the report.

One important issue is the time period over which disadvantage is defined. Should we focus on current period poverty, or on identifying those people with a low average standard of living over their lifetime. The life-cycle theory of consumption suggests that, if there are perfect capital and insurance markets, then people will borrow, save and insure so as to have a reasonably steady level of real consumption over their lifetime (where 'real' means adjusting for variations in both prices and needs). To the extent to which there are imperfections in these markets, there may be efficiency grounds for state transfers across the life cycle (subject to a consideration of the efficiency costs of such transfers).

The concept of living standards that we focus on here is that of *current real consumption*. Whilst this is not a perfect indicator of the overall consumption opportunities available to household members, it has a policy-relevant interpretation irrespective of the extent of private savings opportunities. If there are perfect capital markets, then real consumption in any period will be a good indicator of a person's (expected) lifetime income. Alternately, in the (more likely) absence of perfect capital markets, real consumption in a given period will reflect both lifetime resources and short-term variations in incomes and needs. Since both of these can provide rationales for state intervention, this provides a convenient ranking framework for the evaluation of the impact of welfare state activities.

4.1 The Counterfactual

Such a ranking also implies a different conceptual framework to the presentation in Tables 3.1 and 3.2, and which rank households according to their gross income. The main justification for using gross income is practical: gross income is relatively easily defined and it is possible to rank households on this basis (since few households have zero incomes). Such a ranking does not provide a very clear counterfactual, however, because it includes some government policies (cash benefits) but not others (taxes and non-cash benefits). An alternative would be to rank people by some indicator of their living standards in the absence of state intervention, for example, by using private income. We could then ask the question: 'to what extent does state support go most to those who would be least able to support themselves if there were no welfare benefits (and no taxes)?'

A practical problem with this approach is that a large proportion of the population have zero private incomes, and so it may not be possible to define equal sized quintiles or deciles. A more fundamental problem, however is the realism of this counterfactual. If all welfare benefits were to be abolished, private incomes would most likely change dramatically, destroying the relevance of the counterfactual.

However, if state intervention does not re-order the income distribution then it does not matter whether private, gross or disposable income measures are used; all measures will lead to the same ranking of households. The choice of income measure can thus be seen as a choice of how to deal with re-ranking. What if a household with no private income received state support which provided it with a disposable income toward the middle of the income distribution. Should this household be considered middle class? If the counterfactual is that of no state intervention, then the answer might be no: they are a poor household receiving a large amount of support. However, it is possible that such a household would find other means of having an average consumption level if there were not welfare benefits.

A more useful way of considering these issues is in the context of incremental changes. What if one per cent were taken from all transfers (and taxes)? Would this impact more on the poor or on the middle class? The household in the previous paragraph will have an income near the average both before and after this hypothetical policy change. From this incremental perspective, therefore, they should be considered middle class, and so private income is an unsuitable index for ranking. Similarly, an incremental perspective suggests that disposable rather than gross income will be a better indicator of consumption under current policies, and so should be used for ranking households.

The basis for our preferred measure for the ranking of households is thus disposable, or after tax, income. However, it is also necessary to make a number

of other measurement decisions. These include: the sharing unit, the choice of counting unit, the input of consumer durables (particularly housing), the needs of families of different sizes, the role of non-cash government benefits, and the effect of life-cycle spending patterns. These issues are considered in turn.

4.2 Sharing Unit

Private transfers are a major source of consumption for many people. Since consumption resources are usually shared within families, the measurement of resources over a wider unit than the individual is needed to capture real consumption levels. Using household surveys, there are three sharing units that are commonly defined. The first is the *household*, and this is the primary unit used here.

The main disadvantage of this, is that it may not be appropriate for households of unrelated individuals (4.5 per cent of households in 1993-94). A narrower alternative is to use the (co-resident) *family* as the sharing unit, and some of the calculations below have been replicated excluding multiple family households. At the aggregate level of the current study, however, these results were very similar to the results shown, and so are not reported.

Most targeted assistance in Australia is assessed on the basis of *income unit* or nuclear family income. Income units can be single adults, couples, sole parents with their dependent children, or couples with children. Adult children are treated as separate income units from their parents. However, younger adults may face parental as well as personal income tests (these extend to parents who are not co-resident).

This targeting structure rests upon a set of assumptions about the extent to which financial obligations should stretch beyond the nuclear family. Whilst in some areas (particularly for students and unemployed youth) these remain an area of some contention, it is reasonable to consider an assessment of the targeting success of these payments using a similar set of sharing assumptions. Hence, in Section 7.2 where we consider trends in cash benefits, some results are shown which are restricted to those households with only one income unit.

None of these sharing units address the important fact that many people receive support from family members who are not co-resident (usually in-kind or irregular cash benefits, which are often not recorded in household surveys). Again, students provide a good example of people whose living standards might be supported in this way.

4.3 The Counting Unit

Whilst it is often convenient to count the numbers of households or income units with specific characteristics, a stronger ethical case can be mounted for using the *individual* as the counting unit. Simply put, it is worse if a six person household is in poverty than if a single person household is. Using individuals as the counting unit ensures that a poverty index will be higher in the first case.

The individual is thus used as the primary counting unit in the results presented here. Note that this is consistent with the use of a broader unit such as the household as the sharing unit, because we simply assign an index of household living standards to each person. That is, the bottom quintile is defined as the 20 per cent of people living in households with the lowest living standards.

The use of the individual as a counting unit has important implications for the way in which benefits to households are calculated. It is assumed that welfare benefits assist the living standards of all household members.[15] However, if we were to simply assign the benefits received by each household to each member within it, this would lead to double counting of benefits. That is, a benefit paid to a two person household would be counted for each person. To avoid this double counting, and to present estimates of the share of assistance paid to the different quintile groups, benefits are calculated on a per capita basis. That is, each person has assigned to them total household benefits, divided by the number of people in the household. In addition, results are also presented where benefits are adjusted according to an estimate of the needs of different family sizes (see below).

4.4 Income vs Expenditure

Above, it was argued that the preferred measure to examine the distributional impact of welfare benefits is in terms of consumption rather than income. Whilst it is natural to think of expenditure data when trying to estimate consumption patterns from household surveys, this is not necessarily the best indicator. At the household level, the economic concept of consumption can be defined as

A. consumption = expenditure – expenditure on durables + services from durables.

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15 Since education and health benefits accrue to individuals, an alternative approach might be to assign these benefits only to those people in the household who receive them. However, since all household members are in the same quintile, this would make no difference to the quintile means and totals presented in this report.

That is, consumption is expenditure on non-durables, plus the services derived from household durables during the period. Expenditure in turn, can be related to household income as conventionally measured as

expenditure = income – increase in financial assets.

That is, households receive income, save some of this (saving may be negative), and spend the rest. Financial assets include all forms of wealth holding which are not included as household durables. Consumption can thus be defined as

B. consumption = income – increase in financial assets – expenditure on durables + services from durables.

Typically, very little information is collected in household surveys on durable services or changes in financial assets. Given poor information on these variables, which is the better indicator of consumption, expenditure or income? Conceptually, the difference between the two is simply saving, but measurement issues complicate this. From one perspective, expression A may seem the more useful, as there is only one unknown term, durable services. However, expenditure is often much more volatile than income, with significant fluctuations from week to week. Moreover, many people save via the purchase of consumer durables, such as their house, rather than by increasing their financial assets. Since much of their expenditure may thus be saving, this suggests that income may be a better indicator of consumption than expenditure patterns alone.

However, neither of these measures encompasses the service flows from household durables which can play an important part in maintaining living standards. Fortunately, it is possible to derive estimates of the most important of these, service flows from home ownership, from the 1993-94 HES (but not from earlier HES unit record files).

Following Yates (1992) imputed rental income for owner-occupiers is defined as follows. A rate of return is applied to the estimated current sale price of the dwelling, to obtain an imputed gross rental rate. From this, expenditures on mortgage interest, rates, repairs, maintenance and insurance are deducted. A conservative five per cent per annum gross rate of return is assumed (adjusted to a weekly amount). This definition of imputed rental does not take into account capital gains. This is appropriate here as capital gains are part of household saving rather than consumption. This definition also means that some households with high interest charges (e.g. recent house purchasers) will have negative imputed rentals. This is appropriate as it accurately reflects the fact that they are increasing their net wealth in real terms, and their current consumption is low compared to their income.

In addition, imputed rental subsidies are also calculated for public housing tenants and people living rent-free. For public tenants, the ABS estimate of rent subsidy is used. For people living rent-free, a market rent is estimated using a regression over private tenants (dwelling characteristics, state, and decile of regional socio-economic disadvantage).

4.5 Needs

To estimate real household living standards, it is typical to adjust incomes to take account of the consumption needs of people in different sized households. Here, the economies of sharing in larger households are represented with a very simple equivalence scale: the square root of the number of people in the household. Whilst this is a commonly used approach, it is nonetheless an assumption. One example where this assumption is important is when we examine the distribution of cash benefits among the elderly (see Section 7.1).

However, the use of an equivalence scale to adjust for household needs is not unproblematic – and not just because of the many estimates of household costs that could be used. At lower incomes, there is general acceptance that an adjustment for needs is required. A large family is generally accepted as being poorer than a small family with the same income. However at higher incomes, many people may be prepared to consider family size as a choice made by the family (or at least the parents). To rank households according to income relative to need is thus to pre-judge one of the questions to be considered: 'should the state provide support to middle-income families with many children?' Hence some results are also presented where no adjustments are made for needs in the ranking of households.[16]

Just as needs can be taken into account when ranking households, it may be the case that we wish to adjust for need when evaluating whether different types of families receive a fair amount of government support. That is, if richer households are also larger, we should take into account the fact they can benefit from economies of scale, and so need a lower per-capita rate of benefits. Consequently, equivalent cash benefits are also calculated. These are defined as cash benefits divided by the equivalence scale.

Most non-cash benefits, however, do not have any elements of joint consumption within the household, but are rather directed towards the consumption of

16 Alternative approaches which could be explored, at the expense of some additional computational complexity, include ascribing different living standards to the adults and children in the same household, and taking account of economies of scale of adults living together, but not children. (See Bradbury, 1997, for further discussion of these issues.)

individuals (housing benefits are an exception, but are only a small part of non-cash benefits). For these benefits, per capita incomes are used.

4.6 Should Government Non-Cash Benefits be Included as Part of Income When Ranking Households?

Since non-cash government benefits such as health care and education contribute to household living standards, it can be argued that they should be included in the consumption measure used to rank households. Disposable income as described above includes cash benefits, and imputed rent includes non-cash housing benefits to public housing tenants. This leaves education, health and other smaller welfare benefits. Should they be included in the measure of resources used to rank households?

The main reason for *not* including these benefits when ranking households stems from a consideration of household needs. In particular, the aged need more health care services than the young to be equally well off. If we were to include health care benefits as part of income, we would need to adjust income equivalence scales to compensate. If it were the case that current benefits were already allocated precisely according to need, then this compensation would exactly offset the introduction of the benefit into the income calculation. Whilst this might seem an unlikely occurrence, we do not know how actual allocation deviates from this goal: deviation is likely in either direction for any given demographic group. This issue of the appropriate equivalence scales for health benefits is discussed further in Appendix A.

A similar argument can also be applied to education if we assume that households with children have a greater need for education services. However, the argument is less clear-cut in this case, because these education costs may reflect a consumption decision by parents. That is, whilst gender and age (and health status for the most part) are exogenous influences upon household living standards, parents may choose to have children, and thus incur education costs.

Here, we assume that older people have greater health needs, and households with children have greater needs for education services, and so do not include these non-cash benefits in the index of household resources used to rank households. This does not mean that these programs are unimportant for household living standards. Rather, it is the very existence of these programs that allows us to use income as our welfare indicator. If government-provided health care services for the aged did not exist, for example, it would be appropriate to adjust the incomes of the aged downwards to take account of their required private expenditure on these services. See Appendix A for more discussion of these issues.

4.7 Life Cycle Dissaggregation

Whilst one of the goals of the welfare state is to redistribute income across the life cycle, another goal is to equalise living standards between individuals. One way of describing this is to say that the welfare state should assist in reducing the inequality of lifetime income within each generation. An alternative way of operationalising this concept is to require the welfare state to reduce inequality among the people within each life-cycle stage.[17] It is possible to address this latter question with the data available here.

This is done by allocating households to one of four 'life cycle groups'. Households are first divided according to whether the household member with the highest income is below or above retirement age. The work force age households are then split into three categories, households comprising a single person or a couple only, households consisting of unrelated individuals only, and 'larger households' (predominantly households with dependent children). Around 47 per cent of households fall into the last category, with 29 per cent comprising singles/couples, 20 per cent over retirement age, and four per cent unrelated individuals.

People are then assigned to quintiles within each of these groups, so that the bottom 20 per cent of people in retirement age households are assigned to the bottom quintile, along with the bottom 20 per cent of work force age single/couple households and so on.

4.8 Summary of Ranking Methods Used

The discussion above implies a number of alternative ranking methods that can be reasonably used to rank households. The alternative ranking methods employed here are as follows.

GIH Gross income of households. This is a ranking of households by gross income. Each quintile contains the same number of households (whereas for all other measures, each quintile contains the same number of people). With this ranking, benefits are shown on a per household basis (compare this with the equivalent or per capita basis used with the other ranking methods). This measure is used for comparability with ABS publications.

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17 This is not the same as equalising lifetime incomes. For example, there could be two life cycle stages, with large inequality between the people in each. If people reversed their ranking between each period, however, then lifetime incomes could be very equal. In the absence of such re-ranking, nonetheless, the two concepts of between-lifetime inequality are equivalent.

GI Gross income (total income). This differs from GIH in that the same number of individuals are in each quintile.

DI Disposable income (gross income less income tax).

EDI Equivalent disposable income. DI $/\sqrt{n}$, where n is the number of people in the household.

DIIR Disposable income plus imputed rent.

EDIIR Equivalent disposable income plus imputed rent. DIIR $/\sqrt{n}$. The use of the same equivalence scale for imputed rent implicitly assumes that the square root equivalence scale is applicable to households paying market rents.

DIL Disposable income within life cycle group. This removes the impact of the income differences between different life cycle groups.

EDIL Equivalent disposable income within life-cycle group. This also permits household size to influence living standards.

DIIRL DIIR within life-cycle group.

EDIIRL EDIIR within life-cycle group.

5 The Distribution of Government Benefits in 1993-94

Table 5.1 begins an examination of how different definitions of living standards influence conclusions about the overall progressivity of cash and non-cash benefits. In this table, ten different ways of ranking households according to their living standards are used. All of these assume that every member of the household has the same living standard.[18] Figure 5.1 shows the share distribution of cash and non-cash benefits using a selection of the measures in Table 5.1.

The first line of the table shows the number of households in each quintile when households are ranked by gross income and then divided into 5 groups with the same number of households in each (ie as in Tables 3.1 and 3.2). The second line shows the number of people in each quintile when there are equal numbers of people in each quintile. Overall, there is an average of 2.62 people per household.

The second panel shows the household income levels which define the boundaries between the different quintiles whilst the third panel shows the quintile means (these are only shown for the first four ranking methods). Note that these statistics vary both in terms of the population included in each quintile, and the variable for which the minimum and mean is shown. When households are ranked by their gross income, the mean gross income of the first 20 per cent of households is $151 per week. On the other hand, if we rank households by gross income, but then consider the first 20 per cent of *people*, these people live in households which have an average gross income of $198 per week.

This is higher because the first 20 per cent of households are smaller than average, and so to draw a line at the 20th percentile of people requires the inclusion of some households from the next quintile of households (this can be seen in the different lower boundaries for the 2nd quintile shown in the second panel). Similarly, when we rank households according to disposable income, and select the bottom 20 per cent of people, they live in households with average disposable incomes of $194 per week.

The last column of Panel 3 shows that, for the whole population, the mean gross household income is $826 per week, mean income tax is $158 per week ($826

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18 This is probably inappropriate for the four per cent of households that consist of unrelated individuals, and some of the one per cent of households that consist of multiple families. However, other calculations (not shown here) excluding these households produce very similar conclusions at this level of aggregation. Some results restricted to single income unit households are shown in Table 7.3 below.

Table 5.1: Alternative Quintile Definitions and the Aggregate Distribution of Cash and Non-cash Benefits: 1993-94

	Quintile[a]					
	Bottom	2nd	Middle	4th	Top	**All**
1.[b] Numbers (000)[c]						
GIH: Number of households	1 323.2	1 323.2	1 323.1	1 323.5	1 323.8	**6 616.8**
GI: Number of people	3 478.0	3 475.4	3 479.2	3 478.6	3 479.1	**17 390.4**
2. Quintile Lower Bounds ($ pw, selected measures)						
GIH	-2130	267	459	741	1101	**-2130**
GI	-2130	345	581	846	1194	**-2130**
DI	-2130	337	516	705	942	**-2130**
DIIR	-2035	394	570	749	1008	**-2035**
3. Quintile Means ($ pw, selected measures)						
GIH	151	354	593	909	1611	**724**
GI	198	461	714	1010	1745	**826**
DI	194	425	607	817	1296	**668**
DIIR	248	480	660	871	1402	**732**
4. Mean Per Household Cash Benefits ($ pw)						
GIH	136	187	88	48	23	**97**
5. Mean Per Capita Cash Benefits ($ pw)						
GIH	111	81	29	13	6	**48**
GI	92	49	23	13	6	**37**
DI	90	48	24	15	8	**37**
EDI	76	60	25	18	5	**37**
DIIR	83	51	26	15	8	**37**
EDIIR	65	60	34	19	7	**37**
DIL	68	46	31	25	14	**37**
EDIL	66	47	30	28	13	**37**
DIIRL	67	46	32	25	14	**37**
EDIIRL	63	47	32	28	13	**37**
6. Mean Equivalent Cash Benefits ($ pw, single person equivalent)						
GIH	121	121	49	25	12	**65**
GI	122	88	48	25	13	**59**
DI	118	84	48	30	17	**59**
EDI	112	99	44	31	10	**59**
DIIR	111	86	52	31	17	**59**
EDIIR	104	94	53	33	12	**59**
DIL	101	74	55	42	25	**59**
EDIL	105	78	47	45	21	**59**
DIIRL	99	76	55	42	25	**59**
EDIIRL	103	78	50	44	21	**59**
7. Mean Per Household Non-cash Benefits ($ pw)						
GIH	112	157	140	133	132	**135**
8. Mean Per Capita Non-cash Benefits ($ pw)						
GIH	80	65	45	39	37	**53**
GI	73	55	46	43	40	**51**
DI	72	53	47	44	41	**51**
EDI	69	60	49	42	36	**51**
DIIR	68	57	47	43	42	**51**
EDIIR	62	64	51	43	37	**51**
DIL	63	53	50	47	43	**51**
EDIL	63	55	50	47	41	**51**
DIIRL	61	55	50	48	43	**51**
EDIIRL	61	57	50	47	42	**51**

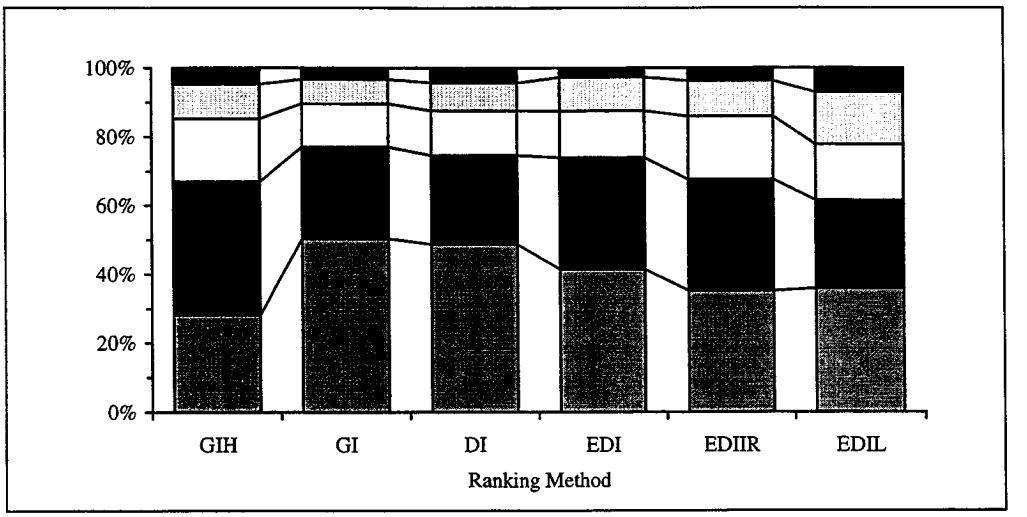
Notes: a) All quintile definitions except for the GIH measure are based upon ranking of individuals, with the same number of persons in each quintile. The GIH quintile ranking has the same number of households in each quintile.

b) Numbers in this column relate to Panels 1-8 mentioned in the text.

c) Quintile numbers are not exactly equal because of unequal weighting of households. Number of people for the remaining measures are close to those for the GI ranking method.

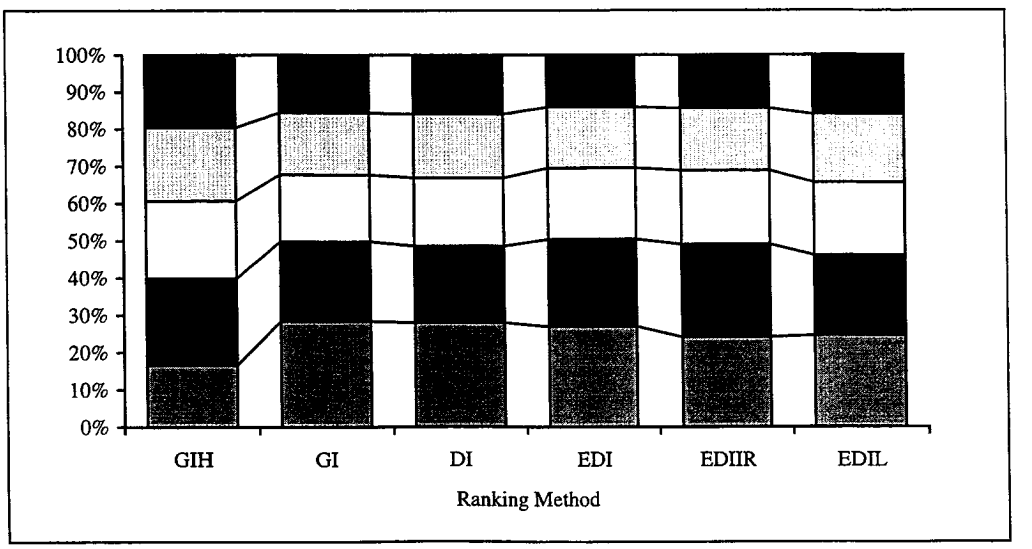
Figure 5.1: Distribution of Benefits Across Quintiles: 1993-94

A. Cash Benefits



Key: GIH Quintiles of households ranked by gross income .
GI Quintiles of individuals ranked by gross income.
DI Quintiles of individuals ranked by disposable income.
EDI Quintiles of individuals ranked by equivalent disposable income.
EDIIR Quintiles of individuals ranked by equiv. disp. income including imputed rent.
EDIL Quintiles of individuals ranked by equiv. disp. income within each life cycle group.

B. Non-cash Benefits



less $668) and the mean imputed rent $64 per week ($732 – $668). It does not make any sense to calculate such differences within each quintile, as there are different people in each quintile for each grouping.

The fourth and seventh panels of the table replicate the mean household benefit data shown in Table 3.1. However, higher income households tend to have more people, and so it is reasonable to expect that they should have higher benefits on this ground alone. The first lines of Panels 5 and 8 respectively correct for this by showing the mean level of per capita benefits received by households. This makes a dramatic impact upon the apparent progressivity of both cash and non-cash benefits.

When benefits are calculated on a per household basis, the second quintile receives a good deal more than the first quintile of both cash and non-cash benefits (Panels 4 and 7). When expressed in per capita terms, however, this relationship is reversed for both categories of benefits. At the same time, the relative amounts of benefit received by the top quintile also declines when considered on a per capita basis.

For cash benefits, however, the use of a per capita calculation probably overstates the benefits received by small households, as joint consumption in multi-person households means that larger households have lower per capita needs. The first line of Panel 6 therefore calculates per equivalent adult cash benefits. As might be expected, the equivalence scale leads to intermediate results between the per capita and per household ranking.

For the GIH measure, households are assigned to the bottom quintile by ordering households by gross income and then choosing the first 20 per cent of households. In the remaining quintile definitions, on the other hand, the bottom quintile is defined as those households containing the bottom 20 per cent of *individuals*. This again changes the apparent distributional pattern of benefits, particularly for cash benefits. For the GIH measure in Panel 5, the bottom quintile of households receive an average cash benefit of $111 per week for each person in the household. This is 2.3 times the overall average. When we look at the bottom quintile of people (GI), however, the amount received is $92 per week, which is 2.5 times the overall average. Grouping equal numbers of individuals rather than households thus increases the relative payment going to the bottom 20 per cent.[19]

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19 Note that total benefits received can be derived from either the GIH result in Panels 4 and 7, or the other variables in Panels 5 and 8 by using the population sizes in Panel 1. For cash benefits, this is $33.4b per annum (33.4×109 = 52.14 × 97 × 6.6×106 = 52.14 × 37 × 17.4×106). This is lower than the corresponding estimate in Table 2.1 (even after adjusting for the different years covered) because of the restricted scope of the HES (exclusion of institutional population), together with apparent under-reporting of benefits or possible under-sampling of beneficiary recipients.

One reason for this difference is that the bottom gross income quintile contains significant numbers of self-employed households with negative or very small recorded business incomes. As was noted above, the smaller size of bottom quintile households means that the bottom quintile of people must extend further up the income distribution than the bottom quintile of households. This leads to the inclusion of more households receiving pensions or benefits.

The overall effect of moving from the bottom quintile of households to the bottom quintile of persons is also illustrated in Figure 5.1. This shows the share of benefits going to each quintile, rather than the absolute dollar values. The first column in each part of the figure shows the share of benefits going to different quintiles of households. The bottom shaded region indicates the share of the bottom quintile, the next shaded region the share of the second quintile and so on. In part A this share is calculated from the GIH figures in Panel 4 of Table 5.1, whilst the first column of Part B is derived from Panel 7. The remaining columns show shares of benefits going to quintiles of individuals, and are calculated from Panels 5 and 8 of Table 5.1 respectively.

In 1993-94 the share of cash benefits going to the bottom quintile of households (GIH) was under 30 per cent. However, the share of cash benefits going to the bottom 20 per cent of individuals (GI, the second column of Figure 5.1 Part A) was much larger, at just under 50 per cent. A similar, but less dramatic pattern is evident in Part B for non-cash benefits.

Whilst the first two columns of Figure 5.1 show the impact of changing the counting unit when ranking households, it is also important to consider the impact of using alternative indicators of household resources. The implications for the distribution of cash benefits are shown in Panels 5 and 6 of Table 5.1 and in Part A of Figure 5.1, whilst results for non-cash benefits are shown in Panel 8 of Table 5.1 and Part B of Figure 5.1.

In general, using disposable rather than gross income to rank households does not make a great deal of difference to the distribution of either cash or non-cash benefits, though the top two quintiles of disposable income do receive slightly more cash benefits than the top quintiles of gross income. This is likely to be due to family payments going to some families who also receive tax concessions for non-working spouses.

These first three measures all use the total income of each household as the indicator of living standards. But larger households have greater needs than smaller households. Hence the remaining three ranking methods use equivalent incomes to rank households. This reduces the number of large households in the top quintiles. Since some of these large households contain young adults receiving unemployment payments and older adults receiving age pensions, this

leads to a lower level of cash and non-cash benefits being received by the top quintile. At the bottom of the distribution, the use of an equivalence scale moves some of the smaller, aged, households out of the bottom quintile and into the second quintile, leading to a corresponding shift in the distribution of benefits.

The use of imputed rent in the income measure used to rank households leads to a small drop in the mean benefits received by the bottom quintile (both cash and non-cash). This is for two main reasons. First, many households receiving the age pension have substantial housing wealth, and the inclusion of this in the living standard measure moves them out of the bottom quintile. Second, some high income households who receive few benefits, have substantial negative imputed rental (their interest payments are very high) and this may move them down to the bottom quintile.

The use of a within-life-cycle ranking also alters the distribution of benefits. With this ranking, the bottom quintile comprises those people in the bottom quintile of aged households, together with those people in the bottom quintile of single/couple households, those in the bottom quintile of larger households, and those in the bottom quintile of unrelated adult households.

For all the different measures, this disaggregation by life cycle decreases the cash and non-cash benefits going to households at the bottom of the ranking and increases it for those households at the top (i.e. comparing DIL with DI, EDIL with EDI and so on in Panels 5, 6 and 8 of Table 5.1). Some of the redistribution apparent in the other rankings is thus *redistribution across the life cycle, rather than redistribution among those people living in the same life cycle stage*. The incomes of aged households are the main reason for this pattern. Households with older members tend to have lower incomes and receive more cash and non-cash benefits than working age households. When ranked together with other households, they are mainly in the bottom quintiles. When ranked within life-cycle group they are, by definition, evenly spread across the quintiles.

Whilst this redistribution across the life cycle is thus an important aspect of the welfare state in Australia, it is important to keep this in perspective. Compared to countries where the social insurance role of the welfare state is more prominent, the Australian welfare state implements a much greater degree of redistribution from people with high lifetime incomes to those with low lifetime incomes. For example, Falkingham and Harding (1996) simulate lifetime incomes in Australia and the United Kingdom and conclude that the Australian system involves much more distribution of income between people whilst the UK system involves more distribution between life-cycle stages of individuals.

The within-life-cycle stage impact of cash and non-cash benefits in Australia is more clearly evident in Table 5.2 which shows the distribution within each life-cycle group. (The smaller 'unrelated adults' group is omitted.) The different levels of benefits received by different groups is largely as expected, with aged households receiving the largest amount of both cash and non-cash benefits, followed by larger families.

Among the aged, equivalent cash benefits are highest in the middle three quintiles. The drop off in cash and non-cash benefit payments at the top end of the distribution is due to the income and asset testing of the age pension and the associated pharmaceutical benefits. The lower level of benefits shown at the bottom of the distribution is partly because the equivalence scale used here tends to place single person households at the lower end of the income distribution, and at the same time assumes that they receive a lower equivalent cash benefit.[20] However, this to is also partly a result of the targeting of social security payments, and the loss of some benefits by the asset rich households. This issue is considered further in Section 7.1.

It is also interesting to note that retirement cash benefits have a more progressive distribution when households are ranked by a more comprehensive income measure which includes imputed rental income. This is because home-owner households are not eligible for rent assistance, and people with valuable houses also are more likely to have other assets which exclude them from pension via the assets test.

The declining level of non-cash benefits with income quintile for the aged is due to the higher incomes of younger retired people, together with the lower incomes of people living in public housing. Note that the ABS calculation method does not take account of the different patterns of public and private health service use by households with different income levels (though differences in these patterns across age groups are included).

Nonetheless, under all the ranking methods shown here, the top quintile of retired households still receives a significant amount of cash as well as non-cash benefits. This is due to both the long taper on the Age Pension income test, together with receipt of non-income tested payments by war veterans.

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20 The square root equivalence scale assumes that single adults need 71 per cent of the income of a couple to obtain the same living standard. The base Age Pension, however, only pays singles 60 per cent of the couple pension. This means that single adults form the bulk of households in the lower quintiles irrespective of whether household or equivalent household income is used as the ranking measure. For the same reason, single adults are also assumed to receive a lower level of equivalent cash benefit.

Table 5.2: Within Life Cycle Group Distribution of Cash and Non-cash Benefits

	Quintile					
	Bottom	2nd	Middle	4th	Top	**All**
			Retired			
Quintile Means ($ pw, selected measures)						
DI	131	223	283	347	611	319
DIIR	194	301	375	457	789	423
Mean Equivalent Cash Benefits ($ pw)						
DI	127	151	171	161	109	144
EDI	117	168	171	167	96	144
DIIR	139	153	167	160	101	144
EDIIR	134	168	170	161	87	144
Mean Per Capita Non-cash Benefits ($ pw)						
DI	99	95	93	84	70	88
EDI	94	97	94	87	69	88
DIIR	99	97	92	85	70	88
EDIIR	92	96	96	89	69	88
			Work Force Age, Single or Couple			
Quintile Means ($ pw, selected measures)						
DI	149	357	536	755	1135	587
DIIR	190	408	581	791	1196	633
Mean Equivalent Cash Benefits ($ pw)						
DI	97	52	8	3	0	32
EDI	103	48	6	2	0	32
DIIR	90	53	13	3	1	32
EDIIR	97	49	12	2	0	32
Mean Per Capita Non-cash Benefits ($ pw)						
DI	52	36	26	26	25	33
EDI	52	36	25	26	25	33
DIIR	48	38	28	26	25	33
EDIIR	47	39	28	26	25	33
			Work Force Age, Larger Family			
Quintile Means ($ pw, selected measures)						
DI	271	517	676	874	1383	744
DIIR	309	565	730	942	1502	810
Mean Equivalent Cash Benefits ($ pw)						
DI	97	65	48	32	18	52
EDI	103	70	36	36	15	52
DIIR	93	68	48	32	18	52
EDIIR	98	69	40	36	16	52
Mean Per Capita Non-cash Benefits ($ pw)						
DI	60	51	50	47	43	50
EDI	60	53	50	47	41	50
DIIR	57	53	49	48	43	50
EDIIR	58	55	49	47	42	50

The strongest pattern of targeting applies to work force age households which consist of single adults or married couples (including de facto). Under all four ranking methods, the top two quintiles receive negligible cash benefits. The targeting in this case is more precise under the measures which do not include imputed rent. This is due to the wide variations in imputed rental income in this group. Some households with high incomes also have very high interest payments, leaving them with very little disposable income. Whilst this may place them in the lower quintiles of consumption, they do not receive any social security assistance. Non-cash benefits are also more targeted towards the lower income households, partly because of the higher proportions of these households still in education.

The final life-cycle group in the table is the largest, comprising almost half of all households. The highest quintile of this family type receive much less than the average level of cash benefits. The benefits they do receive are from family payments, together with payments paid to income units within the households that have low incomes. See Section 7.2 for further discussion of income trends for this family type.

5.1 Summary

What do these alternative methods of ranking households tell us about the overall distributional incidence of cash and non-cash benefits in Australia? In one important respect, the alternative ranking methods used here do not change the broad picture shown in Table 3.1. Irrespective of how we measure living standards, many families with high living standards do receive substantial amounts of cash and non-cash welfare benefits.

Nonetheless, there are some significant variations in the distributional incidence of benefits when we use different measurement and conceptual perspectives, and these provide insight into the nature of the Australian welfare state. Several important points arise from the analysis of this section.

- Table 3.1 employed the method conventionally used by the ABS for the presentation of the distributional incidence of government benefits. This descriptive approach shows the lowest quintile households to be receiving less cash and non-cash benefits than some higher income quintiles. However, this is because of their smaller size. It is more appropriate to look at per capita (or per equivalent capita) benefits received and assign equal numbers of individuals to each quintile. When this is done, the apparent share of cash benefits received by the bottom quintile increases from under 30 per cent to almost 50 per cent. (A similar but less dramatic pattern applies to the distribution of non-cash benefits).

- Using disposable rather than gross income does not make much different to the overall distribution of cash and non-cash benefits.

- Older households tend to be smaller than average, and receive extensive cash and non-cash benefits. Thus ranking households using equivalent household income (rather than household income) moves many older households out of the bottom quintile, and so decreases the share of benefits going to the bottom quintile.

- Similarly, because the elderly often have substantial housing wealth, including imputed rental in the measure of household resources also reduces the benefit share going to the bottom quintile. This is reinforced by the fact that many larger households of moderate incomes (receiving few benefits) also have very high housing costs. Their negative imputed rental income thus moves them down the income distribution.

- When considering the distribution of welfare benefits across the whole population, the most comprehensive measure of resources used here is 'equivalent household disposable income including imputed rent' (EDIIR). The 20 per cent of individuals who are ranked lowest on this indicator receive 35 per cent of all cash benefits, and 24 per cent of non-cash benefits. The top quintile of individuals, on the other hand, receives four and 15 per cent of cash and non-cash benefits respectively.

- This picture changes quite substantially when individuals are ranked within each life-cycle group. This is particularly the case for the cash benefits received by the top two quintile. The top quintile defined using the EDIIR measure, for example, nearly doubles its share of cash benefits from four to seven per cent. This is primarily due to cash benefit receipt by the top quintile of the aged population.

- Among the elderly, the receipt of both cash and non-cash benefits is widespread. Interestingly both the top and bottom quintiles receive less cash benefits than do the middle three quintiles. This probably is a reflection of income and asset testing (see Section 7.1).

- Among work force age families, the receipt of cash benefits in particular is more targeted, though high income larger families continue to receive significant benefits.

Whilst it is useful to have an understanding of the broad distributional patterns associated with cash and non-cash benefits to households, to make sense of the patterns that do exist requires a much more detailed examination of particular policy areas. This is the focus of the remainder of the report, though it is readily

conceded that a single report such as this can only begin to skim the surface of the multitude of policy issues involved in these different programs. In Section 6 we examine education and health non-cash distributions in more detail whilst Section 7 examines trends in cash transfers since 1984. Section 8 then considers the distributional impact of superannuation.

6 The Distribution of Education and Health Benefits in 1993-94

6.1 Education

It is a well established empirical result that children from wealthier families tend to consume more education services than less advantaged children. This is particularly the case for post-school education, where the children of unskilled parents are much less likely to undertake higher education than the children of professional or managerial parents (e.g. Chapman, 1996; Anderson and Vervoorn, 1983). This relationship appears to have remained broadly constant in the face of the abolition and the re-instatement of tertiary education fees over the last two decades in Australia (Linke, Oertel and Kelsey, 1985; Crockett, 1987; Power and Robertson, 1987; Robertson and Sloan, 1990; Chapman and Smith, 1995). However, there is some evidence that age and gender patterns of access might be affected by such cost factors (Marginson, 1993).

This Australian literature has focused on the question of how educational participation rates differ between youth of different class backgrounds. Here, we take a somewhat broader view and address the question: to what extent is state expenditure on education services devoted to those families which have higher living standards? This is closely related to the former question, but also depends upon the living standard of families with children of education age compared to the general population. This is in accordance with the rationale that one reason for state support for education is to support families when their needs are high relative to their incomes.

As noted above, there are limitations in using the ABS fiscal incidence data to study the incidence of education benefits. First, these data assume that education expenditure benefits those households that have members in education. No account is taken of the shifting of education benefits onto employers (via lower wages for graduates) nor the shifting on to other family members living in different households.

Moreover, to the extent to which we can identify 'middle class' recipients, this can only be done on the basis of household characteristics. Higher education students who have left their parental home may thus have a low current income and fall outside this definition (though it is possible to exclude these: see below).

Nonetheless, it is still informative to describe the distribution of education benefits across different living standard groups -- particularly when we wish to

compare the distributional impacts of different aspects of the education system. Table 6.1 begins, however, with overall education expenditure, and examines the extent to which different definitions of living standards alter the apparent distribution of education benefits. Because child care benefits are closely related to pre-school benefits (which are counted as part of education expenditure) the tables of this section all include child care benefits (though they are separated in Table 6.2).

Table 6.1: Percentage Distribution of Combined Non-cash Education and Child Care Benefits Using Different Ranking Methods: 1993-94

	Quintile					
	1st	2nd	Middle	4th	Top	All
Households ranked by gross income (GIH)	6.9	16.5	24.3	25.6	26.7	100.0
Persons, ranked by household disposable income (DI)	12.3	20.1	23.6	22.9	21.1	100.0
Persons, ranked by equivalent household disposable income (EDI)	19.9	21.6	22.7	19.6	16.2	100.0
Persons, ranked by equivalent household disposable income including imputed rent (EDIIR)	24.1	20.9	19.9	18.7	16.4	100.0

The top row of the table ranks households by gross household income so that there are equal numbers of households in each quintile. It shows the share of total education (and child care) expenditure received by the households in each category. Using this ranking, the highest share of educational benefits does indeed go to the top quintile of households. However, as noted above, low income households tend to be smaller and so would be expected to receive less in benefits even if they were otherwise identical. The second row of the table thus shows shares of education benefits when equal numbers of individuals are included in each quintile and disposable income is used as the measure of living standards (most of the change between the first and second rows is due to the counting method rather than the income definition). This leads to a much more equal pattern of benefits, apart from the lowest quintile (which contains a greater proportion of elderly households).

The third row of Table 6.1 then takes account of the different income needs of different sized households by ranking by equivalent disposable income. This change further increases the income share of the bottom quintile and reduces that of the top quintile (again this is partly due to the elderly in small households, who move up the income distribution).

Table 6.2: Percentage Distribution of Non-cash Education and Child Care Components: 1993-94

	Quintile						
	Bottom	2nd	Middle	4th	Top	All	Total Expenditure ($m pa)
Households Ranked by Equivalent Disposable Income							
Higher Education	13.9	10.5	17.2	21.9	36.5	100.0	2 752
TAFE Education	12.0	16.0	17.6	23.8	30.6	100.0	2 240
Government Schools	24.2	25.5	24.4	18.4	7.5	100.0	9 637
Non-Government Schools	11.9	19.9	26.9	21.7	19.6	100.0	2 108
Pre-school	25.5	31.2	23.8	12.9	6.6	100.0	286
Child Care	35.4	34.0	24.1	6.5	0.0	100.0	497
Other	19.9	22.9	23.4	18.8	15.0	100.0	955
Total	19.9	21.6	22.7	19.6	16.2	100.0	18 485
Households Ranked by Equivalent Disposable Income Plus Imputed Rent: Distribution Across All Households							
Higher Education	16.6	11.0	14.8	20.4	37.1	100.0	2 752
TAFE Education	14.1	16.3	15.1	25.9	28.7	100.0	2 240
Government Schools	29.7	24.1	21.7	16.9	7.6	100.0	9 637
Non-Government Schools	13.3	20.3	22.8	21.4	22.2	100.0	2 108
Pre-school	33.1	30.1	20.8	10.0	5.9	100.0	286
Child Care	42.2	31.3	22.1	4.2	0.3	100.0	497
Other	24.3	22.0	20.4	17.8	15.5	100.0	955
Total	24.1	20.9	19.9	18.7	16.4	100.0	18 485
Households Ranked by Equivalent Disposable Income Plus Imputed Rent: Distribution Across Larger Families[a] Only							
Higher Education	9.8	11.7	14.7	22.3	41.6	100.0	1 811
TAFE Education	13.9	17.8	16.0	22.3	30.0	100.0	1 604
Government Schools	29.3	24.7	20.8	16.8	8.3	100.0	9 555
Non-Government Schools	13.0	20.5	21.3	21.9	23.3	100.0	2 107
Pre-school	32.7	30.6	20.5	9.7	6.5	100.0	286
Child Care	41.9	31.7	21.6	4.5	0.3	100.0	497
Other	24.2	23.4	19.9	17.6	15.0	100.0	893
Total	23.8	22.4	19.7	18.1	16.0	100.0	16 760

Note: a) 'Larger Families' are households where the head is below retirement age and the household is not a single person, a couple only, or a household of unrelated adults.

Finally, the last row of the table shows shares of education benefits when households are ranked by our most comprehensive indicator of household consumption, equivalent disposable income including imputed rental income. Under this definition of resources, the bottom quintile receives the largest share of education expenditure, and the top quintile the smallest. Imputed rent is calculated as a function of net equity in the dwelling less interest and maintenance costs. Many households with children are at stages in their housing life cycle where they have high mortgages, high interest charges and hence low, or in some cases negative, imputed rentals. The table suggests that, at least to some extent, education expenditure is effective in targeting assistance to this life-cycle stage which is particularly consumption constrained.

Nonetheless, no matter how households are ranked, substantial education benefits still accrue to middle and higher income households. The pattern of this assistance, however, varies considerably across different programs, as is shown in Table 6.2.

The table is in three panels. The first panel shows the distribution of benefits across households ranked by equivalent disposable income. The second panel ranks using disposable income plus imputed rent, whilst the third panel restricts attention to larger families only. The first two panels show a broadly similar pattern, though, for the reasons outlined above, there are more benefits accruing to lower quintiles when imputed rent is included.

The last column of the table shows the total expenditure by Australian governments on each of the programs in 1993-94. About half of all education expenditure went to government schools, with another $2.1b to non-government schools.[21] Higher education received about $2.7b and TAFE $2.2b (note that these figures have been calculated by removing HECS liabilities of students from total expenditure). Child care services received about half a billion dollars, with pre-schools receiving $290m in 1993-94.

The distributional impact of these different programs, however, varies considerably. Higher education is very much concentrated in high income households, with the top quintile receiving 37 per cent of the expenditure (using DIIR). Indeed the results in the first two panels underestimate the regressive nature of higher education expenditure, since many students in low-income households of unrelated adults come from middle-class backgrounds. The last

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21 It could be argued that, since much school education is compulsory, it is not appropriate to include it as a welfare benefit as families do not have a choice about accessing the service. However, most parents would still send their children to school even in the absence of compulsion, and so this constraint is not relevant.

panel of Table 6.2 removes these households (as well as the elderly). When this is done, over 41 per cent of higher education expenditure accrues to the top quintile of the income distribution. Interestingly, the highest share of TAFE benefits also goes to the highest income households, though not to the same extent.

Government school benefits, on the other hand, are strongly biased towards those households with lower living standards. This in turn is offset by a distribution of benefits for non-government schools in favour of high-income groups. These distributional patterns arise from two main factors. First, higher income households are more likely to send their children to non-government schools.[22] Second, large families with many school students (and hence greater education benefits) are more likely to be at the lower end of the living standard distribution because this is calculated using income adjusted for needs. Finally, it should be recalled that the allocation of non-government education benefits is only based upon the average government subsidy to these schools, and no account has been taken account of the varying subsidies paid to different categories of private school. If these were taken into account, non-government school expenditure would be less regressive than shown here, since expensive private schools receive less assistance.

Both pre-school and child care benefits are targeted towards families with lower living standards. Again, this is partly due to a correlation with family size, but also reflects the income-testing arrangements associated with each program and the fact that households with young children are at a stage of their life cycle where they have lower incomes and higher housing investment costs.

Even for the most targeted of these programs, however, substantial benefits are still received by middle if not high income households. Does this mean that increased targeting is warranted? Traditionally, one of key arguments for extensive state involvement in education has rested upon the positive externalities associated with it. Primary and secondary education leads to a socially and technically literate population, and higher education can also produce a more informed public debate, externalities from associated research and a spread of skills through the economy as the educated impart on-the-job training to others (e.g. Chapman and Smith, 1995). All these phenomena mean that the benefits of education will not be fully captured by the educated individual, but will spill over into the wider population.

However, one necessary condition for these externality justifications of state intervention is that the education benefits provided by the state must actually lead

22 In addition, at each income level, families with more children are also more likely to use the state school system.

to greater education levels. This will not always be the case. For example, if children from middle and higher income families were required to pay full fees for higher education, many would still continue to participate. Moreover, since higher education is supply constrained, those who drop out might well be replaced by sufficiently able students from low-income backgrounds – leading to no drop in the total number of graduates. Hence these externality arguments are only a partial justification for the education benefits provided by the state to middle-class families, and depend very much upon the pattern of demand for education.

In some circumstances there are other externality arguments with more validity. The above discussion suggests that the state could income test entry to government schools on the grounds that the middle class will then purchase school education elsewhere. However, because schooling is so important in the cultural development of individuals, this would be likely to lead to a much more fragmented and class divided society – an externality that most would consider undesirable.

Other efficiency arguments are also important. In particular, the capital and insurance markets that will permit the private financing of education from either the parent's higher living standards at other stages of their life cycle, or from the student's higher incomes post-education, are poorly developed. State subsidies to education can thus be seen as a means of enabling redistribution across individuals' lifetimes.

However, an alternative solution to this issue is to develop the necessary private markets, and the Australian Higher Education Contribution Scheme (HECS) can be seen in this light. This seeks to recover a fraction of higher education costs from the increased incomes that graduates receive after graduation. Since graduates tend on average to have higher incomes, this is a broadly equitable approach. However, it can be argued that the HECS scheme could do more to provide insurance against the uncertainty associated with the income increment that might arise from having a degree. That is, HECS is recovered from graduates even if they receive only a modest income after graduation (though the concessional interest rate provides some subsidy to low-income earners who take a longer time to repay the loan).

6.2 Health

Tables 6.3 and 6.4 present similar data on health care expenditures. In the ABS fiscal incidence study, the bulk of health expenditure is allocated according to age/sex/state patterns of service utilisation. The patterns of distribution shown in

Table 6.3: Percentage Distribution of Health Benefits Using Different Ranking Methods: 1993-94

	Quintile					
	1st	2nd	Middle	4th	Top	All
Households ranked by gross income (GIH)	18.9	24.3	19.7	18.5	18.6	100.0
Persons, ranked by household disposable income (DI)	32.0	20.6	16.3	15.6	15.5	100.0
Persons, ranked by equivalent household disposable income (EDI)	26.2	23.1	17.9	16.7	16.1	100.0
Persons, ranked by equivalent household disposable income including imputed rent (EDIIR)	21.7	24.0	20.1	17.5	16.8	100.0
Persons, ranked by EDIIR within family type	20.5	20.4	19.8	19.9	19.5	100.0

Table 6.4: Percentage Distribution of Health Components: 1993-94

	Quintile						
	Bottom	2nd	Middle	4th	Top	All	Total Expenditure ($m pa)
Households Ranked by Equivalent Disposable Income							
Hospital Care	27.9	23.5	17.4	15.8	15.4	100.0	10 281.1
Medical	22.4	21.3	19.1	18.7	18.5	100.0	7 167.9
Pharmaceutical	35.5	29.8	14.9	11.4	8.4	100.0	1 869.6
Other	19.3	20.2	20.6	20.5	19.5	100.0	1 212.8
Total	26.2	23.1	17.9	16.7	16.1	100.0	20 531.6
Households Ranked by Equivalent Disposable Income Plus Imputed Rent							
Hospital Care	20.9	25.1	20.3	17.1	16.6	100.0	10 281.1
Medical	20.4	21.7	20.1	18.9	18.9	100.0	7 167.9
Pharmaceutical	31.2	29.6	18.0	12.4	8.8	100.0	1 869.6
Other	20.2	20.0	20.5	20.0	19.3	100.0	1 212.8
Total	21.7	24.0	20.1	17.5	16.8	100.0	20 531.6
Households Ranked by Equivalent Disposable Income Plus Imputed Rent Within Family Type							
Hospital Care	19.2	19.7	19.8	20.6	20.8	100.0	10 281.1
Medical	20.0	20.3	20.0	19.9	19.8	100.0	7 167.9
Pharmaceutical	30.2	24.3	18.0	16.2	11.3	100.0	1 869.6
Other	20.2	20.6	20.4	19.7	19.2	100.0	1 212.8
Total	20.5	20.4	19.8	19.9	19.5	100.0	20 531.6

Table 6.3 therefore mainly reflect correlations between family size, age and income. The households with the lowest incomes tend to be elderly, and so a ranking by disposable income leads to a larger share of benefits going to the bottom quintile. The use of equivalent income and imputed rent spreads the elderly across the income distribution, evening out the distribution of benefits. Finally the last row of Table 6.3 shows the distribution when people are divided into quintiles within their family type. The aged are now evenly spread across all quintiles (by definition) and so health care expenditure as a whole is evenly allocated (though health care needs might or might not be similarly distributed – see below).

Table 6.4 examines the distribution of health care components. Distributional patterns are shown for households ranked by equivalent disposable income, EDI plus imputed rent, together with this measure ranked within each life-cycle group.

Around $10b per annum, or half government health expenditure is on hospital care. When ranked by disposable income, lower income households receive more. However, as for total expenditure, this largely reflects the correlations between income and age and between age and hospitalisation rates. When households are ranked within each life-cycle group, hospital care benefits are evenly spread across the income distribution.

A similar pattern applies to medical benefits. Pharmaceutical benefits on the other hand are targeted towards lower income households, irrespective of the ranking mechanism used. This is due to the pharmaceutical concessions available to pension and benefit recipients.

This is also one of the few health benefits in the ABS fiscal incidence study where the usage of services is explicitly differentiated according to income. As noted above, hospital and medical expenditure is allocated on the basis of age/sex/state utilisation patterns. This is justified on the grounds of an insurance principle, i.e. an approximation to the premium that would be required for a given age/sex/state group to purchase insurance to cover these expenditures.[23] However, this does not take account of the fact that service utilisation varies significantly between individuals, as does need for health care.

Our concern here is not to map out the full pattern of service usage and need, but rather to consider the association between usage, need and our indicators of economic advantage. Since people with low income tend to have poorer health, health services are probably more pro-poor than the results shown above would

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23 Appendix A discusses these issues in the context of the calculation of the best indicator of household living standards. In this section, we are concerned simply with whether people with different levels of resources receive more health care assistance.

indicate. In Australia, this is reinforced by the existence of private health care services. Private hospitals, for example, are more likely to be used by high-income earners (with or without private health insurance). The reduced usage of public health services by private patients has been used as one of the key justifications for the continuance of private health insurance.

The most comprehensive study on the distributional incidence of public hospital benefits in Australia is that of Schofield (1997). After estimating the pattern of the utilisation of public hospital services across income groups, she finds the benefits to be distributed much more in favour of the poor than found in the above tables (or earlier studies). Whereas the ABS fiscal incidence study shows the bottom gross income quintile receiving 30 per cent more than the top quintile, her more detailed estimates show the bottom receiving five times as much as the top quintile.

One limitation with this type of analysis is that it does not set these expenditure patterns against the health care needs of different groups (i.e. low-income people are generally less healthy). Another limitation is that the association between low income and high health service use could be due to common transitory factors. For example, a household where the main income earner has a major operation may have both high health utilisation and a low income for that year. However, the family's access to economic resources may still be quite high given a long prior period of higher incomes.

Nonetheless, these considerations are not likely to be strong enough to change the basic conclusion that hospital services are more pro-poor than implied by the broad results shown in Table 6.4. Much of this redistribution, however, remains within the life cycle. That is, many of the low-income elderly receiving significant health services would be placed much higher in the income distribution if incomes were considered on a lifetime basis.

7 Cash Benefits, 1984 to 1993-94

7.1 Retirement Incomes

Whilst many aspects of state non-cash welfare provision are specifically designed to apply to a wide range of families, it is a notable feature of the Australian income support system that almost all payments are means tested.[24] Nonetheless, Table 3.1 showed that significant cash benefits are received by middle and higher income families, and Figure 3.1 indicated that cash benefits to middle-income families have increased since the mid-1980s. The reasons for these trends are examined in more detail below.

The income-tested Australian pension system was used by Goodin and Le Grand (1986, 1987) to test the hypothesis that political pressures on the modern welfare state will lead to a 'creeping universalism' whereby payments initially targeted on the poor become broadened to include middle-class recipients. They focused on the proportion of the eligible population receiving Age Pension, Invalid Pension and Widow's Class B Pension between 1911 and 1980. Whilst the latter showed no particular trend, Age Pension coverage rose dramatically over this period, from 32 per cent of those of pensionable age in 1911, to 76 per cent in 1980. Most of this increase occurred after 1945. Invalid pension coverage also apparently rose, though calculation of coverage rates is more difficult in this case due to a lack of independent information on the population of people with disabling medical conditions.

Whilst there was a general broadening of the eligibility criteria for age pension up to the beginning of the 1980s, this 'creeping universalism' has in fact been now substantially reversed. Figure 7.1 shows the proportion of the population over retirement age who were receiving either an Age or War Service Pension (see Figure 7.3 for expenditure trends). Coverage grew rapidly during the 1970s with the removal of income tests for people over age 70, and the abolition of assets tests. However these restrictions were re-introduced in the mid-1980s and administrative procedures were further tightened, leading to a steady fall in pension coverage. Higher interest rates in the second half of the 1980s also reduced pension coverage (due to more exclusions via the income test). The subsequent fall in interest rates in the early 1990s led to a corresponding rise in coverage.

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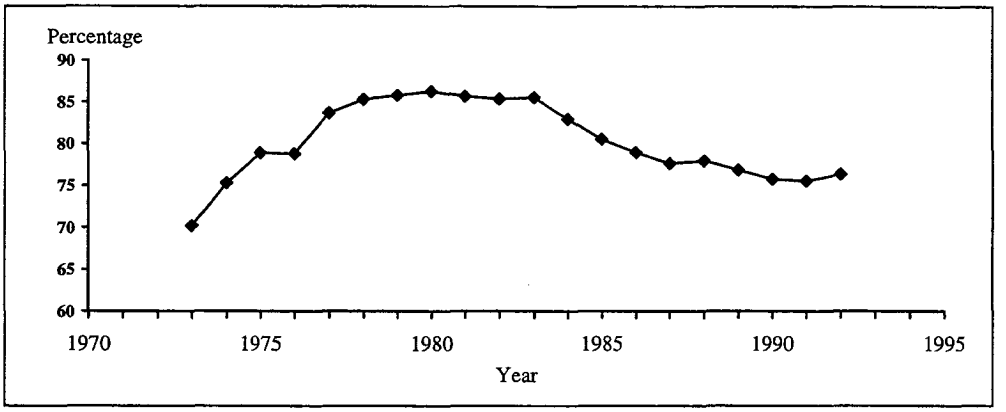
24 Some war disability and war widows pensions are non-means-tested as is the blind pension and some other supplementary payments (double orphan's pension, mobility allowance and child disability allowance).

Figure 7.1: Pension Coverage of the Retirement Age Population: 1973 to 1992



Source: Department of Social Security, *Pensioners and Beneficiaries as a proportion of the population and the labour force*, 1973-1983 and 1983-1992.

Falling coverage does not necessarily imply a reduction in pension receipt for the better-off aged, since the reasons for non receipt of pension could be unrelated to living standards. Possible reasons might include restrictive residence requirements and non-take-up of entitlements (though there is no evidence that either of these are important in Australia). Table 7.1 shows some more direct indicators of the extent of income support for pensioner households with different living standards.

Table 7.1: Mean Cash Benefits for the Retired: 1984 to 1993-94[a]

	Household Net Income Quintile[b]					
	Bottom	2nd	Middle	4th	Top	*All*
	Mean Cash Benefits ($1993-94 per week)					
Single Person Households						
1984	135	148	147	145	89	*133*
1988-89	119	144	143	136	80	*124*
1993-94	126	161	161	168	109	*145*
Couples						
1984	220	250	250	196	97	*203*
1988-89	198	236	250	185	108	*196*
1993-94	169	248	254	224	103	*199*

Notes: a) Population is households with head over retirement age, and containing one or two adults only.

b) Quintile cut-offs are different for singles and couples. For example, the bottom quintile of single person households contains the 20 per cent of single person households with the lowest household net incomes.

In this table, individuals in households where the head was over retirement age are ranked according to their household net income (imputed rental income is not available for earlier years). Quintiles for single adult and couple households are defined independently so that it is not necessary to incorporate assumptions about the correct equivalence scale between them. For each quintile, mean cash benefits are shown for 1984, 1988-89 and 1993-94 (adjusted for inflation using the CPI).

Considering the overall averages first, between 1984 and 1988-89 the mean cash benefit fell by around seven per cent for single person households and 3.5 per cent for couples. Though the real value of the base rate of pension did fall marginally over this period (by around one per cent), most of this fall is due to the reduction in coverage illustrated in Figure 7.1. Between 1988-89 and 1993-94, mean payments increase by 17 per cent for singles, but by less than one per cent for couples. This can be compared with an increase in the real base payment for both singles and couples of about 10 per cent over this five year period.[25] These patterns are consistent with the survey data on the proportion of people aged over retirement age who were receiving at least some cash benefits (not shown in the table). For singles, this was relatively stable, at 88, 86 and 89 per cent in each year, whilst for couples there was a significant decline in coverage, from 87 to 85 to 82 per cent.

The pattern of cash benefits across income quintiles also changed dramatically. For both singles and couples there were large decreases in the cash benefits received by the bottom quintile, matched by increases in payments received by the top 20 per cent of households. This trend is also illustrated in Figure 7.2 which shows the distribution of cash benefits across quintiles of the income distribution in each year. Does this suggest some degree of 'capture' of the retirement pension system by the middle class?

Such a conclusion would be premature, as these patterns probably tell us more about the limitations of household survey data than they do about the failure of the age pension income test to target assistance on the most needy.

One notable feature in Table 7.1 is the fall in cash benefits for the bottom quintiles of both singles and couples. For the bottom quintile of singles, real benefits fell by seven per cent between 1984 and 1993-94, whilst for couples the fall was 23 per cent. At the same time, overall benefits rose by nine per cent for

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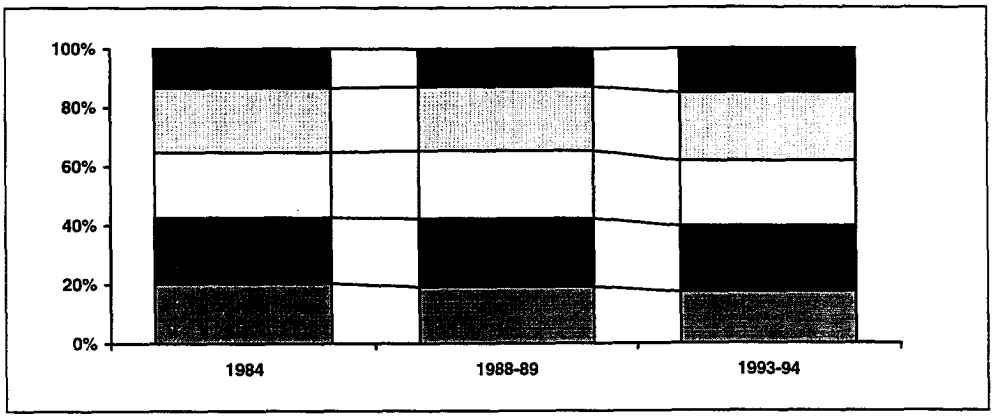
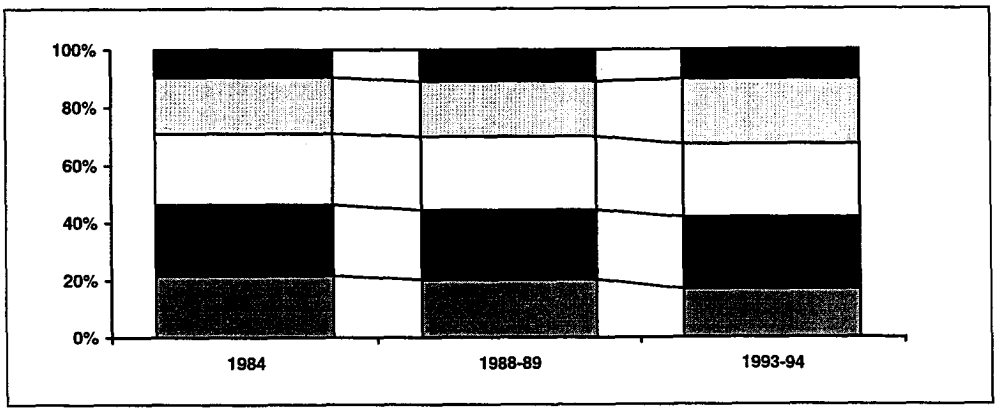
25 The pension increases are only approximate, and vary slightly depending upon when during the year the comparison is made. A significant part of the real increase in pension after 1988-89 is due to the interaction of the lagged CPI adjustment to pensions interacting with the fall in the inflation rate.

Figure 7.2: Distribution of Cash Benefits for the Retired: 1984 to 1993-94

A. Singles



B. Couples



singles and fell by two per cent for couples. The main reason for the reduction in cash benefits at the bottom was the (re-)introduction of an assets test on pension entitlement in March 1985. This meant exclusion from pension for a significant number of low income but asset rich households. Many of these households were thus placed in the bottom quintile of disposable income after 1984 – leading to a fall in mean cash benefits for the bottom quintile. In addition, the period of the Labor Government saw a continual process of adjustment to the regulations used in the measurement of investment income. This may be the reason why mean pension income of bottom quintile couples continued to fall after 1988-89.

The introduction of the assets test, however, does not provide an explanation for the growth in the mean cash benefits of the top two quintiles between 1988-89 and 1993-94. One reason for this growth was the decline in nominal interest rates

between these years. Since it is nominal investment income that enters into the income test, this increased cash benefit entitlements for the higher income aged.

Whilst the failure of means testing to take account of these inflationary biases might be considered a minor failing of means testing arrangements, there has been no change over the last decade in the policy framework which of itself would lead to an increase in middle class access to cash benefits in retirement. If anything, the trend has been in the reverse direction, with both the introduction of the assets test and policy developments designed to incorporate new investment instruments into the means testing framework.

To the extent to which an opposite trend is shown in these household surveys, this is largely a pointer to the limitations of household survey data for measuring these distributional issues. Whilst there are clear gaps in the means testing arrangements for pensions (e.g. housing wealth is not directly included), this means testing involves a much more detailed consideration of household resources than is possible with household survey data. In particular, information on (non-housing) assets is typically not collected in Australian household surveys, though this forms an important part of means testing – particularly for the retirement age population.

In addition, pension income tests incorporate a detailed set of procedures for dealing with complex financial instruments. Whilst it is not inevitable that these procedures will result in an equitable targeting of support according to the economic criteria of income and consumption outlined above, it would be audacious to assume that the simpler criteria of resources available in household surveys could be used on its own to evaluate such policies.

In the absence of evidence which would suggest a misdirection of the targeting of Australian retirement pensions, coverage patterns such as shown in Figure 7.1 probably provide the best guide to the extent of middle class inclusion in the retirement cash benefit system. Over the last decade, coverage has fallen significantly and, whilst there was a small upturn in coverage in the early 1990s, the growth of superannuation is likely to lead to a further fall in Age Pension coverage.

Thus the 'creeping universalism' hypothesis of Goodin and Le Grand has not been supported by income support policy developments since the early 1980s. However, it might be argued that the political pressures they describe have merely been redirected during the 1980s into providing subsidies to private superannuation arrangements. The distributional impact of superannuation is considered further in Section 8.

7.2 Trends for Work Force Age Households

Whilst the retirement income trends described above have led to some growth in the relative cash benefit shares of the households in the middle of the income distribution, these trends only play a small part in the growth in middle quintile cash incomes shown in Figure 3.1. The main reason for this growth is apparent in Figure 7.3 which describes trends in aggregate Social Security expenditure since 1980 (in real terms, per person in the Australian population). Whilst the total of Age, Disability and Service Pension expenditure has steadily risen, the rise in unemployment and other work force age payments has been dramatic.

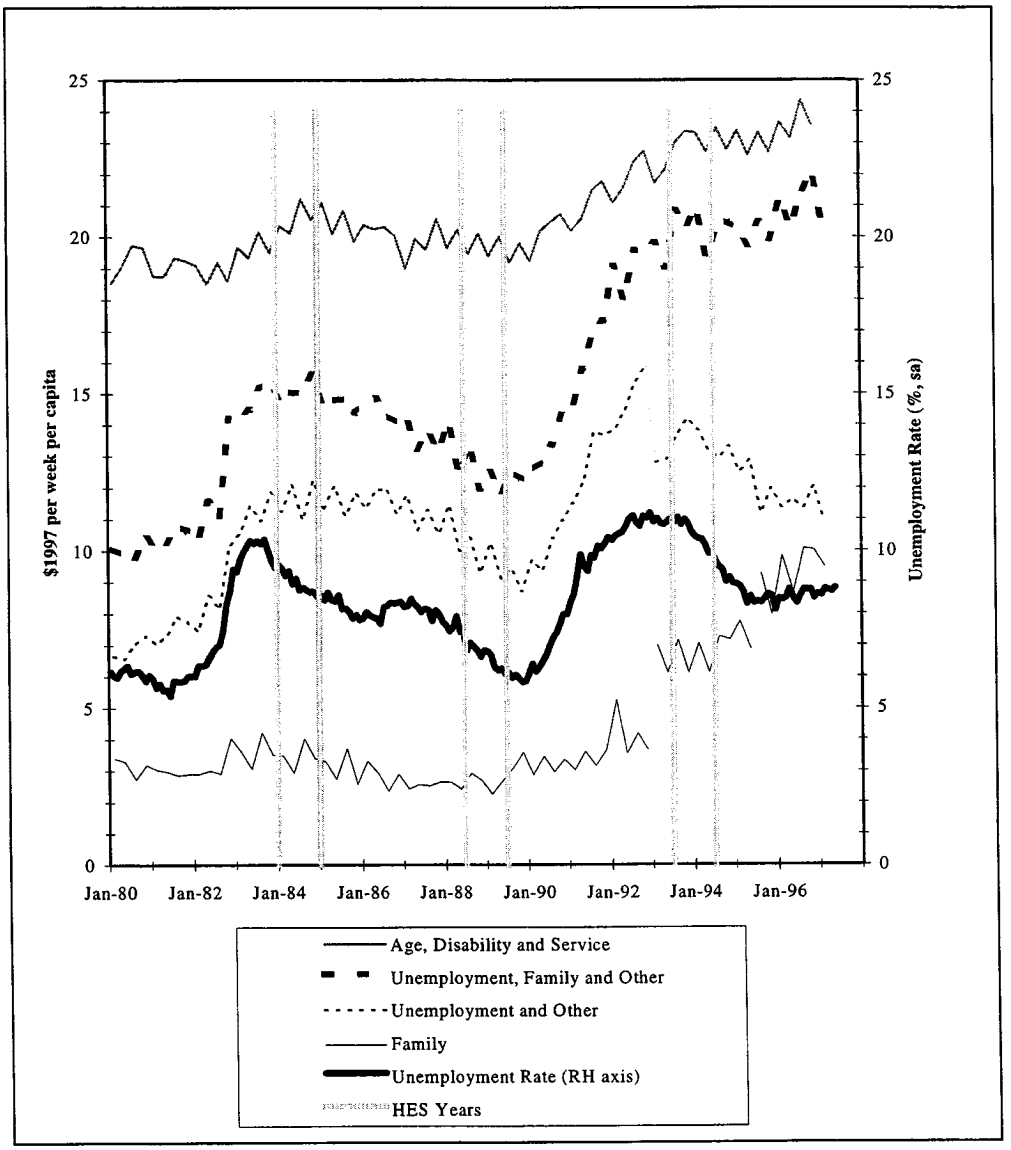
Family expenditures have seen the most dramatic increase over this period, though much of this increase has been definitional. In 1993, additional payments for the children of income support recipient parents were moved into the family payment system and in 1995, part of the dependent spouse income tax rebate began to be phased out and replaced with Basic Parenting Allowance. (Unemployment and other payments had a corresponding drop in 1993.)

Included in the figure is the unemployment rate, which peaked in 1983 and again in 1992. Though the HES survey years of 1984 and 1993-94 followed the unemployment peaks by a similar period, the very different patterns of recovery after the two recessions meant that unemployment rates were significantly higher during the second period. In 1984 the unemployment rate averaged 9.0 per cent, whilst in 1993-94 it was 10.5 per cent.

This, together with the increase in real value of some payments (particularly family payments), is the main reason for the higher levels of cash benefit expenditure shown in Table 7.2. This table shows cash benefit receipt for households with heads below retirement age. Household types are distinguished as in Section 5 into singles and couples, households of unrelated individuals, and 'larger families' which are primarily families with dependent children. The top panel of the table shows mean equivalent cash benefits, the middle panel mean per capita benefits, and the final panel shares of cash benefits across quintiles.

For all three household types, mean benefits decreased from 1984 to 1988-89 then increased in 1993-94. For households of unrelated individuals and larger families, the increase was very large, and similar patterns are found in the equivalent and per capita results. Households in the bottom quintiles had significant income increases, but the largest increases were for households in the second quintile of incomes. This is borne out in the final panel which shows the share of cash benefits going to second quintile households increasing at the expense of the bottom quintile.

Figure 7.3: Unemployment[a] and Real Per Capita Expenditure on Social Security Benefits[b]: 1980 to 1997



Notes: a) Unemployment rate is seasonally adjusted.
b) Age, Disability and Service pension expenditure is a three-quarter moving average. See text for discussion of breaks in continuity.

Source: ABS Time Series Service, March quarter, 1997.

Table 7.2: Cash Benefits for Work Force Age Households: 1984 to 1993-94

	Within Group Quintile of Equivalent Disposable Income of Persons					
	Bottom	2nd	Middle	4th	Top	**All**
	Mean Equivalent Cash Benefits ($1993-94 per week)					
Singles and Couples						
1984	113	28	6	1	1	30
1988-89	95	25	4	4	0	26
1993-94	103	43	6	2	0	31
Unrelated Individuals						
1984	115	51	15	0	2	36
1988-89	55	24	20	2	11	22
1993-94	122	92	33	11	8	53
Larger Families						
1984	86	34	26	27	17	38
1988-89	74	30	23	20	10	31
1993-94	104	67	33	30	13	49
	Mean Per Capita Cash Benefits ($1993-94 per week)					
Singles and Couples						
1984	90	20	4	1	1	23
1988-89	77	19	3	3	0	20
1993-94	87	32	4	1	0	25
Unrelated Individuals						
1984	74	35	10	0	1	24
1988-89	38	17	13	1	6	15
1993-94	80	57	21	7	5	34
Larger Families						
1984	43	17	12	13	8	19
1988-89	39	15	11	10	5	16
1993-94	52	32	16	16	7	25
	Cash Benefit Shares (Percentage of Per Capita Benefits)					
Singles and Couples						
1984	77.4	17.3	3.5	0.9	0.8	100.0
1988-89	75.9	18.4	2.7	2.8	0.2	100.0
1993-94	69.5	25.8	3.4	1.1	0.2	100.0
Unrelated Individuals						
1984	61.4	29.4	8.2	0.0	1.0	100.0
1988-89	51.0	22.0	17.3	1.3	8.4	100.0
1993-94	46.3	34.2	12.4	4.3	2.9	100.0
Larger Families						
1984	46.2	17.7	13.2	14.2	8.8	100.0
1988-89	48.4	19.1	14.3	12.3	5.9	100.0
1993-94	42.4	26.0	13.4	12.8	5.4	100.0

'Larger families' (predominantly families with dependent children) are the most common family type, and for this group, the share of cash benefits going to the second quintile rose from 17.7 to 26.0 per cent between 1984 and 1993-94. Does this change reflect changes in the semi-universal family payments, or is it simply a reflection of the higher unemployment rates in 1993-94? Further information on these families is shown in Table 7.3.

Table 7.3: Distribution of Cash Benefits for 'Larger Families': 1984 to 1993-94

	Quintile of Equivalent Disposable Income					
	Bottom	2nd	Middle	4th	Top	**All**
	Mean Per Capita Cash Benefits ($1993-94 per week)					
Family Benefits Only[a]						
1984	2	5	4	4	2	4
1988-89	2	4	3	2	1	2
1993-94	6	7	4	2	1	4
Family Plus Other Payments[a]						
1984	41	12	8	10	6	15
1988-89	37	11	9	8	4	14
1993-94	47	25	12	13	6	21
Households with Only One Income Unit:[b] Family Plus Other Payments[a]						
1984	45	4	2	2	1	11
1988-89	42	8	2	2	1	11
1993-94	45	28	8	2	2	17
Fraction of Households Containing at Least One Unemployed Person (%)						
1984	26.6	12.7	7.5	8.7	7.4	12.6
1988-89	21.2	8.1	9.3	9.1	4.3	10.4
1993-94	29.6	18.1	12.8	11.0	7.7	15.8
Fraction of Households with No Employed People (%)						
1984	44.5	3.6	0.7	0.2	0.0	9.8
1988-89	41.1	3.7	0.4	0.5	0.0	9.2
1993-94	47.2	8.9	0.2	0.2	0.1	11.7

Notes: a) If a household receives any cash benefits other than family payments, then 'family benefits only' is set to zero, and all cash benefits are included in 'family plus other payments'. Otherwise, family payments are included in the first variable, and the latter is set to zero.

b) The quintile ranking is also only across those households with only one income unit, so households in each quintile are not necessarily a subset of the households in the same quintile in the panels above.

Because of the definitional changes associated with family payments it is necessary to create some artificial summary variables. One variable is termed 'family benefits only'. For households which only receive family benefits, this is defined equal to those benefits. For other households it is set to zero. The second variable is defined as 'family plus other payments' and is defined equal to total cash benefits (including family payments) for such households, and zero otherwise. The top panel thus shows the distribution of family payments going to those families that were only receiving family payments, whilst the bottom panel shows total payments going to families receiving other benefits.

Overall 'Family benefits only' declined somewhat during the 1980s, then increased back to the 1984 level by 1993-94. Benefits going to the top two quintiles decreased over the period, mainly as a result of the introduction of the Family Allowance income test in 1987. At the same time, benefits to the bottom two quintiles increased significantly. This is all the more remarkable given that families receiving primary income support payments have this variable defined equal to zero. This reflects the substantial expansion of family payments to low wage working and self-employed households, together with increases in the generosity of these payments.

The largest increases in average payments, however, were amongst those households receiving primary income support payments. Increases, moreover, were particularly notable for the middle three quintiles, and this is the main reason for the pattern observed in Figure 3.1.

The reason for this increase is made clear in the final two panels of the table. In 1993-94, almost 16 per cent of large families contained at least one unemployed member, and almost 12 per cent had no employed members. These numbers are significantly higher than in 1984. Within each quintile, it can be observed that the increase in cash benefits closely follows the increase in unemployment. For example, it is notable that 11 per cent of households in the second highest quintile had at least one member unemployed when interviewed during 1993-94.[26]

It might be argued that households in the top half of the income distribution have sufficient income to support their own unemployed members – and so they should not be receiving additional cash benefits. The lowest after-tax income of

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26 Strictly speaking, the use of person weights means that 11 per cent of the people in the quintile lived in households with unemployment. If there is a positive correlation between unemployment and household size, then the percentage of households experiencing unemployment will be lower.

households in the second top quintile in 1993-94 was $539 per week,[27] and the average was $867 (or $45 000 per annum). Most of the cash benefits in the top two quintiles, however, are received by households with more than one income unit.[28] This can be seen in the third panel of the table, where cash benefits for single income unit households are shown.

Important examples of cash benefits being received in multiple income unit households include sole parents living with their (higher income) parents, and disabled or unemployed adult children living with their parents. The presence of the latter in particular was thus a key mechanism whereby the higher unemployment rate in 1993-94 led to a growth of 'middle class welfare'.

To argue against this form of 'middle class' welfare is thus to argue that adult individuals should not be entitled to an independent means of financial support. At first glance, this is entirely consistent with a view that the key goal of income support is to ensure that people have opportunities to reach at least some basic consumption level. If people have low incomes, but are able to obtain support from private sources (e.g. other family members) then this poverty alleviation goal might indeed suggest that state support should be directed away from them to those who do not have this support. Indeed, a requirement to first seek support from other family members is a feature of the social assistance schemes of some countries (e.g. Switzerland, Germany and Austria), though it is not always enforced (see Eardley et al., 1996)

Against this, it can be argued that a social norm exists in Australia that adult individuals have a right to be autonomous of other family members (other than their spouse) and hence a right to state support in their own right. Certainly this norm does appear to underlie income support policies for people who are unambiguously considered adults. However, there continues to be debate over where the adult/child threshold lies, as has been evidenced by debate over the recently announced Common Youth Allowance for young job seekers and students.

Even if these arguments based upon social rights are not accepted, there are other grounds for adopting a narrow targeting focus. A key issue is ascertaining exactly what support is available to an individual. In particular, to assume that non co-

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27 Note that the quintile is defined in terms of *equivalent* disposable incomes, and so the lower bound is likely to apply to smaller households. Average size households in this quintile will tend to have higher incomes than this lower bound.

28 Income units are either single adults, married couples, couples with dependent children, or sole parents with dependent children. Adult children are counted as a separate income unit from their parents.

resident family members will provide support may force many people into hardship. A more justifiable approach from the poverty alleviation perspective is to assume that the incomes of other family members *in the same household* will contribute to the living standard of an individual – if only because of the shared consumption of many goods within the household. However, to target assistance on a household basis would provide strong incentives for household dissolution.

8 Superannuation

Superannuation is often nominated as the most important form of middle class welfare in Australia. It is only available to people with earnings or self-employment income, its availability and magnitude tends to increase with income, and it is associated with substantial taxation concessions. Titmuss (1963) described 'occupational welfare' (of which superannuation plays a major part) as one of the three main components of the welfare system in industrialised capitalist countries. This framework has subsequently been applied by other writers such as Jamrozik, Hoey and Leeds, (1983) to describe Australia superannuation policy.

The last two decades have seen a significant expansion of superannuation in Australia, largely due to government subsidies and regulation.[29] The policy motivation for this expansion has been twofold: to increase the flow of saving in the Australian economy so as to reduce international capital account imbalances; and to increase the stock of savings available to future retiring generations, so reducing future liabilities on government. To the extent to which equity considerations have been important in shaping the debate about superannuation, the main focus is usually on comparisons between different generations. Our focus here, however, is on the distributional impact of superannuation policy on the distribution of resources *within* each generation.

At the personal level, the primary goal of superannuation is to provide a mechanism for individuals to move resources from a wage-earning to a non-wage-earning period of their lives. Whilst this goal is shared by the taxation and public pension systems, the latter also incorporate a degree of redistribution from the high- to low-income members of each generation. Such a distributive goal is not a key feature of superannuation, and indeed it has been argued that superannuation tax concessions lead to a shift in public resources towards, rather than away from, those individuals with higher lifetime incomes.

It is difficult to quantify the extent of between-person income redistribution created by superannuation for two reasons. First, the expansion of superannuation has been associated with a myriad of policy changes, often incorporating 'grandfather' clauses. The resulting system is thus very complex, and only the broad parameters of the current system are discussed here. Even more important, however, is our lack of knowledge of the behavioural implications of policy.

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29 The two key events were the introduction of award superannuation in 1986-87 and the Superannuation Guarantee in 1992-93.

Different behavioural assumptions can lead to quite different estimates of distributional impact.

The distributional implications of superannuation policy arise from several sources. The first is simply the distribution of access to superannuation and its associated benefits. For the most part, only employed (including self-employed) individuals have contributions to superannuation. Some low-income employees are totally exempt, many people only receive the contributions required under the superannuation guarantee legislation, whilst people with high wages often receive quite substantial employer superannuation contributions.

Of itself, this distribution does not necessarily have a direct implication for living standards. Superannuation is often calculated as part of a salary package, with increases in employer contributions associated with offsetting decreases in salaries. This packaging of incomes is explicit at higher income levels, and was implicit in the Accord superannuation agreements of the 1980s. Future increases in mandated employer contributions are also likely to be offset by slower growth in real wages (Bateman and Piggott, 1993). This implies that the receipt of employer-provided superannuation in itself is not necessarily a net benefit.

At the same time, however, a general trade-off between wages and superannuation does not mean that all people excluded from superannuation will receive compensatory higher wages. The Accord agreements, for example, led to a reduction in real wages, which was (to some extent) compensated by increases in employer contributions to superannuation. To the extent to which the wage fall was general, those low-income workers who do not receive superannuation are worse off than before. This is the case even though they may be better off not participating in superannuation for other reasons.

Most discussion of the distributional impacts of superannuation, however, has focused on the associated tax concessions rather than the payments themselves. This focus is continued here. The 'welfare' benefits of superannuation are therefore defined to be the cost to the state of providing taxation concessions for superannuation.

Australian superannuation is taxed at three points, contributions to the fund, fund earnings and benefits received. In addition, superannuation income and assets can influence the level of Age Pension received. The main features of these tax arrangements are summarised below. This summary focuses on the more common, funded, superannuation schemes (see Bateman and Piggott, 1993, for details on the treatment of defined benefit schemes).

- Employer contributions are deductable expenses for the employer, and taxed in the hands of superannuation funds at a rate of 15 per cent (provided contributions do not exceed an age-dependent threshold).

- Starting in the 1997-98 financial year, this contribution tax is 30 per cent for people with incomes (including employer superannuation contributions) of $85 000 pa. or higher. There is a shade-in arrangement for people with incomes above $70 000 pa.

- Employee contributions are made out of after-tax income, and are not subject to further contribution tax. There is a tax rebate of 10 per cent of the first $1000 pa of contributions for low-income contributors.

- Arrangements exist for self-employed and not-employed taxpayers to gain similar tax concessions to employees.

- Fund earnings are taxed at 15 per cent (though funds are able to take advantage of dividend imputation and some capital gains tax concessions).

- Lump-sum benefits up to a threshold ($86 495 in 1997-98) are not taxed. Lump sums between this threshold and a 'reasonable benefit limit' (RBL) are taxed at 15 per cent (plus Medicare levy). Higher lump-sum benefits are taxed at the top personal marginal tax rate. The RBL is $869 440 if at least 50 per cent of the benefit is taken in the form of an approved income stream, or half this amount otherwise. These thresholds are indexed according to average weekly ordinary time earnings (AWOTE).[30]

- If the superannuation benefit is taken in the form of an approved pension or income stream, most[31] pension income is taxable in the year received, but attracts a 15 per cent tax rebate (i.e. it is taxed at a rate 15 percentage points less than the person's marginal tax rate).

- For married pensioners, the Age Pension is reduced by 50 cents for every dollar of (combined) income above $172 per fortnight, ending fully at an income of $1342 per fortnight. Income includes wage income, superannuation pension income, income from investments, as well as a deemed rate of return on financial investments. The deemed rate is four per cent on the first $50 000 and six per cent thereafter (as of mid-1997). In the

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30 This is for funded schemes. Higher benefit tax rates apply to unfunded schemes.

31 There is a concessional allowance for the component of the benefit which represents personal contributions made out of post-tax income.

absence of any other income, financial assets of $91 200 or higher will thus reduce the pension paid.[32]

- In addition, there is an assets test which can reduce the pension if assets other than own home are above $176 000 ($264 000 for non-home-owners). No pension is payable when these assets are above $371 500 ($460 000 for non-home owners).[33] Assets held in the form of complying long-term annuities are not counted for the assets test (income from the annuity is used in the income test). To determine pension payments, the income and asset tests are applied separately, and the lower payment is received.

The most extensive modelling of the Australian superannuation system has been undertaken by the Retirement Income Modelling (RIM) Task force in the Treasury Department. Table 8.1 shows some results from one of the simpler RIM models describing the situation of three different hypothetical families with different lifetime wages.

The first row of the table shows the distributional impact of superannuation tax subsidies. There is no universally accepted means of calculating these measures, particularly in calculating the impact of the concessional tax rate on superannuation fund earnings.[34] Using the assumptions of this table, the 'average' couple receives government tax expenditures which are 4.6 times greater than low-income couples. This is despite their gross wages being only 1.8 times greater. Note that Table 8.1 only shows households with incomes up to average weekly earnings, and thus does not encompass the effect of the higher superannuation contribution tax for high-income earners.

However, whilst higher income households may receive greater tax subsidies, these are 'clawed back' to a significant extent by the Age Pension income test. Once this is taken into account, the overall net cost to government (including both

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32 These amounts are for April-June 1997 and ignore Rent Assistance. The corresponding amounts for singles are income thresholds of $98 and $804 per fortnight, a deemed income threshold of $30 000 and an income test cut-in of financial investments at $52 500.

33 Single thresholds for home owners are $124 000 and $241 750 whilst for non-home-owners the thresholds are $212 000 and $330 250.

34 From the perspective of a universal income tax, the fund earnings rate should be compared with the marginal income tax rate of the member. From the perspective of a universal expenditure taxation, on the other hand, there should be no tax on fund earnings (only on contributions and withdrawals). The assumptions in this table use the income tax framework, but effectively halve the calculated concession.

Table 8.1: Estimates of Superannuation[a] Concessions for Hypothetical Families

	Low Income Couple 55/41% of AWOTE	Low/Middle Couple 75/56% of AWOTE	Average Couple 100/75% of AWOTE
	($000, average 1996-97 prices)		
Tax expenditures pre retirement	23	54	106
Gross benefit at retirement	269	375	507
Total Age Pension received in retirement	310	255	178
Taxes payable in retirement	21	26	31
Overall net cost to government	313	283	252
Cost to government of full-rate Age Pension	337	337	337

Notes: Assumes, inter alia: Superannuation commences in 1992 at age 20, age 65 retirement, SGC superannuation only, home owners, female partner receives 75 of income of male partner and has broken work history, superannuation pay out taken as an indexed lifetime annuity. Costs and benefits to government are expressed in net present value terms. See Treasury (1997), attachment B, for more details.

Source: Treasury (1997), Table 1. Based upon the Retirement Income Modelling task force INDMOD model.

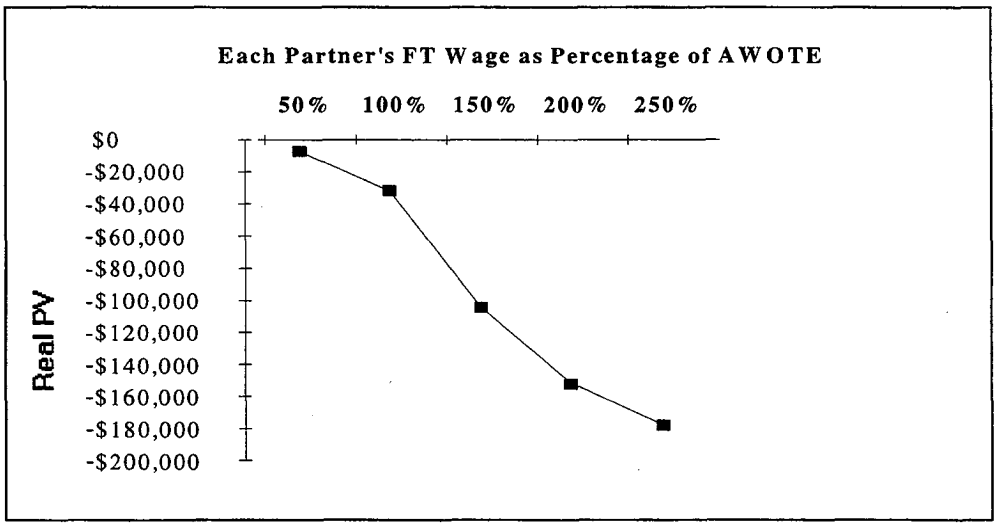
superannuation concessions and the Age Pension) declines with income, as shown in the second last row of Table 8.1. Whilst there are limitations to this type of hypothetical family analysis, it does seem to be the case that the *overall package* of superannuation transfers and the Age Pension is progressive, and leads to more equality of lifetime income than would occur in the absence of both the pension and superannuation (ceteris paribus). The main reason for this is the large expenditure on the flat-rate Age Pension, and the strongly targeted income and assets tests associated with this.

However, it is more difficult to draw firm conclusions about the distributional impact of superannuation tax concessions on their own. Assuming such a thing were politically feasible without other offsetting changes, would there be less or more within-generational inequality if superannuation concessions and regulations were removed?

In addressing this question, it is necessary to first ask whether superannuation policy is actually concessional at all. In fact, the calculations for hypothetical families described in Table 8.1 imply that superannuation saves the government money. That is, the (present value) net cost to government of the combination of superannuation and Age Pension (second last line of Table 8.1) is actually less than the cost of providing a full Age Pension (last line).

Figure 8.1 shows the results of a similar calculation for a wider range of incomes (also prepared by the Treasury Retirement Modelling Task force). Different assumptions were used for the calculation in this figure, and so the results are not fully comparable to those in Table 8.1, but the same patterns are apparent (as in Table 8.1, this figure does not incorporate the contribution surcharge for high incomes). The figure shows the net cost to government associated with the introduction of superannuation at the SGC rate, and this is always negative, and becomes more negative with increasing income. This is because of the reduction in Age Pension and increase in taxation when retired offset the taxation concessions available to contributions.

Figure 8.1: Net Cost to Government of Superannuation Guarantee Policy[a]



Source: Gallagher (1996)

Notes: a) Estimates are calculated in real net present value terms. The net cost to government is calculated by summing the tax expenditure, difference in Age Pension, and difference in retirement taxation (and is negative at all income levels).

This result is puzzling, to say the least. If superannuation saves the government money, why is it so popular as a savings vehicle, and why do so many financial advisers recommend much higher levels of superannuation contributions than assumed in these examples?

In fact, these estimates are extremely sensitive to the assumptions used. For example, Bateman, Kingston and Piggott (1994) undertake a similar exercise evaluating the superannuation guarantee charge. Their results, however, show a positive net fiscal cost to government, rising steeply with income. In this case the

different conclusions appear to stem from two factors. Bateman, Kingston and Piggott include the difference between the fund earning rate and the individual's marginal tax rate as part of the subsidy.[35] The RIM models effectively include only about half of this, hence reducing the net cost. Second, the RIM models use a lower real discount rate (three per cent rather than 4.5 per cent). This places greater weight on the savings to government during the person's retirement, rather than the costs to government during employment. Since the fund earnings concession is regressive, whilst the pension claw-back is progressive, these two differences also explain why the RIM model produces a more progressive result overall.

Whilst these particular assumptions used in the RIM modelling may be defensible, there are other reasons why their calculations significantly underestimate the net cost to government of superannuation concessions. This is primarily due to two other assumptions. The first is that superannuation pay outs are taken in the form of annuities, which then reduce the age pension via the income test. In the absence of the pension income test, this may well be the best strategy for people wishing to maintain a constant consumption level during retirement. The existence of the income test, however, will encourage many people to take a significant fraction of their pension as a lump sum. If this sum is dissipated before pension age, invested in owner-occupied housing, invested in a non-financial asset (with total assets below the asset test threshold), or given away to children (below the gift threshold) then it will not reduce the pension.

More generally, people can significantly increase their total pension receipt over retirement by careful asset management. Essentially, this involves minimising the time spent with amounts of income and assets in the shade-out regions of the income and assets test. Methods for doing this include: investment in owner-occupied housing, higher consumption levels during these periods, and (in some cases) holding non-financial assets.[36] A full modelling of these financial arrangements could change the results shown in Table 8.1 and Figure 8.1 quite significantly. As Gallagher notes:

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35 Bateman, Kingston and Piggott (1994) use this assumption purely for illustrative purposes, and indeed, argue that this difference should not be considered an economic subsidy.

36 The assets test in particular imposes very high effective tax rates over its shade-in range and so there are strong incentives for pensioners to arrange their affairs to avoid this. Pension is reduced by $3 per fortnight for every $1000 of assets. The assets would therefore need to yield a real return of 7.8 per cent per annum to offset this loss of pension. This pension reduction can be avoided by consuming assets, investing more heavily in owner-occupied housing or by investing in complying long-term annuities that are assets test exempt (but which reduce pension via the income test).

> The major threat to the equity [of] superannuation policy is not tax expenditures but dissipation of benefits so that the claw back cannot occur. (Gallagher, 1996: 15)

Some opportunities for dissipation will be closed off by recent policy changes to extend the preservation age of superannuation entitlements until retirement age (60 years by 2025). However, many opportunities will remain for people to optimise their asset holding so as to increase pension entitlements.

However, equally as important as the question of benefit dissipation, is the simplified counterfactual model of pre-retirement savings used in the RIM and similar models. In particular, it is assumed that, in the absence of superannuation, the employer contribution would be paid as taxable salary, half[37] of which would in turn be invested in interest bearing deposits (with interest subject to tax). However, no account is taken of the extent to which this accumulation will reduce the Age Pension in retirement.

More generally, it is likely that high-income earners would save even in the absence of superannuation, leading to a reduced pension. If there is full savings substitution for superannuation then the expansion of superannuation[38] will lead to no change in pension receipt, and the net cost to government of superannuation concessions for high-income earners will be large. To know the distributional impact of superannuation policy it is therefore necessary to have an understanding of the savings substitution patterns of people at different income levels.

One of the reasons why compulsory superannuation is believed likely to lead to significant increases in national saving is that, in the absence of superannuation, many people in the lower half of the income distribution have little or no savings (Gallagher, 1996, reviews this literature). Hence, increases in superannuation cannot lead to less saving by these people. The concept of 'saving' in this analysis, however, typically does not include investment in owner-occupied housing. For most households, this is the most important form of saving.[39]

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37 In Table 8.1, it is assumed that 50 per cent is invested, whilst for Figure 8.1, a 40 per cent assumption is used.

38 The arguments here apply whether this expansion comes about as a result of either regulation or additional concessions.

39 Home ownership is simultaneously saving and investment, and hence has only a small influence on the broader flow of saving and investment funds in the economy. Hence if the goal of national savings policy is to increase the funds available for non-housing investment, it makes sense to exclude owner-occupation from savings calculations at the macroeconomic level.

It is quite feasible that for many low- to middle-income households, superannuation will act as quite a strong substitute for owner-occupied housing investment. In the absence of superannuation, such households might accelerate their mortgage repayments, or invest in better quality housing. For low-income households, diversion of income into superannuation may in fact prevent their entry into home ownership.[40,41]

The implications of this superannuation/home ownership substitution for the effectiveness of the superannuation 'claw back' in retirement depends very much on exactly how this housing substitution is managed. The key consideration is the exemption of owner-occupied housing from the pension income and assets tests. If the presence of superannuation leads to a decrease in housing investment, and hence lower quality housing in old age, then there will be no reduction in retirement income to offset superannuation. This will mean that a significant proportion of the superannuation for these people will be 'clawed back' (subject to the qualifications about dissipation discussed above). On the other hand, if the presence of superannuation simply leads to slower repayment of mortgages in mid-life (without any change in housing quality), then superannuation may lead to a lower accumulation of other assets in the years prior to retirement. The loss of these assets will increase pension entitlements in retirement, and so provide an offset to the increase in assets provided by superannuation. In this case, the net superannuation 'claw back' will be reduced.

Unfortunately, very little is known about the varying saving responses of different types of households. It is possible, however, to make some plausible assumptions, and these are summarised in Table 8.2. For many people, superannuation will simply lead to an increase in their saving. They will thus have greater assets in retirement, which in turn may reduce their age pension. This group, represented in the first line of the table, includes many low-income people excluded from home ownership, higher income people with inflexible saving arrangements, together with other 'myopic' individuals who do not have any savings plans.

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40 Hence suggestions that households should be able to withdraw from superannuation in order to fund mortgage purchases. Treasury (1997) calculations suggest that such withdrawals will lead to lower incomes in retirement. However this drop in income is small compared to the lower housing costs faced by home owners.

41 This also has implications for the calculation of the concessional value of the lower taxation on fund earnings. If the return on superannuation fund earnings is not as good as an acceleration of mortgage repayments, then the concessional value is zero for home purchasers. (Of course, the concessional tax rates on employer contributions and withdrawals are still valuable).

Table 8.2: Savings Substitution and the Superannuation 'Claw Back'

Savings Substitution	Decrease in Housing	Decrease in Other Saving	Increase in Assessable Retirement Assets	Relevant Population Groups
No	No	No	Large	Low income earners excluded from home ownership. Others with fixed saving levels.
Yes	Yes	No	Large	Medium income home purchasers.
Yes	No	Yes	Small	Medium to higher income households with discretionary savings.

The second group are people whose response to superannuation is to decrease their lifetime housing investment. This might include many low- to middle-income earners whose only saving is via home ownership, and who purchase a lower quality house because of their lower disposable income.

Finally, there are people who might reduce their financial savings in response to an increase in superannuation. This is likely to include many higher income households (and medium-income households after they have paid off their house) who have financial investments in addition to superannuation. High-income households are likely to have a wide range of investment options open to them.

This typology of the savings responses of different categories of individuals is both very stylised and extremely speculative. However, if behaviour is as suggested in this table, this has important implications for our views on the distributional impact of superannuation concessions.

In particular, it suggests that, the higher up the (lifetime) income scale we go, the less likely that superannuation concessions will increase the amount of retirement income which can be 'clawed back' by the Age Pension.[42] This is because, for high-income earners, the introduction of superannuation concessions is more likely to lead to a substitution away from other financial assets rather than an increase in saving. At the same time, however, it must be recognised that the value of superannuation tax concessions should be assessed against the tax likely to be paid under plausible alternative investment regimes (such as negative

42 In addition, at very high incomes none will be clawed back at all because the person will be beyond the Age Pension income and asset test thresholds. How high incomes need to be for this to occur depends upon the extent of dissipation and investment in housing as well as the actual contribution rates.

gearing or other means of converting income into capital gains). Nonetheless, it appears that significant concessions will remain, even with the introduction of the superannuation surcharge.[43]

There are thus three reasons why the actual distribution of the net cost to government are very unlikely to follow the picture portrayed in Table 8.1 and Figure 8.1. The first, which we have set aside to this point, is the very uneven distribution of superannuation across the workforce (see Brown, 1994; Rothman, 1996). The average high-income earner is likely to have a much higher percentage of their income delivered in superannuation than the average low-income earner (the hypothetical calculations assume a constant percentage). Of course, if the net cost to government of superannuation is indeed negative, then this reinforces the progressivity of superannuation.

However, there are good reasons to assume that this is not the case. These calculations do not take account of any dissipation of income which would reduce the Age Pension 'claw back'. Most likely this is large enough to turn the negative net costs to positive. Unfortunately, not a great deal is known about the investment patterns of retirees, and research has not been able to quantify either the overall, nor the distributional impact of different investment and consumption strategies in retirement. The central importance of the pension income and assets tests to the equity of retirement incomes policies suggests that more research is desirable. This should incorporate both the development of models incorporating behavioural responses in retirement, as well as data collection exercises describing the actual investment strategies of retirees.

Finally, it is likely that savings substitution patterns during the years prior to retirement may mean that the pension 'claw back' for high-income earners will be much less than suggested by simple hypothetical calculations. Again, unfortunately, very little concrete information is available.

In summary, it is likely that superannuation does indeed entail quite significant concessions to middle and higher income households, though the magnitude of the net tax concessions are undoubtedly overstated in conventional tax expenditure calculations as shown in Table 2.1. As was argued in Section 2, the fact that the benefits from superannuation policy are widespread is not of itself a

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43 Bissaker (1997), for example, compares the returns on superannuation with negatively geared property or share market investments for high-income earners subject to the surcharge. Over a 10 year period the returns are either similar or higher with superannuation, depending upon the yield assumptions. This calculation would probably shift further in favour of superannuation if a longer investment period were used. The advantage of superannuation stems from the fact that fund earnings continue to be taxed on a concessional basis for all members.

cause for concern. All income groups require mechanisms for shifting resources across the life cycle. However it may not be desirable if the concessions used to encourage saving are greater for higher income earners. In particular, since the taxes used to finance these concessions are broadly proportional, concessions which provide greater proportionate benefits to high-income earners will have adverse distributional outcomes.

These negative outcomes, could in principle, be offset by other positive externalities flowing to the whole community. For example, if faster economic growth is to flow from higher savings rates, and the only people who can save are high-income earners, then it may be desirable to provide savings subsidies which are inequitable. As argued above, however, there are good grounds for expecting that savings may be unresponsive to tax concessions. Even if this is not the case, for effective public policy, all aspects of the trade-off between growth and distribution need to be clearly identified.

The main conclusion of this brief review of superannuation policy is that much ignorance remains about distributional impacts. Moreover, this ignorance is no accident, but flows directly from two key design features of the policy. Whilst public pension policies may change the behaviour of individuals, superannuation policy actually *requires* a behavioural change. That is, taxation incentives are put in place to encourage individuals to increase their retirement savings above what might have been the case otherwise. Since a significant component of superannuation remains non-compulsory, an understanding of behavioural responses is essential in a way that is unusual for other social security policies.

The second key feature is that superannuation consists of a number of different policy instruments with offsetting distribution impacts. Tax concessions provide greater benefits to high-income earners (though the superannuation surcharge reduces this advantage significantly for very high income earners) whilst the pension income and assets tests (together with taxation in post-retirement) 'claw' much of this back. However, these different instruments are separated from one another by significant time periods. Understanding the interactions of policies that act in different directions over such a long time interval is bound to be difficult.

The transparency of superannuation policy, and hence the effectiveness of public policy administration in this area, will be much enhanced by policies which reduce the importance of these two features. Such a policy framework would have three main differences from the current policy structure.

- A greater emphasis on compulsory superannuation, rather than on providing incentives for participation.

- A less regressive structure of superannuation concessions, matched by a weakening of the Age Pension income and assets tests.

- A more comprehensive assessment of asset values in retirement which removes asset holding distortions. For example, including the family home in the assets test.

In the absence of these and other, policy simplifications, we can expect that successful public policy in the field of superannuation will require a much larger ongoing research effort than is necessary for many other public policies.

9 Summary and Conclusions

In Australia, concerns are often voiced that too much of the welfare effort has been 'captured' by the middle class. Some commentators argue that this diverts resources away from the most needy, whilst others point to the possible reduction in government deficits (or taxes) if well-off households could be excluded from government-provided welfare benefits. In addition, it is argued, requiring the well-off to provide for themselves would help increase private savings, with consequent macroeconomic benefits.

This report provides an overview of the distributional incidence of government-funded welfare programs in Australia. The welfare programs examined here include government expenditures on education, child care and health and social security as well as government tax expenditures on superannuation.[44] The analysis of direct expenditures is based on data assembled by the ABS in *The Effects of Government Benefits and Taxes on Household Income.* The focus is on distributional patterns in 1993-94, but some comparisons with data from 1984 and 1988-89 are also made. Government expenditures on social security payments are termed *cash benefits*, whilst expenditures on education, child care and health are termed *non-cash benefits*, since they are delivered in the form of services to households.

These ABS 'fiscal incidence' studies allocate government expenditure on welfare services to those households that utilise, or are likely to utilise, the welfare services provided. This method defines welfare benefits to be equal to expenditure, and assumes that benefits are not shifted onto other households (or to other periods of the life cycle). There are also other limitations (due to data restrictions) which mean that in some cases non-cash benefits are only allocated approximately to those households that might benefit. Whilst the methodology is thus limited, and it cannot substitute for detailed analysis of particular policy areas, it does provide the best data source for addressing questions of the broad distributional incidence of welfare benefits.

In the standard results from this study, the ABS ranks households according to their gross income, and divides them into five groups, or quintiles. At the most aggregate level, the data show that poorer households tend to receive more cash benefits than households with higher gross incomes, whilst non-cash benefits are relatively evenly distributed across households. Since these benefits are financed

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44 Some results also include housing and other smaller welfare benefits.

from taxes that are roughly proportional to income, both cash and non-cash benefits strongly contribute towards an equalisation of living standards.

However, gross income is a relatively crude indicator of living standards, and so Section 4 of the report introduces several more comprehensive measures of household living standards. These take account of household needs, additional consumption capabilities due to imputed rental income from owner-occupied housing, and the distinction between the distribution of income across the life cycle vs the distribution of income between people at the same life cycle stage. It is argued, however, that it is not appropriate to include non-cash benefits themselves in living standards indicators, because to do so would require much greater knowledge of the distribution of need for these services. This issue is elaborated in an Appendix to the report.

9.1 The Distribution of Aggregate Cash and Non-cash Benefits

Section 5 employs these alternative methods to examine the distribution of total cash and non-cash benefits in Australia in 1993-94. In one important respect, the alternative ranking methods used here do not change the broad picture shown in the ABS published results. Irrespective of how we define the well-off, they do receive substantial amounts of cash and non-cash welfare benefits. Nonetheless, cash benefits decline steeply with income, whilst non-cash benefits are reasonably constant in dollar terms, and decline as a proportion of income.

Whilst this broad conclusion generally continues to hold, there are some significant variations in the distributional incidence of benefits when we use different measurement and conceptual perspectives, and these provide insight into the nature of the Australian welfare state. The following results are found.

- The standard presentation used by the ABS does not take account of the fact that lower income households tend to be smaller. This produces results where the bottom quintile is found to receive less cash and non-cash benefits than higher income quintiles. It is more appropriate to look at per capita (or per equivalent capita) benefits received and assign equal numbers of individuals to each quintile. When this is done, the apparent share of cash benefits received by the bottom quintile increases from under 30 per cent to almost 50 per cent. (A similar but less dramatic pattern applies to the distribution non-cash benefits).

- Using disposable rather than gross income to rank households does not make much different to the distribution of total cash and total non-cash benefits.

- Older households tend to be smaller than average, and receive extensive cash and non-cash benefits. Thus, ranking households using equivalent household income (rather than household income) moves many older households out of the bottom quintile, and so decreases the share of benefits going to the bottom quintile.

- Similarly, because the elderly often have substantial housing wealth, including imputed rental in the measure of household resources also reduces the benefit share going to the bottom quintile. This is reinforced by the fact that many larger households of moderate incomes (receiving few benefits) also have very high housing costs. Their negative imputed rental income thus moves them down the income distribution.

- When considering the distribution of welfare benefits across the whole population, the most comprehensive measure of resources used here (and the preferred measure) is *equivalent household disposable income including imputed rent* (EDIIR). The 20 per cent of individuals who are ranked lowest on this indicator receive 35 per cent of all cash benefits, and 24 per cent of non-cash benefits. The top quintile of individuals, on the other hand, receives four and 15 per cent of cash and non-cash benefits respectively.

- This picture changes somewhat when individuals are ranked separately within each life-cycle group. This is particularly the case for the cash benefits received by the top two quintiles. The top quintile defined using the EDIIR measure, for example, nearly doubles its share of cash benefits from four to seven per cent. This is primarily due to cash benefit receipt by the top quintile of the aged population.

- Among the elderly, the receipt of both cash and non-cash benefits is widespread. Interestingly, both the top and bottom quintiles receive less cash benefits than do the middle three quintiles. This is probably a reflection of income and asset testing. (Some households drawing down their savings may have very low incomes because the assets test excludes them from pension receipt).

- Among work force age families, the receipt of cash benefits, in particular, is very targeted to those families with the lowest living standards, though high-income households continue to receive some benefits.

Whilst it is useful to have an understanding of the broad distributional patterns associated with cash and non-cash benefits to households, to make sense of these patterns requires an examination of particular policy areas. A broad overview of

each of the areas of welfare state expenditure is undertaken in the remaining sections of the report.

9.2 Education and Health Non-cash Benefits

Section 6 of the report examines education (including child care) and health non-cash benefits in more detail. It is well established in the literature that children from wealthier families tend to consume more education services than less advantaged children. This report addresses the question of the extent to which state expenditure on education services is devoted to those families which have higher living standards. As well as depending upon the class background of students, this also depends upon the living standard of families with children of education age compared to the general population. This perspective is in accord with the rationale that one reason for state support for education is to support families in the life-cycle stage when their needs are high relative to their incomes.

A key limitation of the ABS fiscal incidence data is that it can only categorise people according to the characteristics of their current household. Hence some results are also calculated which focus upon 'family households' – excluding those households consisting of students who have left their parental home (since they may be receiving substantial support from family members who are not co-resident).

The apparent distributional incidence of education expenditures is extremely sensitive to the method used to rank households and calculate benefits received. When households are ranked by gross income, the top quintile receives 27 per cent whilst the bottom quintile receives only seven per cent. However, if the preferred method of ranking individuals by their equivalent household disposable income including imputed rent is used, the bottom quintile receives 24 per cent whilst the top quintile receives 16 per cent. This change is due to the facts that education benefits tend to accrue to larger households who have higher income needs, and to households which have low consumption levels (compared to their incomes) due to their high mortgage repayments.

The distribution of education benefits varies dramatically between programs. Higher education (and TAFE to a lesser extent) expenditure strongly favours high-income households. If households with students living apart from their parents are excluded, the top quintile of households receives 42 per cent of higher education spending, whilst the lowest quintile receives only 10 per cent.

Public school education benefits are highest amongst the lowest living standard households, whilst government subsidies to private schools are more likely to go

to higher income households (though this expenditure is only approximately allocated).

Both pre-school and child care benefits were received predominantly by the lower three quintiles in 1993-94. This reflects both income testing of child care assistance and the association between life-cycle stage and household income (and housing expenditures).

Whilst government education expenditure is allocated to those households containing students, fiscal incidence studies such as that conducted by the ABS typically allocate health expenditure according to the utilisation of services by the age/sex/region group that each individual belongs to. This, not surprisingly, leads to a relatively even distribution of non-cash health benefits across the population, with the main distributional patterns due to the correlation of age with income.

In particular, when households are ranked within each life-cycle category, most health benefits are very evenly spread across income quintiles. The main exception is pharmaceutical benefits, where income support recipients receive much higher government subsidies.

One limitation of the ABS approach is that it does not take account of important policy features such as private insurance. A study by Schofield (1997) examines this and other variations in usage between income groups and finds that public hospital services are much more pro-poor than age and sex based allocations imply.

9.3 Cash Benefit Trends

Section 7 of the report considers trends in the allocation of cash benefits between 1984 and 1993-94. One notable feature of this period was the growth in cash benefits received by the three middle-income quintiles.

Part of the explanation for this can be found in changes in targeting policies for pensioners. In Australia, the coverage of the Age Pension steadily increased during the post-war period up until the early 1980s. This trend was interpreted by some authors as evidence of a 'creeping universalism' whereby the middle classes exerted political pressure to ensure a broadening of welfare state benefits to include them. However, the 1980s saw a reversal of this trend, with a significant reduction in pension coverage.

Paradoxically, however, the household surveys conducted by the ABS over this period show a *fall* in the relative cash benefit shares of the low-income retired population – despite the increase in targeting. This pattern is apparently due to the introduction of assets tests (and more complicated income tests) which led to

some asset-rich but income-poor pensioners losing pension. Since the targeting employed by the Department of Social Security utilises much more information about financial resources than is collected in household surveys, it would be inappropriate to assume that this increased targeting led to more middle class welfare. Rather, this points to the limitations of income survey data that do not include information on household assets.

Most of the growth in cash benefits going to middle-income households, however, arises from the income patterns of working age 'larger families'. These are families which are not single person households, couple only households or households of unrelated adults.

The main reason for the cash benefit increase for these families was the higher rate of unemployment in 1993-94. Even though negligible numbers of households in the middle and fourth quintile had no members employed, substantial numbers of these households contained at least one unemployed member. This would often be an adult child of the household head receiving cash benefits in their own right.

9.4 Superannuation

Superannuation is often nominated as the most important form of middle class welfare in Australia. It is only available to people with earnings or self-employment income, its availability and magnitude tends to increase with income, and it is associated with substantial taxation concessions. In Section 8, the report reviews available evidence on the distributional impact of superannuation taxation concessions in Australia.

A striking feature of the literature on this topic is the extreme sensitivity of conclusions to the assumptions used to calculate distributional incidence. This flows directly from two key design features of superannuation policy in Australia. Whilst public pension policies may change the behaviour of individuals, superannuation policy actually *requires* a behavioural change. That is, taxation incentives are put in place to encourage individuals to increase their retirement savings above what might have been the case otherwise. Since a significant component of superannuation remains non-compulsory, an understanding of behavioural responses is essential in a way that is unusual for other social security policies. In particular, in order to understand the distributional incidence of these programs it is necessary to understand how households might change their saving and housing investment plans in the light of superannuation tax concessions.

The second key feature is that superannuation consists of a number of different policy instruments with offsetting distribution impacts. Tax concessions provide greater benefits to high-income earners (though the superannuation surcharge

reduces this advantage significantly for very high income earners) whilst the pension income and assets tests 'claw' much of this back. However, these different instruments are separated from one another by significant time periods (and associated opportunities for dissipating funds to avoid the 'claw back'). Understanding the interactions of policies that act in different directions over such a long time interval is bound to be difficult.

The transparency of superannuation policy, and hence the effectiveness of public policy administration in this area, will be much enhanced by policies which reduce the importance of these two features. This could include a greater reliance upon compulsory superannuation, rather than on providing incentives for participation, a more comprehensive measurement of assets in retirement, and a less regressive structure of superannuation concessions matched by a weakening of Age Pension income and assets tests.

9.5 Interpretation and Conclusions

The welfare activities of the state in Australia lead to a more equal distribution of resources across households, while also providing substantial support to the middle class. How should we evaluate these two outcomes? Both conservative and radical commentators have been critical of middle class benefits. Those on the left have argued that a reduction of the cash and non-cash benefits going to the middle class could be used to finance additional benefits for the most vulnerable in society. Conservative commentators have argued that a reduction in middle class benefits could be used to finance deficit and/or taxation reductions, and to encourage private saving.

Whilst all these perspectives should be incorporated in a full evaluation of welfare programs, the Australian debate too often ignores the important efficiency objectives of welfare state programs. Social insurance was the first goal of the welfare state, and though the targeted welfare states of Australia and New Zealand have never fully embraced this goal, the arguments for social insurance remain valid. These arguments stem from important failures in private capital and insurance markets in the fields of health, education and within-lifetime income distribution.

For example, private health care insurance faces many well-known problems, with limited mechanisms for ensuring control over expenditure and with people suffering poor health more likely to insure. State intervention in health service provision thus has the potential to provide efficiency gains which more than outweigh the taxation burden on middle and higher income households which is required to finance this provision. This rationale for state involvement is independent of any equity considerations.

Similarly, family payments paid to middle-class families with children can be justified as efficient responses to the imperfections in capital markets which restrict families in moving resources across their lifetime to periods when their expenditure needs are greatest.

The rationale for expenditure on middle class education benefits is in some respects weaker than for health and social security, particularly in the case of higher education. Traditionally, one of key arguments for extensive state involvement in education has derived from the positive externalities associated with education. These mean that the benefits of education are not fully captured by the educated individual, but spill over into the wider population. However, when there are supply constraints in the provision of higher education, this argument is less valid. If children from middle and higher income families were required to pay full fees for higher education, many would still continue to participate, and those who drop out might well be replaced by sufficiently able students from low-income backgrounds.

An alternative justification for public support for higher education is that this replaces ineffective private capital markets that prevent the financing of education from either the parent's higher living standards at other stages of their life cycle, or from the student's higher incomes post-education.

However, one solution to this is to develop the necessary private markets, and the Australian Higher Education Contribution Scheme (HECS) can be seen in this light. This seeks to recover a fraction of higher education costs from the increased incomes that graduates receive after graduation. It can be argued on both equity and efficiency grounds that this scheme should do more to provide insurance against the uncertainty associated with the income increase that might arise from having a degree. Nonetheless, the broad structure of the scheme is consistent with the efficiency and equity criteria outlined here.

To say that there are strong efficiency grounds for many of the benefits that the Australian welfare state provides to the middle class, is not of course the end of the story. At the level of individual programs these benefits need to be carefully weighed against equity and other efficiency costs.

One of the most important efficiency costs that has been raised in this respect is the impact of middle class welfare on private savings. If these social insurance and within-lifetime redistribution benefits were removed from better off households, it is argued, the households would increase their own saving to cover these needs. This would increase national saving, and help reduce international capital account imbalances. Whilst this may increase economic efficiency at the macroeconomic level (though this remains a topic of debate), this needs to be weighed against efficiency costs at the household level. To use an analogy, if

middle class households were not permitted to have motor vehicle insurance, this would probably lead to an increase in national saving, as people put money away to cover the possibility of accident or theft. However, the welfare loss from doing this would be great. Similar criteria need to be employed when evaluating the impact of social insurance on saving rates.[45]

In summary, this report has not found evidence of an inappropriate level of middle class welfare in Australia. Indeed, the targeting ethos so strong in Australia means that we have less middle class welfare than most other industrialised countries (certainly this is the case for cash benefits[46]) – and there are generally good efficiency reasons for the middle class welfare that we do have.

This conclusion, however, should be tempered by our lack of knowledge of the distributional impact of superannuation taxation concessions. Also, this does not imply that the equity/efficiency trade-off of particular government programs cannot be improved. This trade-off must be assessed on a case by case basis, and it is not pretended here that this is an easy or uncontroversial task. However, to assume that the existence of substantial middle class welfare means that there is a corresponding potential for a reduction in welfare state activities is to seriously misunderstand the role and benefits of middle class welfare in Australian society.

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45 The other argument for increasing saving is associated with the desire to ensure equity between different generations by ensuring that each generation pays for its own retirement. As the discussion of superannuation in Section 8 illustrated, it is not easy to implement this between-generation objective without introducing complicated within-generation redistribution patterns. The latter are likely to be much more important, particularly given the wide range of other factors influencing welfare variations between generations (see Osberg, 1998).

46 See footnote 1.

Appendix One: Equivalent Incomes when Health Benefits are Included

Consumer equivalence scales are indices which show the relative incomes required by different family types to reach the same living standard. How should they be employed when measuring the distribution of living standards based upon broader measures of well-being which include non-cash benefits?

Most commonly, distributional analyses of the resources available to households use household *disposable income* divided by an *income equivalence scale* as the index of the well-being of each individual in the household. Disposable income, however, excludes many non-cash resources that households use. In particular, if the state provides services such as health care and education the household will not have to purchase these services and so they will be better off. Hence, the inclusion of these services in the measure of household resources, it might appear, should give a better indication of the distribution of living standards in the population. Household disposable income plus non-cash benefits is here termed 'final income'. This appendix considers the inclusion of state-provided health services in final income.

There are two commonly used methods for calculating a broader indicator of living standards based upon final income. The first approach is to add non-cash benefits to household disposable income, and then to apply the same equivalence scale as was used to derive equivalent income. One problem with this is that non-cash benefits may have a different pattern of household joint consumption than other commodities. For example, there is little joint consumption of health services. Thus, a large household which has to purchase all its health services will require relatively more final income (compared to a small household) than it does disposable income. The reverse argument applies to non-cash housing benefits. Hence it is unlikely that the same equivalence scale will be appropriate for final income as for disposable income.

Because of this, some researchers have attempted to explicitly incorporate assumptions about the relative needs associated with particular services. For example, Smeeding et al. (1993) adjust disposable incomes to single person equivalents using a conventional equivalence scale and then add health non-cash benefits directly to this. In this note, this is termed the *per capita approach*. The rationale for this is that there are no sharing economies in health benefits, and so they should contribute equally to each person's living standard, irrespective of their household composition.

Whilst apparently appealing, there are two problems with this approach. The first, and most important, is that it does not take account of variations in needs for non-cash payments. One implication of this is that this method ascribes an overly re-distributive role to non-cash benefits. Secondly, this approach does not take account of the interaction between cash and non-cash equivalence scales. This has important implications for the comparison of different final income distributions. These two issues are explored below.

The usual approach to allocating health benefits is on a risk-related insurance principle. The benefit is thus assumed to correspond to the likely insurance premium required to provide the same services for a person in the given age/sex group. In practice, health benefits are usually allocated according to the utilisation of services by different age/sex groups.[47]

An alternative approach would be to allocate health benefits directly to those people who use the services. However, this does not produce a very useful measure of living standards. To use it is as such would imply that some very sick people were very well-off (since they are consuming large quantities of health services). Allocation according to average utilisation in each age/sex group, it might seem, avoids this perverse result. However this is not the case. Whilst age/sex allocation (correctly) shows that older people use more health services, they also have greater health needs than younger people. *Unless the equivalence scale for non-cash benefits takes these higher needs into account, older people will be erroneously assumed to have higher living standards than younger people.* Is there a sensible way of allocating health benefits to households whilst taking account of their variations in needs?

To begin with, it is important to recognise that *the disposable income equivalence scale already incorporates assumptions about the distribution of non-cash benefits.* The income equivalence scale shows the relative amounts of disposable income that different households require in order to reach the same living standard. The scales can be estimated either by reference to household expenditure patterns, or by reference to subjective views on the relative needs of different family types. However estimated, these needs are likely to change significantly if the goods that must be purchased from income change. For example, equivalence scales usually do not discriminate by age – assuming that younger and older households require the same income. However this would

47 This can be extended to differentiate according to other indicators (such as health insurance category).

surely be an inappropriate assumption if there were no state-provided[48] health services for the elderly.

Indeed the question posed in this appendix can be rephrased in this context. The conceptual basis for the allocation of non-cash benefits to households is to examine *how much the household would need to spend in the absence of the non-cash benefit to permit the same consumption of services*. To make the analysis tractable, it is assumed that the household would demand the same services in the absence of their state provision and that the consumption cost equals the cost of provision.

It is natural to formalise the non-cash equivalence scale question within the same framework. That is, *if households were purchasing the non-cash services which are currently provided by the state, what relative expenditures would be required so that the members of different sized households would be equally well off?* In other words, how would we define a 'final income equivalence scale' for the situation where there was no state-provided service?

The simplest approach to this question is to consider two commodities 'basic health services' and 'other'. We then assume that the distribution of state provided basic health services reflects the needs for these services. In particular, older groups both receive and need more, and basic health services are a 'pure necessity' – with the same amount of basic health services required irrespective of living standards (again the need assumption is identical to the assumed pattern of receipt).

If the disposable income equivalence scale for the 'other' goods is fixed across all income levels, this means that the final income equivalence scale cannot be. For example, consider two households, one comprising a single young person, one with a single older person. If the former is taken as reference, the income equivalence scale for the older person will typically be set at 1, implying the same needs for income (given current policies for non-cash service provision). If households had to purchase basic health services, older households would need more than younger, and the difference would be a fixed dollar amount (under the above assumptions). This fixed dollar amount will translate into a smaller proportion of income for high-income households. That is, the final income equivalence scale for the older household will be always greater than 1 and will be higher for households with lower incomes.

Indeed, there is no reason why the equivalence scale concept need always be considered in ratio terms. The objective is to obtain an index, 'equivalent final

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48 Or subsidies to the elderly via community rating of health insurance.

income' which best reflects relative living standards. In the above example, the fixed dollar cost of basic health services means that it is simpler to treat needs as a quantity to be subtracted from final income (rather than a quotient). A household may receive a given amount of non-cash benefits, b, but this is also the amount that they need to spend on basic health services and which must be subtracted from final income to arrive at the income they need to spend on other commodities. If y is disposable income, m the income equivalence scale, then

'equivalent final income' = $(y + b - b)/m = y/m$ = 'equivalent disposable income'.

This thus leads to a simple ***irrelevance proposition***. *If non-cash health benefits are allocated according to need, then information on public health expenditure will provide no additional information about the level and distribution of household welfare.* If these assumptions are held, we should simply rank households according to their equivalent disposable income since this already makes implicit assumptions about the distribution of non-cash goods.

This point is illustrated in Figure A1.1 which shows the implied consumer indifference curves implied by the assumptions of this simple model. If basic health services are below some threshold, utility is undefined (the person is dead?), above this threshold, however, only the provision of other goods can increase welfare. Hence, if we believe that health services are provided according to need, and provide services equal to this personal threshold, then it is the provision of non-health goods (i.e. disposable income) that should be used to rank individuals. In Figure A1.1 it can be seen that the amount of other goods consumed is sufficient to identify the indifference curve which the individual can reach.

The remainder of this appendix considers some implications of this proposition.

A1.1 The Measurement of Social Inequality

This irrelevance proposition might appear counter-intuitive. The same amount of non-cash health benefits are received by all households of the same demographic composition, irrespective of their incomes.[49] Does this not imply that a living standard indicator based upon final income should show less inequality than one based upon disposable incomes only? No. The two types of indicators apply to different universes of need, and so they cannot be directly compared. The index

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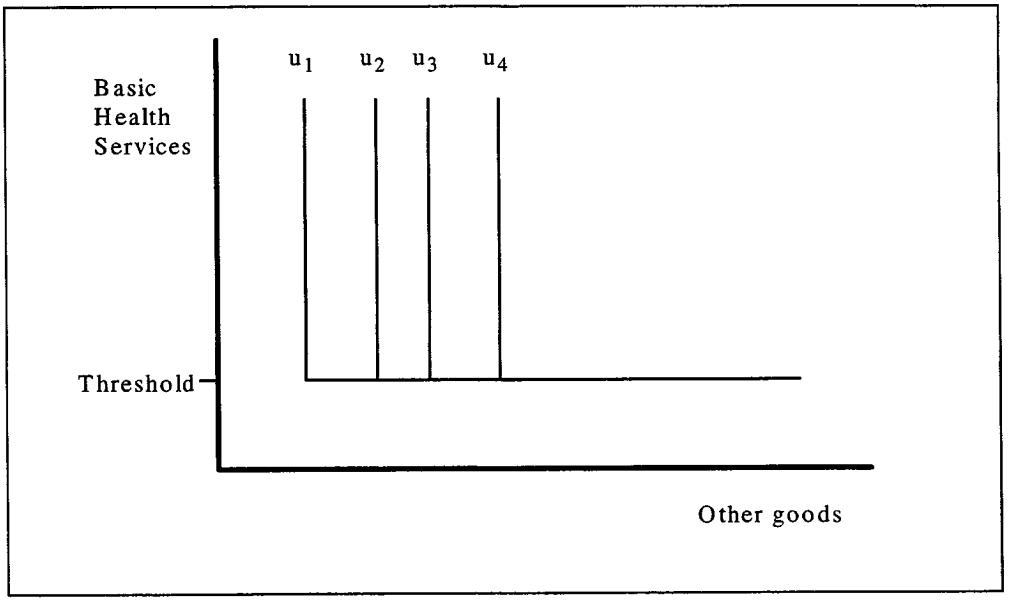
49 This is the usual modelling assumption. To the extent to which different benefits are received by different households for reasons other than needs, then the assumption of the irrelevance proposition is violated.

Figure A1.1: Indifference Curves with Health Services Fully Satisfying Independent Health Needs



of equivalent disposable income shows how households compare in their ability to satisfy needs other than those already supplied by non-cash services. Final income, on the other hand, is a measure of resources available for the purchase of basic health services as well as other goods. If basic health services are a necessity for everybody, then final income must be more equally distributed than disposable income in order to arrive at the same distribution of welfare levels across households.

A1.2: Describing the Impact of Non-Cash Benefits

The irrelevance proposition does not mean, however, that non-cash services are unimportant in influencing the degree of inequality in household living standards. Because they tend to be universally available, these basic services are vitally important in the equalisation of living standards in a given community. The irrelevance proposition simply says that this effect is already incorporated into the disposable income equivalence scale.

Of course, if we wish to show how non-cash benefits influence inequality in living standards then we need to show how they are allocated across the population. The simplest way to do this is to show the amounts of non-cash benefits received by different equivalent disposable income groups as is done in the body of this report. A more specific counterfactual can be obtained by

estimating the living standards that households would have if they were required to purchase all their non-cash health benefits. This is calculated by subtracting non-cash health benefits from disposable income and then applying the disposable income equivalence scale to the result. The degree of inequality of this measure compared to the actual equivalent income distribution could then be used as an indicator of the contribution of non-cash health benefits to social equality.[50]

A1.3: Comparisons of Living Standard Distributions

What do these assumptions imply for comparing the distribution of living standards in different countries (or one country at different times)? For example, how should we compare the distribution of living standards in two countries, one with a high level of non-cash health services, and the other with a low level.

The simplest approach is to assume that basic health care needs are actually different in the two countries and equal to the amount that people actually get. In this case the irrelevance proposition applies to both countries, and we should ignore non-cash health benefits when comparing them.

Otherwise, we need to introduce some specific assumptions about the different needs of different household types for health services. We might assume, for example, that age/sex specific needs for basic health care services are identical in the two countries. This means that the country with the lower expenditure cannot be meeting all those needs (or else the higher expenditure country is wasting resources). Since the needs must then be made up from disposable income, this implies that the disposable income equivalence scales in the two countries should be different (for example, the low expenditure country should have higher relative needs for larger and older households).

A more straight-forward way to implement this is to introduce an explicit assumption regarding the basic health needs in each age/sex group. For example, we might take one country's expenditures as a reference indicator of needs. Then we can apply a (common) disposable income equivalence scale to $y + b - r$ where y is disposable income, b is non-cash health benefits received, and r is the reference country expenditure (in the reference country, $b = r$).

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50 This difference could be decomposed into two parts: that due to going from actual health service utilisation to age/sex specific utilisation rates, and that from the insurance principle to no health services.

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