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# **Housing Assistance and the Lifetime**

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# NATSEM

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## **Abstract**

The value of housing assistance is frequently couched in broader terms than just the direct housing outcomes – additional impacts, for example, on people’s education, labour market activity and health. These broader impacts also have a clear lifetime dimension. In contrast, the costing of housing assistance tends to be narrow and focused on a point in time. So, what are the net benefits (benefits less costs) of housing assistance to government and to recipients when we take into account both housing and non-housing impacts and consider the streams of these impacts over people’s lifetimes? This paper draws on the AHURI research project ‘Housing Assistance – a Lifetime Perspective’. The aims of the project are to develop estimates of the lifetime net benefits of different types of housing assistance to government (from a whole-of-government perspective) and to recipients of assistance. The paper outlines the lifetime framework and data sources used for the analysis and presents preliminary results for Commonwealth rent assistance and public rental housing.

## **Author note**

Anthony King is a principal research fellow with the National Centre for Social and Economic Modelling at the University of Canberra.

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# 1 Background

A full picture of the value of housing assistance is fundamental to major debate about the extent and nature of such assistance. Our view of the value of housing assistance, however, tends to be narrow. It tends to concentrate on the direct impacts of assistance – the impact of a rent subsidy, for example, on a household's housing costs and as an element of government outlays.

This focus on the direct impacts of housing assistance is despite a growing appreciation of the possible important indirect effects of housing assistance – impacts on other aspects of people's lives. Housing assistance can have positive effects, for example, on people's education and health, on their employment prospects, on crime and community cohesion and so forth. There is ample evidence of the existence of these indirect impacts, with much current research into their scale and nature – often referred to as research into the 'non-shelter' or 'whole of government' impacts of housing.

The potential importance of these indirect effects in assessing the full value of housing assistance is amplified by the fact that many of these areas of indirect impact can have lasting effects over people's lifetimes. Thus, an increase in educational attainment can have an impact over a whole lifetime – through, for example, improving employment prospects, earnings, savings and retirement income. A lifetime perspective on the value of housing assistance is important.

This paper provides some early results from an AHURI study which has been designed to broaden the valuation of housing assistance beyond consideration of just the direct impacts of housing assistance – by adding the indirect impacts and the lifetime perspective. The positioning paper for the project (King 2001) set out the policy and research contexts for the study and outlined the methodology to be pursued.

The broad aim of the study is to assess the impact that these potential indirect effects of housing assistance over a lifetime can make on our assessment of:

1. the value of housing assistance in general; and
2. the value of different forms of housing assistance.

It should be stressed that the focus of this research is on developing a framework for broader valuation of the impacts of housing assistance in a lifetime perspective. It does not directly address the important research gap on determining the magnitude and nature of the non-shelter outcomes of housing assistance – to what extent can housing assistance have an impact on labour force performance, and so forth. That gap is being addressed by a number of other AHURI research projects. This research

does, however, have scope to explore the sensitivity of estimated lifetime impacts to plausible assumptions about the initial impacts.

An account of the methodology being used is provided in section 2 before providing some illustrative early results in section 3 (Commonwealth rent assistance) and section 4 (public rental housing). The paper concludes in section 5 with some pointers to their interpretation.

## **2 The framework**

The method being used to assess the broader value of housing assistance is a ‘hypothetical’ model of people’s lifetimes. This entails constructing ‘typical’ lifetimes for people and estimating the direct and indirect impacts of housing assistance over these lifetimes. This is a method commonly used in other areas of policy analysis where intervention is seen to have lifetime impacts – such as research into education or superannuation. Using it here reflects the view that housing, too, can have lifetime impacts – housing assistance can be seen as an investment in people’s futures.

The model under development is outlined below in terms of its scope, the development of hypothetical lifetimes, incorporation of the policy environment, and housing details.

### **2.1 Scope**

The model is being confined to three areas of the possible indirect impacts of housing assistance:

1. educational attainment;
2. labour force activity; and
3. health.

These three areas have been chosen because:

- they emerge repeatedly in the research as important aspects of the possible indirect impacts of housing assistance;
- they each have potentially large lifetime effects; and
- they can be reasonably readily incorporated into a framework for assessing housing assistance by drawing on research undertaken in other areas of public policy analysis.

With this research still underway, note that the examples presented later in the paper include only the possibility of education and labour market impacts.

## **2.2 Hypothetical lifetimes**

Construction of the hypothetical lifetimes involves compiling consistent sets of lifetime characteristics for a limited number of illustrative individuals/families.

### *Demographics*

#### *Family types*

The framework is being constructed to handle three family types – single people, couples without children and couples with two children. Lifetimes are being examined from the age of 25 years on. This starting age is selected as approximating the age at which people tend to move from living in the parental home to independent living. In June 2000, 46% of 20-24 year olds were living in the parental home, while this was the case with just 12% of 25-34 year olds (ABS 2000, Table 26).

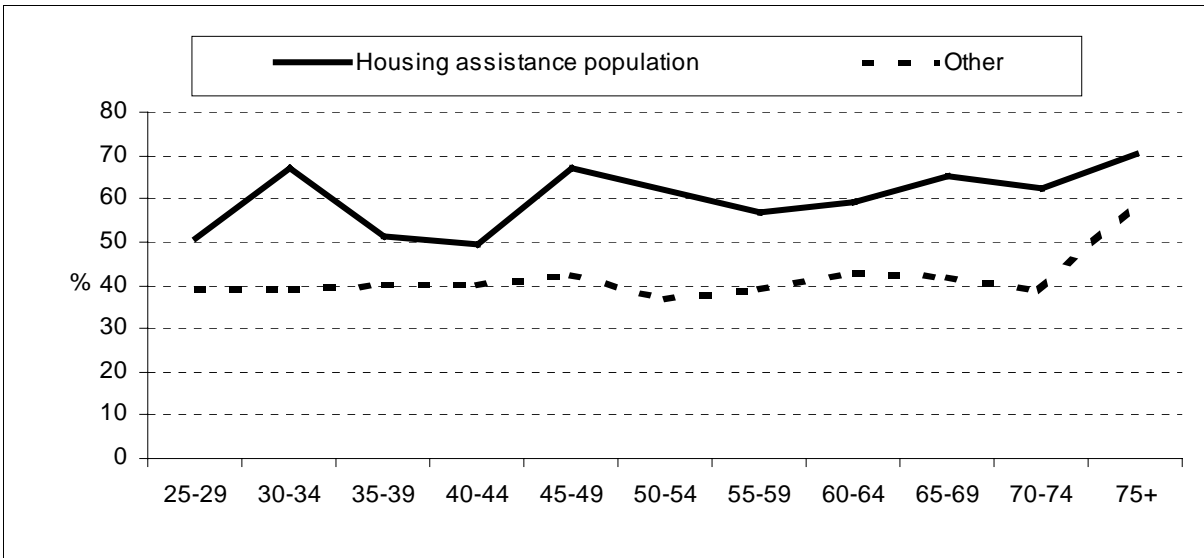
#### *Life events*

Details on the timing of life events for the hypothetical cases have been based on ABS demographic statistics and ABS survey data. In the case of couples, they are taken to be married (in a de jure or de facto sense) by age 25, and to both be the same age. In the case of the couple with two children, the first child is taken to be born when the mother is 24 years old, and the second two years later. This timing reflects patterns according to level of mother's educational attainment – with our base cases having low educational attainment. Lives are taken to continue to the age of 77 years for females and 82 years for males. These are the life expectancies for a 25 year old in the latest Australian life tables.

#### *Education*

The hypothetical cases – before any educational impacts – have a low level of educational qualifications; namely, no post-school qualifications. This is in line with the pattern of qualifications among the population that may be considered to be potential recipients of housing assistance. This population is approximated here as people in the bottom two quintiles of the income distribution. The prevalence of no post-school qualifications among this group is shown in figures 2.1 (males) and 2.2 (females).

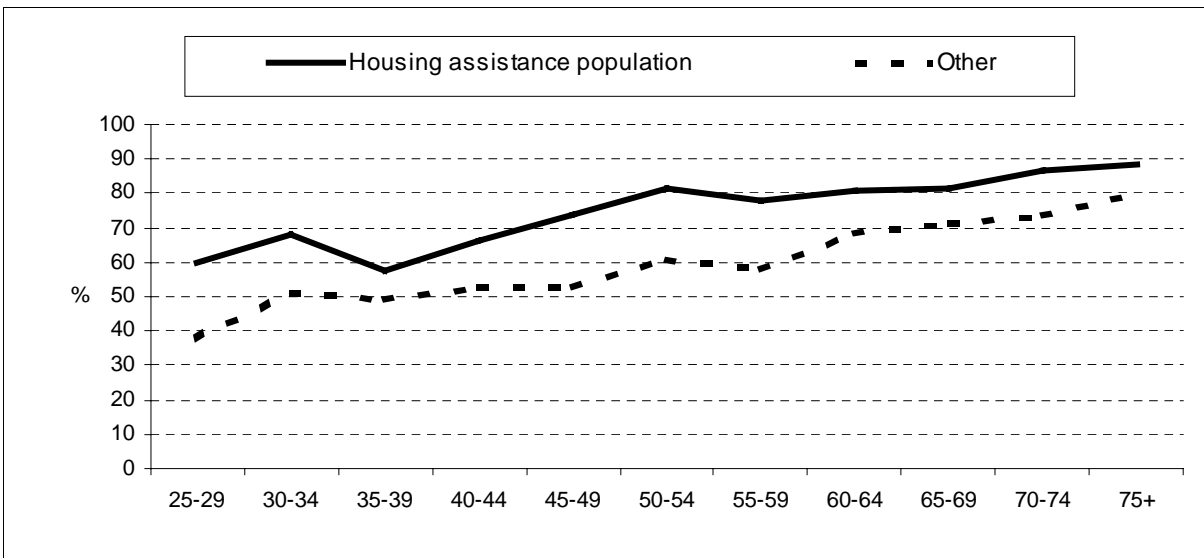
**Figure 2.1 Proportion of males with no post-school qualifications: housing assistance population<sup>a</sup> and others, Australia, 1997-98**



<sup>a</sup> Housing assistance population is defined to include people living in income units with equivalent disposable incomes in the lowest two quintiles – uses OECD equivalence scale.

Data source: ABS 1997-98 Survey of Incomes and Housing Costs, unit record data

**Figure 2.2 Proportion of females with no post-school qualifications: housing assistance population<sup>a</sup> and others, Australia, 1997-98**



<sup>a</sup> Housing assistance population is defined to include people living in income units with equivalent disposable incomes in the lowest two quintiles – uses OECD equivalence scale.

Data source: ABS 1997-98 Survey of Incomes and Housing Costs, unit record data

Possible educational impacts for adults are being simulated as the undertaking of a 3-year part-time TAFE course leading to a new level of educational qualification – post-secondary non-degree. Undertaking such study involves private costs for the individual (with data on this updated from the 1991 ABS Student Finances Survey) and government costs in providing the education (with data from Commonwealth

agencies). The level of educational attainment directly links to labour force activity and earnings with the lifetime profiles for these varied according to highest qualification.

### *Labour force*

There is no ready source of information on lifetime labour force profiles and these have needed to be derived from cross-sectional information. The basic information is the current pattern of labour force participation by age, sex and highest qualification taken from ABS survey data. Following Harding (1993) and other applications by NATSEM, within each sex and education group the lifetime profiles are further disaggregated into four groups according to their activities up to retirement:

1. those with full-time employment only;
2. those with full-time and part-time employment;
3. those with full-time and part-time employment, and some unemployment; and
4. those with chronic unemployment (as well as full-time and part-time employment).

Additional considerations in devising the profiles include an assumed age of permanent retirement at 65 (though this does not mean someone can not be effectively retired before then) and the assumption that it is females in couples who reduce their labour force participation when there are young children present.

These lifetime labour force profiles are accordingly grounded in current and recent behaviour while it could sensibly be argued that they should be set, rather, according to one's views about what future labour market behaviour will look like. The response to this point is to note that the framework has the flexibility to insert any lifetime labour force profile. For the first estimates, the labour force profiles, however, are those grounded in current patterns. At some later stage, the framework can be used to explore alternative views of possible future labour force profiles. Note that these points about flexibility and reference to possible future behaviour rather than to current behaviour apply to much of this exercise.

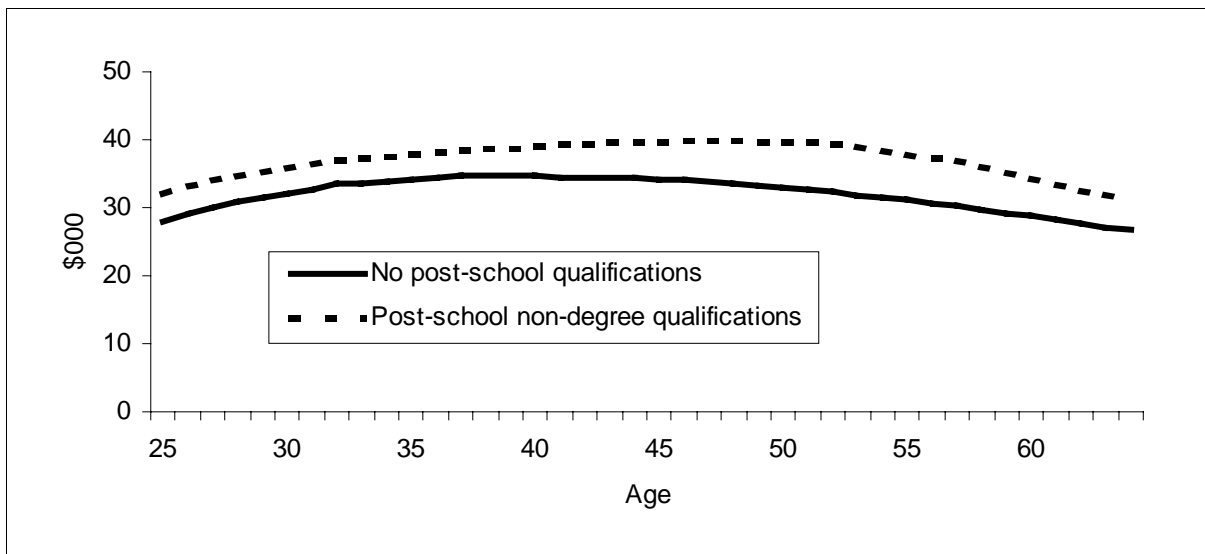
For the first estimates from the model, the base case families are initially assigned a lifetime labour force profile from the 'no post-secondary qualifications' group. An improvement in lifetime labour force activity is then treated by shifting to a higher level profile within the 'no post-secondary qualifications' group or, if there is also a change in education, by shifting to a profile from the 'post-school non-degree qualifications' group. There is, of course, also the capacity to look at different degrees of labour market change as is illustrated with the example presented in section 3.

### *Earnings*

Like the labour force profiles, lifetime earnings profiles are derived from cross-sectional data. The basic profiles have been derived using unit record data from the 1996-97 and 1997-98 ABS Survey of Incomes and Housing Costs. They are specified separately for males and females and by level of educational attainment, cover earnings from wages/salaries and earnings from self-employment, are based on median earnings, and have been updated in line with movements in average weekly earnings to 2000-01 levels. The profiles are specified for full-time workers, with part-time earnings then calculated as a proportion of full-time earnings – 30% in the case of males and 45% for females (on the basis of a comparison of full-time and part-time earnings data from the ABS surveys).

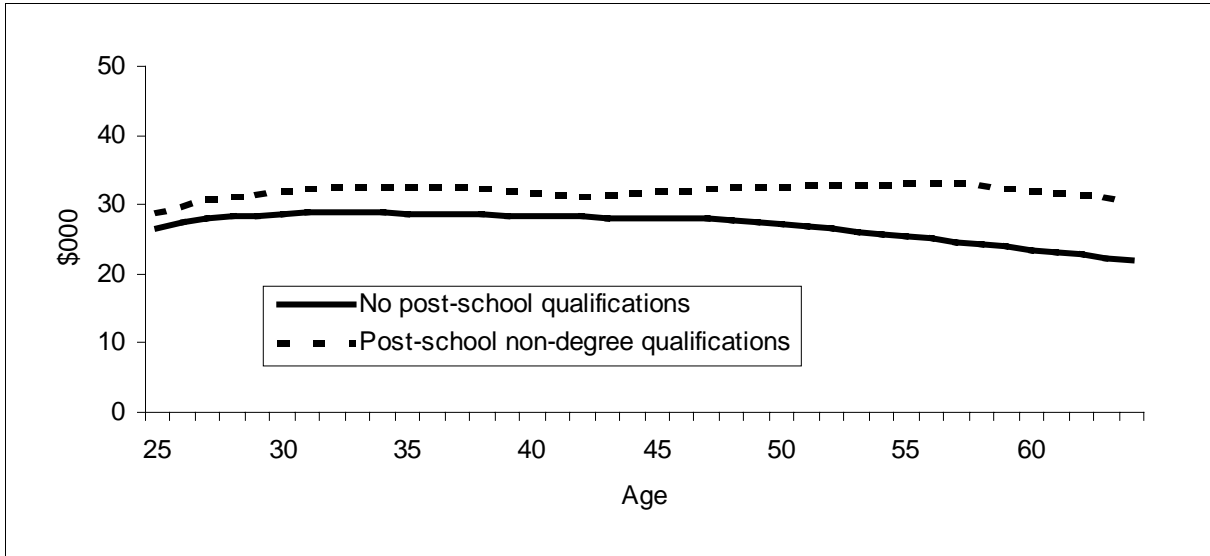
The resulting full-time earnings profiles for males and females are shown in figures 2.3 and 2.4. While the model is operated in real terms, abstracting from the effects of possible inflation, there is a parameter for real earnings growth. The default value is 1% per annum.

**Figure 2.3 Full-time earnings profiles for males: 2000-01 (\$000/year)**



*Data source:* Derived from ABS 1996-97 and 1997-98 Survey of Incomes and Housing Costs, unit record data

Figure 2.4 Full-time earnings profiles for females: 2000-01 (\$000/year)



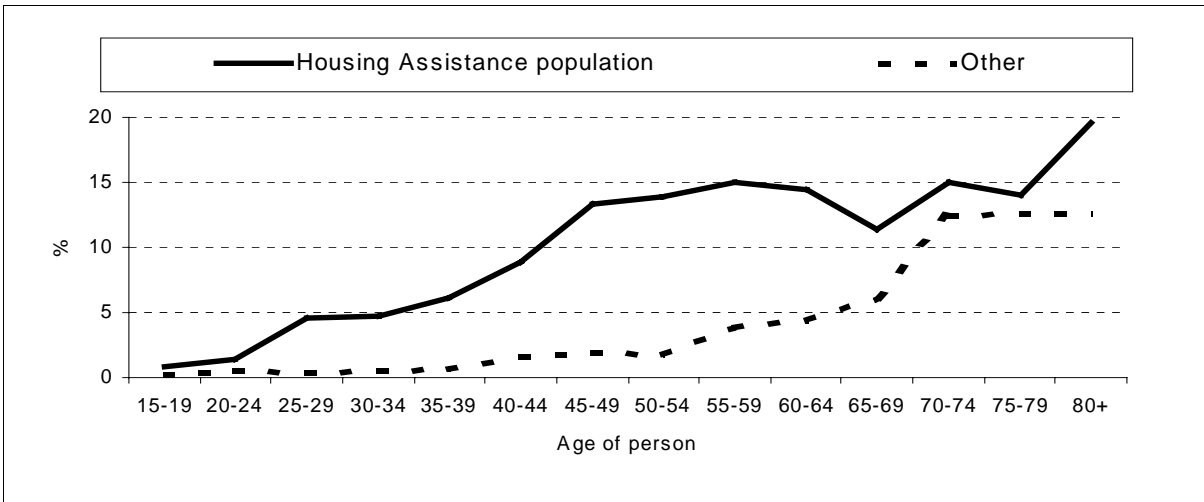
Data source: Derived from ABS 1996-97 and 1997-98 Survey of Incomes and Housing Costs, unit record data

### *Health status*

While inclusion of labour market and educational status and impacts in the model is a relatively straightforward exercise, this is not the case with health status and impacts. Research into the best way to incorporate and cost changes in health status is a current focus of the research – in particular, concerning the evidence on the private and government costs associated with changes in health status. The nature of this material will largely dictate how health status is measured in the model. There are various alternatives such as a basis on self-reported health status, or on health conditions.

We can say at this stage, however, that the base hypothetical families will be assigned low health status. Some evidence for this is presented in figures 2.5 and 2.6 which show the proportions of people reporting low health status for two populations – the ‘housing assistance population’ and others, defined in the same way as for figures 2.1 and 2.2.

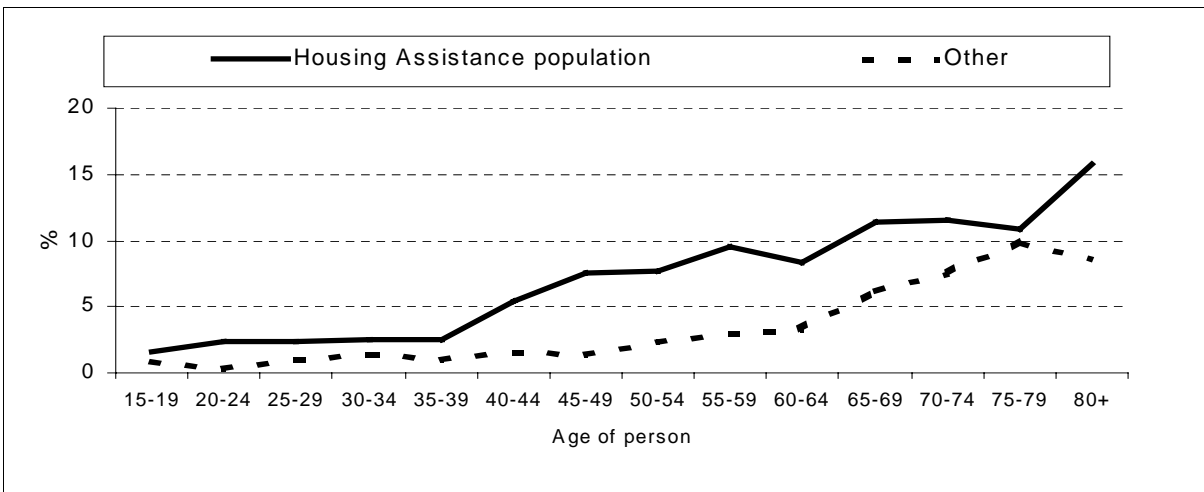
**Figure 2.5 Proportion of males reporting low health status: housing assistance population<sup>a</sup> and others, Australia, 1995**



<sup>a</sup> Housing assistance population is defined to include people living in income units with equivalent disposable incomes in the lowest two quintiles – uses OECD equivalence scale.

Data source: ABS 1995 National Health Survey, unit record data

**Figure 2.6 Proportion of females reporting low health status: housing assistance population<sup>a</sup> and others, Australia, 1995**



<sup>a</sup> Housing assistance population is defined to include people living in income units with equivalent disposable incomes in the lowest two quintiles – uses OECD equivalence scale.

Data source: ABS 1995 National Health Survey, unit record data

### 2.3 The Policy environment

This section sets out elements of the policy environment included in the model other than those related directly to housing assistance which are covered separately in section 2.4.

### *Income support*

The following income support payments are covered in the model (Rent Assistance is covered in the next section):

- Newstart Allowance;
- Family Tax Benefit Parts A and B;
- Mature Age Allowance; and
- Age Pension (including Pharmaceutical Allowance).

Incorporation of these payments includes testing for eligibility and then calculating entitlements. Entitlements are calculated with reference to:

- rates of payment for 2000-01;
- income-testing provisions; and
- assets-testing provisions.

The assets test effectively only applies to the Age Pension as the model covers no assessable assets prior to retirement and the receipt of a superannuation benefit. Application of the assets test makes distinction between the separate thresholds which apply to home-owners and others.

Note that the Age Pension eligibility age for women is gradually being increased from 60 years to 65 years. It will have reached 65 years by 2013, and is set at 65 years in the model. Otherwise the elements of income support covered are specified according to arrangements in 2000-01.

At present, the social security system is generally subject to CPI-indexation, though with the Age Pension indexed to a measure of average weekly earnings. The model thus operates with two parameters for real indexation of the social security system. The default values are:

- Age Pension inflator – 1% (same as the default real earnings inflator)
- Other social security inflator – 0% (i.e. CPI inflation)

### *Taxation*

The model at present includes income taxation and taxation of superannuation – the GST is still to be added. Taxation of superannuation is dealt with below with this part of the description confined to income tax. The income tax system modelled is according to 2000-01 arrangements and includes the following elements:

- distinction between assessable and non-assessable income (family tax benefit and Rent Assistance are examples of the latter);
- tax deductions (applied across the board as a 4% deduction on income from earnings);
- tax rates and scales;
- rebates (pensioner rebate, beneficiary rebate, low income rebate and low income aged persons rebate); and
- Medicare.

Indexation of the income tax system is governed by an index parameter which has a default setting of 1% – the tax system is effectively indexed to real earnings.

### *Superannuation*

Superannuation is an important element of the framework – extending any benefits from increased earnings through to increased private retirement incomes and reduced age pension outlays. The incorporation of superannuation includes the following:

- 9% employer contributions – the rate payable under the Superannuation Guarantee from 2002-03;
- superannuation tax on fund earnings and benefits;
- a default superannuation fund real earnings rate of 4.5% per annum;
- superannuation benefit taken as half lump sum and half allocated pension;
- application of the particular income tax and means-testing provisions that apply to superannuation pensions.

## **2.4 Housing elements**

With housing being the focus of this study, there is considerable scope in the model for variation of the housing parameters, though default values for parameters are being developed.

### *The base cases*

The housing circumstances of the hypothetical individuals/families in the base cases is private rental. Default rent levels will be used, though the sensitivity of the results to these values will be particularly important.

### *Forms of assistance*

The model is being developed to cover four forms of housing assistance:

1. Commonwealth Rent Assistance (CRA);
2. public rental housing;
3. community housing; and
4. home purchase assistance.

The research includes identifying 'typical' policy rules for these forms of housing assistance. This is easy in the case of CRA, with a single set of rules, but requires some work in the case of the other forms of housing assistance. With these, there are variations between housing jurisdictions and between programs within jurisdictions. The initial assumptions being used in the case of public rental housing are set out in section 4.

## **3 An illustrative example (1) – rent assistance**

The framework being developed is illustrated below with a simple example looking at the lifetime costings if rent assistance improves someone's labour force activity and level of education. In the following section, the illustration is extended to the case of public rental housing.

These illustrative examples should be seen as provisional analysis. The framework (model) is not yet complete and nor is determination of the most appropriate values for various parameters in the framework.

### **3.1 The hypothetical experiment**

The illustrative example examines the picture if rent assistance has an impact on labour force activity – and extends it to also include a possible impact on education.

The case in question is a single male, with his life covered from the age of 25 years to death at 77 years. He has a low level of educational attainment (no post-secondary qualifications) and low labour force activity. We then look at the returns (the net costs and benefits) to this individual and to government of paying rent assistance where:

1. there is no impact on labour force activity and education;
2. there is an impact on labour force activity;

3. there is an impact on education and associated labour force activity; and
4. there is an impact on education and associated labour force activity and earnings level.

Some general aspects of the analysis include the following:

- The simulation is undertaken in real terms (2000-01 dollars).
- The example does not include any real earnings growth (or associated indexation of the age pension or tax system).
- Policy parameters (tax rates, social security entitlements etc) are set at 2000-01 levels.
- Permanent retirement from the workforce – and drawing on superannuation (based on 9% employer contributions and benefit in the form of a superannuation pension) – occurs at age 65.
- The individual is assumed to spend their whole lifetime from age 25 years living alone in private rental housing.

### 3.2 The case with no impact

Our starting point, in the absence of rent assistance, has the single male paying \$100 per week for rent<sup>1</sup>. Their labour force career is that of a ‘chronically unemployed’ person (see section 2.2) with no post-secondary educational qualifications. Only half of their 40 years between the ages of 25 and 64 is spent in employment – 16 years of full-time work and 4 years of part-time work. The remaining 20 years before permanent retirement comprise 15 years of unemployment and five years out of the labour force.

Now, we introduce Commonwealth Rent Assistance (CRA). Paying weekly rent of \$100, the single male is entitled to the maximum CRA payment (of about \$2200 per year) for those years when he is receiving base income support. This amounts to 32 years – 15 years receiving Newstart Allowance, 5 years receiving Mature Age Allowance, and 12 years on Age Pension after reaching the age of 65 years. The total lifetime outlay on CRA is \$71 600 – with a corresponding benefit to the individual.

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<sup>1</sup> For comparison, the Productivity Commission (2001, p762) reported the findings of a July 1998 survey of rent assistance recipients conducted by the Department of Family and Community Services. Among singles living alone, just under a half were paying rent of less than \$100 per week, with a further two-fifths in ‘low to moderate priced rental stock’ and paying \$100 to \$149 per week.

The costs to government of providing CRA also include administrative costs. With the payment of CRA attached to the delivery of general income support, these administrative costs are low and difficult to isolate. Following an estimate reported by the Productivity Commission (2001, p793), these administrative costs are estimated to be just \$23 per year<sup>2</sup>. This element marginally increases the total government outlay on CRA to \$72 300.

### *Discounting*

Looking at housing assistance as an investment and, particularly, because we are interested in comparing these outlays with future streams of possible returns and costs, we need to discount the total lifetime outlay to 'present value' terms. The present value of the future payments is the sum that would be needed at the outset to fund the future CRA payments. This is considerably less than the simple sum of the outlays because the initial sum can be invested to generate the required funds in future years. The present value of a future stream of outlays (or costs or benefits) will thus depend on the assumed interest rate – or 'discount' rate. Here, we use a discount rate of 6% (close to the average value of the real bond rate over the past 15 years).

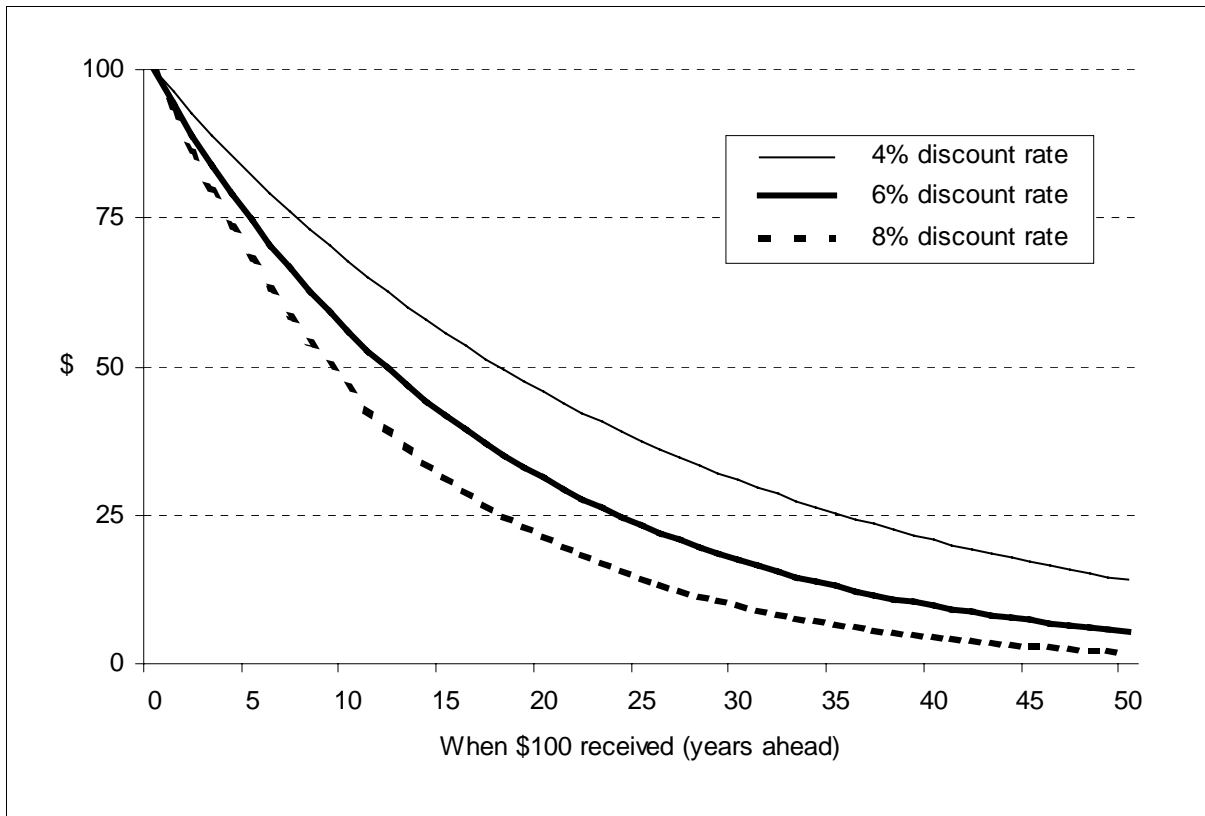
Discounted to present value terms, the \$72 300 outlay on CRA reduces to a figure of just \$18 000 (and, after removing the small administration component, a lifetime benefit to the CRA recipient of \$17 800). What this means is that a starting amount of \$18 000 and an interest rate of 6% would provide the sum required to fund the particular time sequence of CRA payments in this illustrative example. We are looking at a CRA investment of \$18 000.

The effect of discounting is to accord far more weight to costs and benefits that occur in the near future than to those that appear in the distant future – \$100 now is worth more than \$100 in the future. The dramatic impact of discounting, and the sensitivity to the discount rate, are illustrated in Figure 3.1 which shows the present value of \$100 at increasing times from now under alternative discount rates. The higher the discount rate, the lower is the present value of future costs and benefits.

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<sup>2</sup> The Productivity Commission (2001, p793) refers to an estimate that CRA running costs in 1998-99 were \$21 650 per 1000 CRA recipients. Allowance for subsequent inflation gives the estimate used here for 2000-01 of \$23 per recipient.

Figure 3.1 The impact of discounting



### *An investment with no return?*

In this case, where there is no impact of CRA on the person's labour force activity or education, we identify no return to the investment in CRA. This is an appropriate point to draw attention to an important feature of how this analysis should be interpreted. When we say there is no return to the investment in CRA, it is not suggested that the payment of CRA is a waste of money. While we are looking at CRA from an investment perspective, we need to remember that the fundamental purpose of CRA is to provide adequate after-housing incomes to those in need.

In this case we can imagine that the supplementary income provided by CRA is used to meet everyday demands and simply affords the recipient a more adequate standard of living. Without CRA, the case under consideration here is paying around 50% of their gross income in rent for 24 years of their lifetime. With CRA, housing costs over these years are reduced markedly to around 33% of income<sup>3</sup>. This in itself can be enough to justify the payment of CRA. It is money well spent even in the absence of any returns on the investment in the particular sense in which they are

<sup>3</sup> This calculation of the rent to income ratio is on the basis that CRA is a rent subsidy, rather than an income supplement.

being covered here. Were there also broader returns, however, it would be money even better spent.

### **3.3 The case with an impact on labour force activity**

Now let us look at the case where the payment of CRA has an impact on the person's labour force career. How might this happen? Suppose the payment of CRA allows the single male to move to an area with far better access to employment (and education) – better access which is reflected in higher rent accommodation. Translating such a move into an improvement in labour force career does, of course, assume that the reasons for the person's low level of labour force activity are related to locational disadvantage rather than to any personal characteristics. This is the implicit assumption in this hypothetical case.

The improvement in labour force career is simulated here by a qualitative shift in the person's labour force activity – from the 'chronic unemployment' to the 'some unemployment' group (see section 2.2). This shift amounts to 10 years less of unemployment and 2 years less of part-time employment, with a corresponding 12 more years of full-time employment. Still, there are 10 years out of the labour force or unemployed during the period from age 25 to permanent retirement at 65.

The new level of private rent paid in this case is calculated on the basis that a large part of the CRA entitlement is used to supplement the amount of rent paid. With an initial rent of \$100 per week and maximum CRA of \$41.30 per week<sup>4</sup>, the new weekly rent is set at \$130. The move to this new rent level is taken to be a permanent move – the individual does not, for example, return to the low rent area in those years when they are unemployed.

#### *The range of impacts*

The range of impacts which flow from the improved labour force career is set out in table 3.1.

Firstly, there is the increase in earnings which stems from the increased time spent employed. This is manifest in benefits of increased after-tax earnings for the individual and increased income tax receipts for government. It also flows through the compulsory 9% employer superannuation contribution into increased superannuation accumulation. This has the benefits of increased private retirement

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<sup>4</sup> Income support rates are a weighted average of the rates prevailing over 2000-01.

income for the individual, and increased superannuation tax receipts (during the period of accumulation and benefit payout) and income tax receipts for government.

Secondly, the individual's need for and entitlement to income support is reduced by higher private income both before and after retirement. Where this removes all entitlement to base income support, any entitlement to CRA also disappears. So, here we see benefits to government (and corresponding costs to the individual) through reduced income support outlays (base income support and CRA). There is also an impact on CRA administration costs.

Finally, there is the cost to the individual of the increased housing costs faced by the move to the higher-cost location<sup>5</sup>.

**Table 3.1 Impacts from increased labour force activity**

| Individual                            |       | Government                     |       |
|---------------------------------------|-------|--------------------------------|-------|
| Benefits                              | Costs | Benefits                       | Costs |
| Increase in earnings                  |       | Increase in income tax         |       |
| Increase in private retirement income |       | Increase in superannuation tax |       |
| Reduced income support                |       | Reduced income support         |       |
| Reduced CRA                           |       | Reduced CRA                    |       |
|                                       |       | Reduced CRA admin              |       |
| Increased housing costs               |       |                                |       |

### *Costing the impacts*

The returns (costs and benefits) of the impacts in this case of investment in CRA with the specified labour force impact are set out in table 3.2. To show the impact of discounting, the table shows both the undiscounted and discounted values of the costs and benefits. The table shows the differences from the 'base case' of no impact described in section 3.2.

<sup>5</sup> Other factors which may be added in subsequent versions of the model include the costs of working and GST revenues.

**Table 3.2 Additional return on CRA investment with labour market impact: single male, undiscounted and discounted at 6%, 2000-01 dollars (Provisional results)**

|                                       | Change from case with no impact |                 |
|---------------------------------------|---------------------------------|-----------------|
|                                       | Undiscounted                    | Discounted (6%) |
|                                       | \$000                           | \$000           |
| <b>Individual</b>                     |                                 |                 |
| <i>Benefits</i>                       |                                 |                 |
| Increased gross earnings              | 367.6                           | 134.7           |
| Increased private retirement income   | 65.7                            | 4.5             |
| <b>Subtotal (individual benefits)</b> | <b>433.3</b>                    | <b>139.2</b>    |
| <i>Costs</i>                          |                                 |                 |
| Increased income tax                  | 99.4                            | 28.9            |
| Reduced base income support           | 94.8                            | 31.1            |
| Reduced CRA                           | 22.4                            | 7.7             |
| Increased rent                        | 81.1                            | 26.3            |
| <b>Subtotal (individual costs)</b>    | <b>297.7</b>                    | <b>94.0</b>     |
| <b>Net total for individual</b>       | <b>135.6</b>                    | <b>45.2</b>     |
| <b>Government</b>                     |                                 |                 |
| <i>Benefits</i>                       |                                 |                 |
| Increased income tax                  | 99.4                            | 28.9            |
| Increased superannuation tax          | 21.6                            | 4.1             |
| Reduced base income support           | 94.8                            | 31.1            |
| Reduced CRA                           | 22.4                            | 7.7             |
| Reduced CRA admin costs               | 0.2                             | 0.1             |
| <b>Subtotal (govt benefits)</b>       | <b>238.4</b>                    | <b>71.9</b>     |
| <i>Costs</i>                          |                                 |                 |
| <b>Subtotal (government costs)</b>    | <b>0.0</b>                      | <b>0.0</b>      |
| <b>Net total for government</b>       | <b>238.4</b>                    | <b>71.9</b>     |

Source: NATSEM simulations. See text

Looking firstly at the undiscounted values (the first column of table 3.2) and at the benefits for the individual, we see a substantial increase in gross earnings of \$367 600 (full-time employment having replaced 10 years of unemployment and 2 years of part-time employment) and also a notable increase in private retirement income of \$65 700 flowing from the increased superannuation contributions.

On the cost side, the individual incurs increased income tax liabilities and has lower entitlements to income support. The reduction in base income support entitlements totals \$94 800 (with most of this falling in the pre-retirement years). Over the pre-retirement years, the reduction in base income support is the result of the number of years in which the person is no longer unemployed and entitled to

Newstart Allowance. With the loss of eligibility for Newstart Allowance, any entitlement to Rent Assistance is lost and there is a commensurate reduction in CRA entitlements over the pre-retirement years – amounting to \$22 400. After retirement, however, the increase in private retirement income reduces but does not extinguish the entitlement to Age Pension. CRA eligibility remains and there is no change in CRA entitlement after retirement. Finally, the individual has the continuing additional rent to pay, amounting to \$81 100 over the lifetime.

The benefits to government are largely the counterparts to the tax-transfer changes for the individual in the areas of income tax, base income support and CRA. There is also an increase in superannuation tax to the value of \$21 600, and a small reduction in CRA administration costs. No costs to government associated with this labour market response are identified.

Turning now to the discounted values, the impact of discounting (with a 6% discount rate) is again very evident. The values of costs and benefits are all much reduced when seen in present value terms. This is particularly the case for the costs and benefits occurring furthest into the future – such as, the increased private retirement income. Broadly, discounting reduces the value of the pre-retirement costs and benefits to 35-40% of their undiscounted value, and the value of the post-retirement costs and benefits to just 7% of their undiscounted value.

The 'bottom line' in table 3.2 is the right hand column. With the labour market impact, the simulated lifetime benefit of the investment in CRA of \$18 000 (from section 3.2) in discounted terms is:

- for individuals – the basic transfer of \$17 800 (from section 3.2) plus additional net benefits of \$45 200 generated by the labour market impact, giving a total lifetime benefit of \$63 000.
- for government – against an initial outlay of \$18 000, net benefits of \$71 900 generated by the labour market impact.

### *What does this mean?*

From the perspective of a government investment in housing assistance, the results of the simulation reported above show an \$18 000 investment yielding a \$71 900 return to the government. This looks like an extremely attractive use of government money but care does need to be taken with interpretation of this result. For a start, it is specific to the particular hypothetical case in question and there is of course great diversity in the circumstances and possible labour market impacts for CRA recipients. What we can say is that there are potentially large investment returns from CRA above the basic income support function of the payment.

If the case analysed was typical of one in four CRA recipients, then CRA would be a revenue neutral payment in the long term. We do not yet know whether this is a realistic proposition – other AHURI research is exploring this aspect of the non-shelter outcomes of housing assistance – and it most probably is not. The points remain, though, that a positive labour market impact can have major lifetime benefits for government and the individual, and that any return on the investment is a bonus from CRA payment and effectively goes some way to offsetting the cost of CRA.

Another issue in interpreting the result concerns the partial nature of the analysis. It is concerned with a single individual and results can not necessarily be scaled up to cover all CRA recipients (irrespective of the point about their diversity). Even if every CRA recipient was like the particular case analysed, we could not, for example, say on the basis of the above that it looks like a good idea to boost CRA (to the extent that people can move to higher-cost areas) and thereby get rid of unemployment. System-wide effects would need to be taken into account. Large scale changes to CRA could have an impact on the private rental market. There are also important labour market considerations. A clue to these is provided by the benefits in table 3.2 which are not simply transfers between the individual and government. Where does the money come from for increased earnings and superannuation contributions? Has our case gained more employment at the expense of someone else? Is it a case of displacement or of new employment being created? These would be crucial considerations in any expanded interpretation of the results.

### *A marginal change in labour force activity*

The case analysed above involved a rather dramatic impact on the single male's lifetime labour force activity. What would it look like if there was a much more modest labour market impact? Here, we look at the results if the labour market impact is restricted to changing just one year of unemployment to a year of full-time employment. Two variants are covered – with this change in status occurring at age 28 and age 52. The discounted results are summarised in table 3.3.

In these two cases, the far more modest impact on lifetime labour market activity has the correspondingly greatly reduced net benefits to the individual and to government. The time at which the labour force status change takes place is also shown to be important in the result. The discounted impact of an additional year of full-time employment at age 28 years is far greater than an additional year of full-time employment at the age of 52 years. Besides these expected results, table 3.3 also provides the basis for two important points.

Firstly, the net return to government is positive in both cases – small but not insignificant in the context of the \$18 000 investment in CRA. This illustrates the

point that even a small impact on labour force activity can provide a significant return to government.

**Table 3.3 Additional return on CRA investment with marginal labour market impact: single male, discounted at 6%, 2000-01 dollars (Provisional results)**

|                                       | Change from case with no impact              |  |
|---------------------------------------|--|--|
|                                       | Extra year of full-time employment at age 28 | Extra year of full-time employment at age 52 |
|                                       | \$000  | \$000  |
| <b>Individual</b>                     |  |  |
| <i>Benefits</i>                       |  |  |
| Increased gross earnings              | 24.4   | 6.3  |
| Increased priv. retirement inc.       | 0.6  | 0.3  |
| <b>Subtotal (individual benefits)</b> | <b>25.0</b>                                  | <b>6.6</b>                                   |
| <i>Costs</i>                          |  |  |
| Increased income tax                  | 4.8  | 1.3  |
| Reduced base income support           | 7.2  | 1.8  |
| Reduced CRA                           | 1.8  | 0.4  |
| Increased rent                        | 26.3   | 26.3   |
| <b>Subtotal (individual costs)</b>    | <b>40.1</b>                                  | <b>29.8</b>                                  |
| <b>Net total for individual</b>       | <b>- 15.1</b>                                | <b>- 23.2</b>                                |
| <b>Government</b>                     |  |  |
| <i>Benefits</i>                       |  |  |
| Increased income tax                  | 4.8  | 1.3  |
| Increased superannuation tax          | 0.8  | 0.2  |
| Reduced base income support           | 7.2  | 1.8  |
| Reduced CRA                           | 1.8  | 0.4  |
| Reduced CRA admin costs               | 0.0  | 0.0  |
| <b>Subtotal (govt benefits)</b>       | <b>14.6</b>                                  | <b>3.7</b>                                   |
| <i>Costs</i>                          |  |  |
| <b>Subtotal (government costs)</b>    | <b>0.0</b>                                   | <b>0.0</b>                                   |
| <b>Net total for government</b>       | <b>14.6</b>                                  | <b>3.7</b>                                   |

Source: NATSEM simulations. See text

Secondly, the net returns to the individual are negative in both cases. Basically, the returns from increased employment for one year are outweighed by the impact of paying higher rent over a lifetime. In these cases, the individual would have been better off remaining in lower cost housing in an area with poorer employment prospects. Committing to higher housing costs on the presumption of increased earnings may be a risky move. In reality, of course, the person would be unlikely to remain in the higher-cost rental housing in the event that a marked improvement in

labour force activity was not forthcoming. The point though is that the risk of this outcome may mean that the inertia to make the initial move is not overcome – a lifetime low income trap founded on perceived risk.

### **3.4 Adding the impact of education**

The single male in our hypothetical example has no post-secondary educational qualifications but has moved to an area which offers both better employment prospects and improved access to education. Suppose he now takes the opportunity to further his education through three years (from age 25 to 27) of part-time TAFE study.

This introduces a number of additional impacts into the equation. Firstly, there are impacts associated with undertaking education – foregone earnings, private costs of education, and government costs of providing education. Secondly, the lifetime labour force profile shifts to that associated with post-secondary non-degree educational attainment (see section 2.2). Thirdly, earnings increase in line with the increased level of skill (see section 2.2).

The discounted results from this extension of the simulation are given in table 3.4, in two parts. The first column includes the impacts associated with undertaking education and with the changed labour market profile. The second column then adds the further impact of the higher earnings associated with the increased skill level. Note that these impacts continue to be expressed as variations from the base picture, rather than being the additional impacts on top of the impacts associated with increased labour force activity which was presented in section 3.3.

For individuals the net return from only a labour market activity impact was \$45 200 (table 3.2). When we add in some of the impacts of education – the costs of undertaking education and the labour activity change associated with the higher level of educational attainment – the return is somewhat lower at \$35 500. The additional costs of undertaking education (notably the foregone earnings early in the lifetime) are not being outweighed by the later increase in labour market activity. But when we also add in the effect of shifting to a higher earnings profile in line with higher skill, the net lifetime return is markedly higher at \$73 600. Basically, what we are seeing here is the return to education partly offset by increased housing costs.

In the case of government, the impact of education results in higher net returns with or without consideration of the increased earnings. With the full impact, the estimated net total return to government is \$102 900, against the initial investment in CRA of \$18 000. Clearly, if the payment of housing assistance can induce this type of

positive education response, the potential returns from the investment in housing assistance are considerable.

In studies of the returns to education, only part of the difference in earnings is typically attributed to education – part is attributed to ‘talent’. Whether a similar approach should be applied here is not, however, clear. In the example used, the housing assistance provides the opportunity to secure returns to both education and talent. So, it could be argued that the whole change in earnings can be included. A final position on this issue has not yet been reached.

**Table 3.4 Additional return on CRA investment with education and labour market impacts: single male, discounted at 6%, 2000-01 dollars (Provisional results)**

|                                       | Change from case with no impact          |  |
|---------------------------------------|--|--|
|                                       | Excluding impact of higher earnings rate | Including impact of higher earnings rate |
|                                       | \$000                                    | \$000                                    |
| <b>Individual</b>                     |  |  |
| <i>Benefits</i>                       |  |  |
| Increased gross earnings              | 156.4                                    | 209.7                                    |
| Increased priv. retirement inc.       | 5.3                                      | 7.2                                      |
| <b>Subtotal (individual benefits)</b> | <b>161.7</b>                             | <b>216.9</b>                             |
| <i>Costs</i>                          |  |  |
| Increased income tax                  | 29.8                                     | 46.7                                     |
| Reduced base income support           | 54.7                                     | 54.9                                     |
| Reduced CRA                           | 13.5                                     | 13.5                                     |
| Increased rent                        | 26.3                                     | 26.3                                     |
| Education costs                       | 1.9                                      | 1.9                                      |
| <b>Subtotal (individual costs)</b>    | <b>126.2</b>                             | <b>143.3</b>                             |
| <b>Net total for individual</b>       | <b>35.5</b>                              | <b>73.6</b>                              |
| <b>Government</b>                     |  |  |
| <i>Benefits</i>                       |  |  |
| Increased income tax                  | 29.8                                     | 46.7                                     |
| Increased superannuation tax          | 4.5                                      | 6.1                                      |
| Reduced base income support           | 54.7                                     | 54.9                                     |
| Reduced CRA                           | 13.5                                     | 13.5                                     |
| Reduced CRA admin costs               | 0.1                                      | 0.1                                      |
| <b>Subtotal (govt benefits)</b>       | <b>102.6</b>                             | <b>121.3</b>                             |
| <i>Costs</i>                          |  |  |
| Education costs                       | 18.4                                     | 18.4                                     |
| <b>Subtotal (government costs)</b>    | <b>18.4</b>                              | <b>18.4</b>                              |
| <b>Net total for government</b>       | <b>84.2</b>                              | <b>102.9</b>                             |

Source: NATSEM simulations. See text

## 4 An illustrative example (2) – public rental

Using the same example of the single male covered in section 3, how do the numbers look if housing assistance is provided through public rental housing rather than through CRA?

### 4.1 Modelling public rental housing assistance

Whereas CRA is a reasonably straightforward form of housing assistance to model, this is not the case with public rental housing. Besides some differences in the terms of assistance provided by the various housing authorities across the country, the financing of public rental housing – with pooling, for example, across properties and across time – is complex. Here, a number of simplifying assumptions are used to create what might be termed a stylised representation of public rental housing.

The basic assumption is that a public housing dwelling is tied to the recipient case. The single male at age 25 is eligible for housing assistance and the response is taken to be spot purchase of a new dwelling. To enable comparison with the CRA example, the dwelling is assumed to be identical to that being privately rented in the previous example – a property with a value of \$100 000 and generating a market rent of \$100 per week.

The public purchase of this dwelling is financed independently of the broader operations of the housing authority, though the terms of the assumed financing reflect the nature of the borrower. The dwelling is purchased with a long-term mortgage taken out over the life of the dwelling, with no deposit, and with a real mortgage rate on the low side – 2.5%<sup>6</sup>. While recognising the moves toward periodic review of continued eligibility for public rental assistance, there is security of tenure in this example and the tenant remains in the property for life. In this case, that means for 51 years and this period is also conveniently used as the life of the dwelling<sup>7</sup>. At the end of the tenant's life, the dwelling then has no value, but the land is sold. The land value is assumed to amount to 40% of the total property value at the time of the initial dwelling purchase, and this example assumes no real increase over time in land value.

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<sup>6</sup> The mortgage calculation is the credit foncier type and assumes 3% inflation. Thus repayments are calculated on the basis of a 5.5% nominal interest rate before their conversion to the real terms of the rest of the analysis.

<sup>7</sup> This is realistic given the 50 year life for dwellings commonly used by housing authorities in their asset accounting.

Besides mortgage repayments, the running costs attached to the public rental housing include the following elements:

- administration cost – set at 7.5% of market rent;
- maintenance costs – set at 1% of initial dwelling value;
- rates and charges – set at 1% of land value.

Finally, rent charged is set at 25% of the tenant's gross income up to a maximum payment at the market rent level.

The general terms of the analysis – for example, its conduct in real terms and the assumption of no real earnings growth – are the same as those used in the previous example and set out in section 3.1.

## 4.2 The case with no impact

The basic picture of the lifetime costs and benefits of public rental assistance where there is no impact on education or labour market activity is given in table 4.1. For comparison, the results for CRA (as presented in section 3.2) are also shown. Both discounted and undiscounted results are included as they provide another good illustration of the importance of discounting.

Looking first at the undiscounted figures, public rental appears to provide a greater level of housing assistance over the lifetime and at a lower cost than does CRA. But the true picture lies in the timing of these costs and benefits which is taken into account by discounting. The costs to government of public rental fall more heavily in the earlier years – due particularly to the profile of mortgage payments – while the benefits – notably the sale of land – are mainly enjoyed in the later years. The result changes the picture markedly. The bottom line is that public rental in this example provides a level of lifetime assistance about 65% higher than does CRA, though at a 90% higher cost. While lifetime assistance through CRA amounts to an investment of \$18 000, an investment of \$34 100 is required with assistance provided with public rental housing.

It must be stressed that the results for this illustrative example should not be taken as a general cost-effectiveness comparison of providing housing assistance through CRA and through public rental housing. The results are specific to the case in question - including a very specific labour force profile - and to the simulation assumptions. The equation would change with different assumptions about matters such as growth in real land values or the appropriate discount rate. Moreover, different levels of assistance in terms of rent subsidy (ignoring any differences in

matters such as security of tenure) are being provided here in the CRA and public rental examples and, because of means-testing arrangements, the relationship between cost and benefit provided is not linear. Thus, for example, if we amend the CRA provisions so that the lifetime rent subsidies under the two options are the same, and add 1% per annum real growth in land values, then the two options deliver the same level of lifetime assistance at very similar costs to government. If we then reduce the discount rate by 1 percentage point to 5%, public rental housing appears cheaper.

**Table 4.1 Private and government lifetime costs and benefits of CRA and public housing with no impacts on education and labour market: single male, discounted at 6%, 2000-01 dollars (Provisional results)**

|   | Not discounted |               | Discounted at 6% |               |
|---|----------------|---------------|------------------|---------------|
|   | CRA            | Public rental | CRA              | Public rental |
|   | \$000          | \$000         | \$000            | \$000         |
| <b>Government</b>                       |                |               |                  |               |
| <i>Costs</i>                            |                |               |                  |               |
| Income support paid (CRA)               | 71.6           | -             | 17.8             | -             |
| Administration                          | 0.7            | 20.3          | 0.2              | 6.6           |
| Mortgage repayments                     | -              | 158.0         | -                | 71.0          |
| Repairs and maintenance                 | -              | 31.2          | -                | 10.1          |
| Rates and charges                       | -              | 20.8          | -                | 6.7           |
| <b>Subtotal (govt costs)</b>            | <b>72.3</b>    | <b>230.3</b>  | <b>18.0</b>      | <b>94.4</b>   |
| <i>Benefits</i>                         |                |               |                  |               |
| Rent received                           | -              | 169.1         | -                | 58.4          |
| Sale of land at end of life             | -              | 40.0          | -                | 1.9           |
| <b>Subtotal (government benefits)</b>   | <b>0.0</b>     | <b>209.1</b>  | <b>0.0</b>       | <b>60.3</b>   |
| <b>Net total cost for government</b>    | <b>72.3</b>    | <b>21.2</b>   | <b>18.0</b>      | <b>34.1</b>   |
| <b>Individual benefits</b>              |                |               |                  |               |
| Income support (CRA)                    | 71.6           | -             | 17.8             | -             |
| Rent subsidy (rebated rent)             | -              | 101.3         | -                | 29.3          |
| <b>Net total benefit for individual</b> | <b>71.6</b>    | <b>101.3</b>  | <b>17.8</b>      | <b>29.3</b>   |

Source: NATSEM simulations. See text

### 4.3 Labour market and education impacts

The same possible labour market and education impacts are examined here as in the previous example. In this case, the move to an area with higher housing costs is dealt with by increasing the value of the public rental property to \$130 000 –

commensurate with the higher market rent of \$130 per week. The discounted results from the five simulations – labour market impact, two cases of a marginal labour market impact, and the additional education impact with and without the earnings effect – are presented together in table 4.2. Thus, the first column corresponds to the results in table 3.2, the second and third columns to table 3.3, and the fourth column to table 3.4. The key features from this table are summarised below in comparison with the CRA example.

#### **4.4 A summary of the two examples**

The starting picture for the illustrative single male used in these examples – in the absence of any indirect impacts – was that the provision of housing assistance over his lifetime amounted to a government investment of \$18 000 in CRA, or an investment of \$34 100 if assistance was provided through public rental housing. The benefits that flow to the individual partly reflect the relative scale of the housing assistance investment – a discounted lifetime benefit of \$17 800 through CRA or \$29 300 through the more generous public rental assistance.

If the provision of housing assistance leads to indirect labour market and education impacts, the additional net lifetime benefits for both government and the individual can be considerable. Figure 4.1 summarises the additional net benefits to government stemming from such indirect impacts. As each further factor is added, the net benefits mount – and totalling around \$100 000 (in discounted present value terms) when all the elements of these examples are included.

The results are quite similar for CRA and public rental housing, though the additional net benefits in the CRA case are consistently higher than for the public rental case. This reflects in particular the switching on and off of CRA assistance – which is tied to base income support entitlements – while the possibility of means-tested assistance through public rental is continuous over the lifetime in this example with assumed security of tenure.

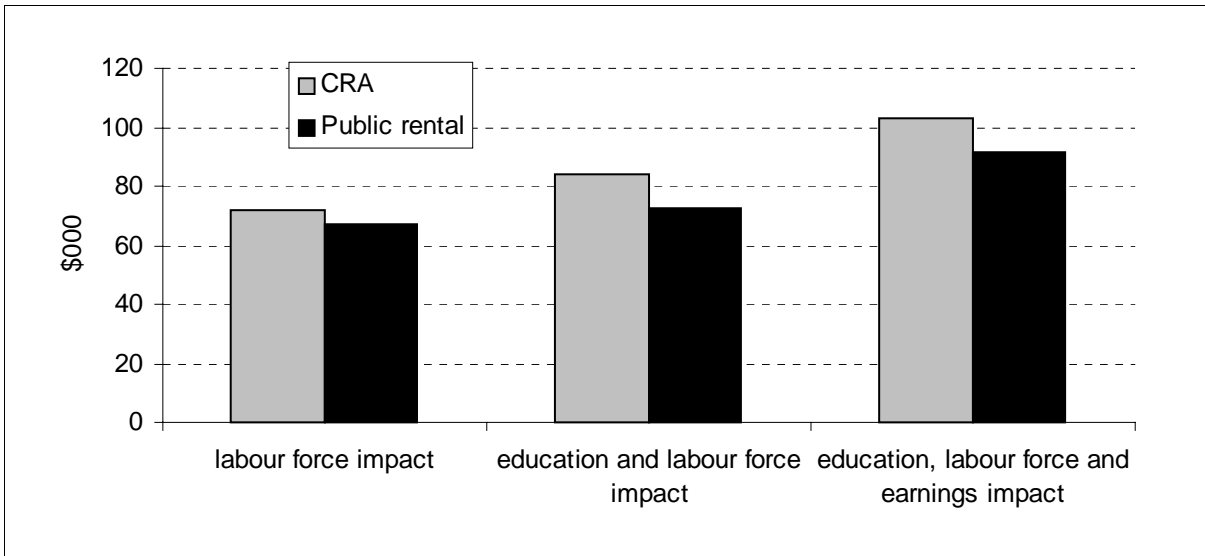
The other side of the coin – the additional net benefit for the individual – is summarised in figure 4.2. Corresponding to the pattern seen above for government benefits, public rental yields slightly higher net lifetime benefits than does CRA. The other key feature of the figure is the drop in the net benefits to the individual when an education and labour market impact is simulated without covering the shift to a higher earnings regime. The foregone earnings while education is undertaken have a greater impact than the subsequent improvement in labour market performance. But, once earnings are also factored in, the lifetime impact is shown to increase considerably.

**Table 4.2 Additional return on public rental investment with education and labour market impacts: single male, discounted at 6%, 2000-01 dollars (Provisional results)**

|                                       | Change from case with no impact |                               |               |                                     |                      |
|---------------------------------------|---------------------------------|-------------------------------|---------------|-------------------------------------|----------------------|
|                                       | Labour market impact            | Marginal labour market impact |               | Labour market and education impacts |                      |
|                                       |                                 | At age 28                     | At age 52     | Without earnings impact             | With earnings impact |
|                                       | \$000                           | \$000                         | \$000         | \$000                               | \$000                |
| <b>Individual</b>                     |                                 |                               |               |                                     |                      |
| <i>Benefits</i>                       |                                 |                               |               |                                     |                      |
| Increased gross earnings              | 134.7                           | 24.4                          | 6.3           | 156.4                               | 209.7                |
| Increased priv. retirement inc.       | 4.5                             | 0.6                           | 0.3           | 5.3                                 | 7.2                  |
| <b>Subtotal (individual benefits)</b> | <b>139.2</b>                    | <b>25.0</b>                   | <b>6.6</b>    | <b>161.7</b>                        | <b>216.9</b>         |
| <i>Costs</i>                          |                                 |                               |               |                                     |                      |
| Increased income tax                  | 28.9                            | 4.8                           | 1.3           | 29.8                                | 46.7                 |
| Reduced base income support           | 31.1                            | 7.2                           | 1.8           | 54.7                                | 54.9                 |
| Increased rent                        | 30.8                            | 14.2                          | 11.5          | 29.7                                | 29.7                 |
| Education costs                       | 0.0                             | 0.0                           | 0.0           | 1.9                                 | 1.9                  |
| <b>Subtotal (individual costs)</b>    | <b>90.8</b>                     | <b>26.2</b>                   | <b>14.6</b>   | <b>116.1</b>                        | <b>133.2</b>         |
| <b>Net total for individual</b>       | <b>48.4</b>                     | <b>- 1.2</b>                  | <b>- 8.0</b>  | <b>45.6</b>                         | <b>83.7</b>          |
| <b>Government</b>                     |                                 |                               |               |                                     |                      |
| <i>Benefits</i>                       |                                 |                               |               |                                     |                      |
| Increased income tax                  | 28.9                            | 4.8                           | 1.3           | 29.8                                | 46.7                 |
| Increased superannuation tax          | 4.1                             | 0.8                           | 0.2           | 4.5                                 | 6.1                  |
| Reduced base income support           | 31.1                            | 7.2                           | 1.8           | 54.7                                | 54.9                 |
| Increased rent received               | 30.8                            | 14.2                          | 11.5          | 29.7                                | 29.7                 |
| Increased revenue from sale of land   | 0.6                             | 0.6                           | 0.6           | 0.6                                 | 0.6                  |
| <b>Subtotal (govt benefits)</b>       | <b>95.5</b>                     | <b>27.6</b>                   | <b>15.4</b>   | <b>119.3</b>                        | <b>138.0</b>         |
| <i>Costs</i>                          |                                 |                               |               |                                     |                      |
| Increased mortgage costs              | 21.3                            | 21.3                          | 21.3          | 21.3                                | 21.3                 |
| Increased administration costs        | 2.0                             | 2.0                           | 2.0           | 2.0                                 | 2.0                  |
| Increased repairs and maintenance     | 3.0                             | 3.0                           | 3.0           | 3.0                                 | 3.0                  |
| Increased rates and charges           | 2.0                             | 2.0                           | 2.0           | 2.0                                 | 2.0                  |
| Education costs                       | 0.0                             | 0.0                           | 0.0           | 18.4                                | 18.4                 |
| <b>Subtotal (government costs)</b>    | <b>28.3</b>                     | <b>28.3</b>                   | <b>28.3</b>   | <b>46.7</b>                         | <b>46.7</b>          |
| <b>Net total for government</b>       | <b>67.2</b>                     | <b>- 0.7</b>                  | <b>- 12.9</b> | <b>72.6</b>                         | <b>91.3</b>          |

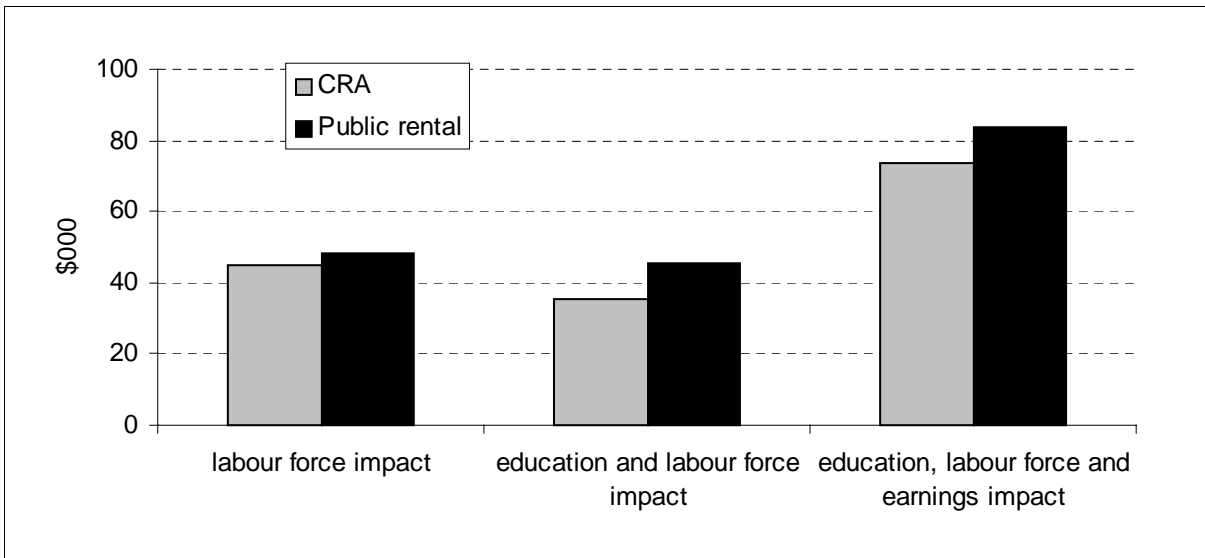
Source: NATSEM simulations. See text

**Figure 4.1 Additional net benefits to government from labour market and education impacts: single male, discounted at 6%, 2000-01 dollars (Provisional results)**



Source: NATSEM simulations. See text

**Figure 4.2 Additional net benefits to individual from labour market and education impacts: single male, discounted at 6%, 2000-01 dollars (Provisional results)**



Source: NATSEM simulations. See text

## 5 Concluding comments

This type of analysis can generate some dramatic numbers which, while useful for demonstrating the scale and pattern of potential impacts, do need to be interpreted with some care. What does the analysis show and what does it not show?

First, a general caveat is in order. The examples presented in this paper refer to a single specific case, and a specific set of assumptions about their housing circumstances, the future environment, and the nature of education and labour market impacts. The example is illustrative and not intended to be typical. The simulation does not cover the diversity of the population, the full range of possible indirect impacts, nor the complexity of issues encountered in the provision of housing assistance – note the stylised treatment of public rental housing.

Second, while the focus in this research is on housing assistance in lifetime investment terms, it needs to be remembered that this is a secondary dimension to housing assistance. The primary purpose of housing assistance is adequate and affordable housing. Thus, no ‘investment’ return to government does not negate the value of the investment in housing assistance. Similarly, the analysis does not imply that housing assistance should be targeted at the young because they have greater scope for indirect benefits over their lifetimes.

Third, while government costs and benefits have been consolidated in the analysis, it should be recognised that the level of government bearing the costs will not always be the same level that is enjoying the benefits.

Fourth, does the analysis show that CRA is a better form of housing assistance than public rental housing? After all, the examples presented show it is cheaper in terms of the level of direct assistance per dollar of investment, and the indirect benefits are slightly higher. Besides the general qualifications about the specific nature of the example used, the answer is that it depends. And it depends crucially on whether CRA and public rental assistance have different likelihoods of promoting indirect impacts. This is a fundamental question which is being addressed by some of the other AHURI research in this area.

Finally, does the analysis show that housing assistance is an excellent investment? It does show that it can be, that the indirect impacts can have lifetime benefits to government and individuals that far outweigh the cost of providing housing assistance. Accordingly, there is much to be gained by designing and providing housing assistance in a way which maximises the likelihood of positive indirect impacts over the lifetime – and much to be lost by not doing so.

## References

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