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Housing assistance: a lifetime perspective

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Executive summary

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 study is 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 method to be used to assess the full 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 will be 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.

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.

The forms of housing assistance, which will be covered include:

- rent assistance (means-tested income support);

- public housing;

- community housing; and

- assistance with owner-occupation.

There are three stages to the research:

1. The first stage is development of the model – constructing the framework for the analysis of the direct and indirect impacts of housing assistance, and defining the selection of 'typical' lifetimes to be examined.

2. The second stage will involve adding numbers to the model – adding estimates of the direct and indirect impacts of housing assistance, and tracing these over a lifetime. This stage is termed 'first estimates' because the scope of this study restricts us to using secondary sources on the key indirect impacts of housing assistance. We recognise that some of the estimates will be characterised by a high degree of uncertainty.

3. The uncertainty about our estimates of indirect impacts and other aspects of the model will be addressed in the third stage which will be concerned with sensitivity analyses. How sensitive are our findings to assumptions about the future environment? How sensitive are they to the key estimates about the scale and nature of the indirect impacts of housing assistance?

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1   Introduction

A full picture of the value of housing assistance is fundamental to major debate about the extent and nature of such assistance. This research, however, is premised on the belief that the way in which we assess housing assistance has moved out of step with its scope and aims. There is a tendency to focus on narrow measures of the performance of housing assistance programs, while the associated policy objectives are, in contrast, broadening.

This situation has been made stark by two developments over recent years. The first of these has been the development and focus on key performance indicators for housing assistance. While the framework for these indicators may be broad, the actual indicators used – with a selection conditioned by matters such as ease of quantification and comparability across jurisdictions – cover a more limited range of housing outcomes. The second development has been the explicit policy recognition of a broader role for housing assistance: that is, more than just getting affordable and adequate roofs over people's heads. Housing assistance, for example, is seen as having an integral role in the promotion of sustainable communities, and also has important ramifications for welfare dependence. Thus, we have, on the one hand, a broadening of what is expected from housing assistance and, on the other hand, a relatively narrow approach to measuring the value of this assistance.

A first step in developing a better picture of the value of housing assistance is to consider the full range of impacts of housing assistance – shelter and non-shelter outcomes and a whole-of-government perspective. This step is an area of recent and continuing research activity and a focus of the AHURI Research Agenda. For example, a major scoping study completed in 2000 (Phibbs 2000) has been followed by AHURI funding a large project on 'Housing Assistance and Non-shelter Outcomes' (currently being conducted by the AHURI Sydney Research Centre). Securing adequate housing, for example, may make the difference in achieving educational goals, staying healthy, increased labour force activity, and earning higher income.

For those on low incomes, assistance with housing affordability can prevent housing costs unduly constraining a household's ability to purchase the other goods and services which underpin an adequate standard of living. If housing costs are too high, the ramifications may be endured across a range of aspects of people's lives with all the symptoms of poverty and social exclusion. Avoiding housing-related poverty is thus a role for housing assistance with broad implications. More specifically, poor housing may encourage either mobility for the wrong reasons or stability for the wrong reasons. Unsatisfactory or insecure housing can lead to frequent locational moves which may hinder attachment to the labour force or education and weaken community support networks. On the other hand, the restricted supply of adequate and affordable housing can confine people to locations with limited educational and labour force opportunities and generally poor access to services. With

regard to the link between health and housing, the direct link between unsanitary housing conditions and health has not been completely eliminated in Australia – notably in some Aboriginal and Torres Strait Islander communities – though more general effects of housing assistance on health may be felt through the links between housing and education and general living standards.

The potential for poor or unaffordable housing – and, correspondingly, housing assistance – to have an impact on other aspects of people's lives means that there is also a range of potential impacts on other aspects of government. Any impacts on people's labour force activity, for example, can affect social security outlays and tax revenues. Any impacts on education can affect the costs of providing education services. Impacts on health will have an impact on health care costs. The entries on the government side of the housing assistance equation should not be restricted to just the direct costs of, say, providing public rental housing or rent assistance.

Given an appreciation of the full range of impacts of housing assistance – shelter and non-shelter outcomes and a whole-of-government perspective – a second step toward gaining a fuller picture of the value of housing assistance is to add the time dimension – the duration of the impacts of housing assistance over lifetimes. If housing assistance can have an impact on aspects of people's lives such as their education, labour force activity and health, then the very nature of these areas of impact means that housing assistance may have lasting long-term impacts. The benefits of increased educational attainment are enjoyed well beyond the getting of education. So too are the benefits of good health. Increased labour force activity has a positive impact on future labour force activity and increased earnings have implications for lifetime asset accumulation and retirement incomes.

In terms of bricks and mortar and land, housing is naturally viewed as an investment – by the owner-occupier or by the landlord. Asset management is accordingly a basic element of those forms of housing assistance which involve investment in housing, such as public housing and some forms of community housing. But housing assistance has the potential to be an investment in a much broader sense. It can be seen as an investment in people's lives through the possible lifetime impacts in areas such as education, work and health. Just as with asset management, we can think of a stream of future impacts for the recipients of housing assistance and for government (for example, future social security outlays and taxation revenues). This lifetime dimension is obviously of particular pertinence to longer-term policy objectives, such as those concerning sustainable communities and welfare dependence.

Is housing assistance a good investment? Are some forms of housing assistance better investments than others? To answer these questions we need to add the lifetime perspective to our view of housing assistance. This second step – the lifetime dimension – has not yet received the same attention as the first. This research is designed to make a start on filling this gap and answering the questions posed above.

It aims to combine these two steps – adding the whole-of-government and lifetime dimensions to the picture of housing assistance – through development of a lifetime framework for analysis and the derivation of first estimates within this framework.

Specifically, there are three parts to the aims of the research.

1. The project will provide a framework for estimating the lifetime net benefits of housing assistance to government (from a whole-of-government perspective) and to recipients of assistance.

   So, what do we mean by a 'framework'? At a first level, the framework will set out the structure of linkages between housing assistance and people's lifetimes and government. What can affect what – and what, in turn, can affect what else? At a second level – where most of the work in this study will be concentrated – the framework will be translated into a spreadsheet model as a basis for putting some numbers on the lifetime impacts of housing assistance. This model will be designed to cover a range of impacts of housing assistance, impacts on both recipients of housing assistance and government, and impacts extending over people's lifetimes.

2. Where readily available or amenable to reasonable estimation, elements of the spreadsheet model will be filled in – thus, allowing first estimates to be made of the magnitude and pattern of benefits.

3. Otherwise, the spreadsheet model will allow for sensitivity analysis – to identify, for example, the key factors that determine net benefits – and associated identification of priority areas for research to fill gaps in the framework.

This Positioning Paper is the first report from this project. It sets out the policy and research contexts for the study before describing the methodology to be pursued. Further reports will include a Work in Progress report, a Findings Paper, and a Final Report. The research is scheduled for conclusion by mid August 2001.

2   Policy context

The broad policy context for this research is the role of program evaluation as an integral part of policy development. This in turn requires a means of measuring outcomes against program and policy objectives – using measures which capture the range of such objectives. The research aims to promote a better match between what is measured and program/policy objectives – to better enable performance measures to capture objectives. The two sides of this issue are expanded upon below with accounts of developments in the policy objectives attached to housing assistance and in the performance measures for housing assistance.

While the continuing requirements for good evaluation alone provide the basic but important policy context for the research, the value of the work is thrown into sharper focus by the possibility of a phase of potential major reform of Australian housing assistance with the renegotiation of the Commonwealth State Housing Agreement (CSHA). This opportunity arises from August 2001, with the next CSHA to begin from July 2003.

2.1   The objectives of housing assistance

The objectives of housing assistance under the CSHA are set out broadly in the 'Guiding Principles' for the Agreement. Under the 1999-2003 CSHA, the first principle is that:

> The purpose of funding is to assist those whose needs for appropriate housing cannot be met by the private market. The duration of assistance provided should be based upon those needs;

> (Commonwealth of Australia 1999, p5)

A similarly basic objective is ascribed to housing assistance by the Australian Institute of Health and Welfare (AIHW).

> The aim of housing assistance is to overcome the problems households face in obtaining or retaining suitable accommodation – whether due to cost, availability or adequacy – and to provide them with the flexibility to meet changing demand.

> (AIHW 1999, p128)

These statements embody the basic elements of providing targeted assistance to help people obtain affordable and appropriate housing – elements which can be found in almost any discussion of housing assistance policy. However, it is also widely recognised that there is much more to housing than just shelter or accommodation. For example, the Industry Commission began its 1993 report on public housing with the statement that 'Housing underpins the quality of life of all Australians' (1993, p1), and the recent AHURI overview of current housing policy issues begins with an account of the many levels of the importance of housing (AHURI 2000, pp 1-2). A notably succinct statement of this importance, from overseas but equally relevant to Australia, can be found in the opening paragraph of the recent United Kingdom Housing Green Paper:

Housing is a basic requirement for everyone. Our homes influence our well-being, our sense of worth, and our ties to our families, communities and work. If we live in decent housing we are more likely to benefit from good health, higher educational attainment and better-paid work.

(UK Department of the Environment, Transport and the Regions 2000, para 1.1)

While this recognition of the broad role of housing is widespread, how does it translate into the breadth of the policy objectives for housing assistance? The CSHA guiding principles touch on the broader aspects, through mention of work disincentives and the principle that housing assistance should have regard to 'the economic, social and environmental objectives of government' (Commonwealth of Australia 1999, p6). Perhaps there is some recognition of the broader aspects of housing assistance in the location of housing support within the 'Stronger Communities' strategic outcome area for the Commonwealth Department of Family and Community services. By the same token, that it is not included under the 'Economic and Social Participation' strategic outcome could be seen to signify that the Commonwealth views housing assistance as of greater relevance to community development than to economic and social participation. The Reference Group on Welfare Reform (2000) did see some broader aspects of housing assistance as falling within its terms of reference – namely, the relationship between housing assistance and employment, in terms of employment disincentives and the role of housing assistance in regional development. But, by and large, the Commonwealth remains very focused on the basic objectives of housing assistance.

This narrow but basic view of housing taken by the Commonwealth may be seen as a reflection of the nature of the CSHA where the Commonwealth provides funds according to some specific and some more general principles. Some flexibility in how housing assistance is delivered is then in the hands of the States and Territories. Indeed, recognition of the broad role of housing assistance is very evident at the level of program design and delivery. Community development approaches in the area of public housing estate renewal, for example, are firmly grounded in an understanding of the manifold potential benefits of housing assistance – benefits in terms of employment prospects, health and so forth (Badcock and Harris, 1998). More generally, the perspective from this level can be seen in the New South Wales 1999 Background Paper on housing assistance reform. It begins by making a clear link between the broad roles of housing and the roles of housing assistance:

Secure, affordable and appropriate housing is crucial to individual well being. It is also critical to community well being, underpinning the capacity of individuals to contribute to the economic and social health of the community. It is within this context that housing assistance programs play an important role.

(NSW Department of Housing 1999, p1)

and, accordingly, includes the broad role to accompany the basic objectives of housing assistance – a system of housing assistance that:

builds sustainable communities and contributes to the social and economic well being of the broader community.

(NSW Department of Housing 1999, p16)

The import attached to the broader role of housing is also very evident in the AHURI Research Agenda. Among the research areas identified in the 2000 Agenda, a number deal explicitly with the linkages between housing and other policy areas. These cover a whole of government perspective on housing assistance, and linkages between housing assistance and other services, the labour market, strengthening communities and regional disadvantage. Similarly, the AHURI policy issues paper concluded with the observation that 'Housing policy issues are complex, interwoven with other aspects of economic and social policy, and significant for the quality of life for all Australians' (AHURI 2000, p8).

The role of housing assistance is clearly widely recognised as extending well beyond immediate shelter outcomes, even if policy objectives are often expressed more narrowly. Housing assistance accordingly needs to be viewed in this wider context. But do our ways of measuring the performance of housing assistance allow us to do so? This question is addressed below.

2.2   Measuring performance

A key finding from the 1993 Industry Commission inquiry into public housing was that there was no systematic means for measuring the performance of public and community housing assistance programs.

It is not easy to trace the use of housing assistance funds or to evaluate how well the funds are spent. Indeed, the full costs of housing assistance are not recorded and governments do not know whether assistance is well targeted or delivered efficiently. (Industry Commission 1993, p xv)

This has led to the establishment of national standards for performance monitoring. The 1996-99 CSHA included a core set of nationally consistent outcome measures relating to:

(a) the total amount of assistance provided;

(b) the targetting of assistance to those in need;

(c) the affordability of assistance provided;

(d) the standard of rental housing provided;

(e) the levels of overcrowding and under-use of rental housing;

(f) consumer satisfaction;

(g) timeliness of assistance;

(h) efficient use of assets;

(i) the value of assets.   (Commonwealth of Australia 1996)

This was a start, though was clearly very focused on the direct housing outcomes. Subsequently, the framework of performance measures has broadened and become more formalised with the National Housing Data Agreement (NHDA) which is a subsidiary agreement to the 1999-2003 CSHA. The NHDA brings together the housing authorities, the Australian Institute of Health and Welfare and the ABS with the task of developing a core set of nationally consistent indicators and data for benchmarking purposes.

The framework of performance measures developed under the NHDA is exemplified by the performance indicators for public housing used by the Productivity Commission in its reporting on the performance of government services (Productivity Commission 2001). This framework is shown in figure 1. There is also a framework for measuring the performance of community housing and one for Rent Assistance is under development.

The framework for public housing performance measurement shows a comprehensive structure, though one which – understandably – is tied to the focused objectives of the CSHA (see section 2.1). It is not designed to cover the broader aspects of the performance of housing assistance, though the elements in the 'appropriateness' branch of the structure are potentially indicators of these impacts. They include, for example, measures of affordability and location. The other point to note about the framework is that the actual indicators used are very specific and tied to appropriate available data. The 'amenity/location' indicator, for example, is a survey-based figure on the proportion of tenants satisfied with these aspects of their dwelling.

In summary, the recent developments in the performance measurement of housing assistance mark a major advance, but one within the confines of the direct impacts of housing assistance. We are now much more able to assess these direct impacts, but they do not extend to capturing the broader impacts.

Figure 1 **Performance indicators for public housing as used by the Productivity Commission**
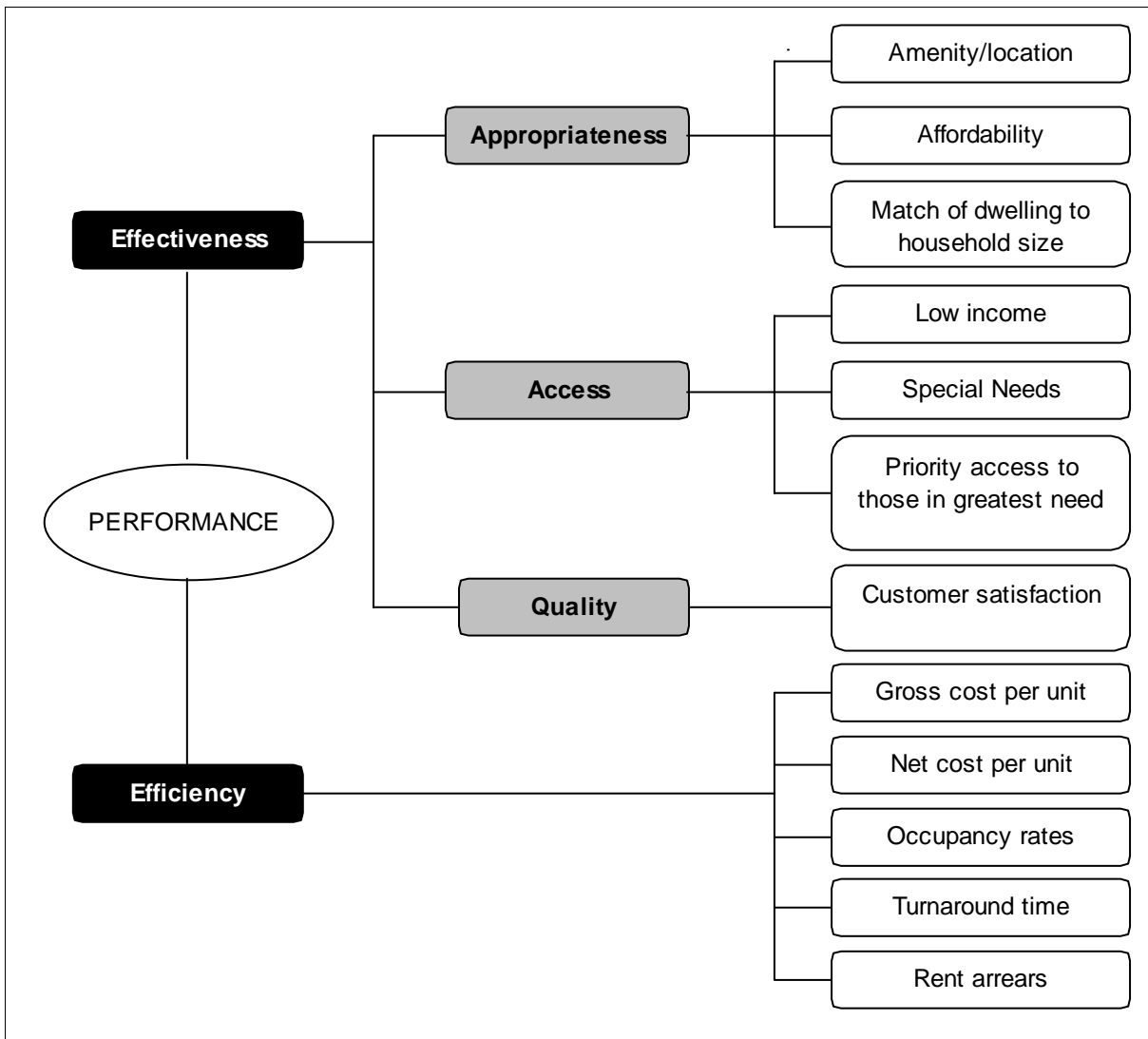
Source: Productivity Commission (2001)

2.3 The risks with narrow measures

The current established measures of the effectiveness and efficiency of housing assistance programs focus on costs and narrow program outcomes (with outcomes expressed in a simple manner amenable to ready monitoring and reporting). These measures are important. We need to be able to measure and report on program outcomes for the operational monitoring of the delivery of assistance, and for the comparison of program delivery by different jurisdictions.

These performance measures can, however, only partially meet the needs of policy development and we need to be careful that these tightly defined measures do not blind us

to the bigger picture. For example, a reliance on the current framework of performance measures would tend to:

- discount (ignore) the non-shelter outcomes of housing assistance – which may lead to an undervaluing of housing assistance in general and of those programs with significant non-shelter outcomes; and

- discount (ignore) any lasting impacts of housing assistance (such as education, employment and health outcomes) – which may lead to a misplaced emphasis on those programs found to have impacts which are more highly concentrated in the short-term.

Neither of these outcomes would be conducive to strategic policy development where there is an aim that housing assistance fits into a broader policy agenda; notably an agenda which has a focus on lasting impacts in terms, for example, of strengthening communities and avoiding welfare dependence.

2.4   Policy relevance

The Australian system of housing assistance is entering a phase of review and possibly major reform. Basic questions in this review will include assessment of the value of housing assistance and the relative value of different types of housing assistance. A proper response to these questions, in turn, will rely on a good picture of the value of housing assistance.

This is where the project is designed to advance the quality of policy development – by providing a tool which will help us move toward a more complete picture of the value of housing assistance. Most commonly, the value of housing assistance is seen in a partial and short-term manner – for example, in terms of the impact on weekly incomes after housing costs. This view is now being extended by other research to incorporate the non-shelter impacts of housing assistance, and this project will take the further step of adding the lifetime dimension – taking into account any lasting impacts of housing assistance.

The research will set out the lifetime impacts of housing assistance across a range of areas of impact from the perspectives of both recipients of housing assistance (with particular relevance to program objectives) and government (with particular relevance to budgetary objectives).

3 Approaches to a lifetime/whole of government perspective

This study draws together two perspectives in housing research and analysis:

1. the whole of government perspective, which seeks to view housing policy in the context of its broad impacts, not only those directly related to housing; and

2. the lifetime perspective, which seeks to view impacts not just at a point in time, but over people's lifetimes.

3.1 The whole of government perspective

As noted above, a whole of government perspective is commonly manifest in general statements about housing policy. Until recently, however, recognition at that level had not translated to the same extent into housing policy research – at least, with research into the evaluation of housing assistance. With an awareness of this gap, the Australian Housing Research Fund recently supported a scoping study to devise a methodology to measure the whole-of-government social and economic impacts of unmet housing need (Phibbs, 2000). In effect, the focus of the study was on the impacts of housing assistance, rather than starting with some explicit notion of what constituted unmet housing need, as the work revolved more around comparing people's circumstances before and after the receipt of housing assistance. That study proceeded to provide a very useful account of the 'state of the art' in this area of housing research.

The research reported by Phibbs (2000) had two principal outcomes: evidence on the whole-of-government impacts of housing, and a consideration of the methodological issues entailed in measuring these impacts. Through a review of the literature and a program of case studies, evidence was found of negative impacts from unmet housing need on health, education, crime, employment prospects, and family and community relationships (Phibbs 2000, p1). Measuring these impacts in quantitative terms, let alone putting a dollar cost on them, emerged, however, as a relatively undeveloped area of activity. The study canvassed a number of alternative approaches and concluded with a proposed methodology for empirical measurement of the whole-of-government costs of unmet housing need.

The approach proposed by Phibbs (2000) involved a longitudinal study of a sample of applicants for housing assistance, with the study comparing their circumstances before and after the receipt of housing assistance. This research has subsequently been funded by AHURI with the project 'Housing Assistance and Non-Shelter Outcomes' being conducted by the AHURI Sydney Research Centre. The study combines the initial 12-month phase of a longitudinal survey (with the foreshadowing of a request for funding to extend the survey) and in-depth case studies. The aims of the study (AHURI Housing and Urban Research

Centre University of Sydney 2000, pp 3-4) have a very close connection with those of the research which is the subject of this paper. They include:

- (describing) the changed social and economic well-being of individuals and families before and after receipt of housing assistance and other housing changes which include tenure, location and type;

- (providing) an impact analysis on the reduction/withdrawal of housing assistance; and

- (using) the information on non-shelter impacts to construct a whole-of-government cost-benefit analysis of the provision of housing assistance.

As was noted in Section 2, research into the non-shelter outcomes of housing assistance was one of the emphases in the AHURI Research Agenda for the 2000 funding round. The AHURI Sydney Research Centre study on 'Housing and Non-Shelter Outcomes' is only one of a number of current AHURI research projects in this area. Other current AHURI research projects which are addressing the broader outcomes of housing assistance include, for example:

- 'Housing and its association with other life outcome' – use of a 3-year panel survey to investigate the association between changes in people's housing situations and changes in other aspects of their lives (education, employment, incomes, health, family formation/dissolution and other aspects).

- 'Do housing conditions impact on health inequalities between Australia's rich and poor?' – use of the 1995 National Health Survey to examine the links between health and income.

- 'An empirical examination of the relationship between housing systems and non-housing outcomes' – literature review and empirical investigation using a 1997 South East Queensland survey of the association between housing circumstances and nine non-shelter outcomes (crime, health status, labour force participation, community cohesion, poverty, education, perceived well-being, anomie, and social exclusion).

- 'Linkages among housing assistance, residential (re)location, and use of community health and social care by old-old adults: shelter and non-shelter implications for housing policy development' – identifying the non-shelter outcomes of different forms of housing assistance for older people.

- 'The housing and other service needs of recently arrived immigrants: a whole of government perspective' – use of the Longitudinal Survey of Immigrants to Australia to examine how housing affects immigrants' use of other services and success in settlement.

- 'Rent assistance and young people's decision making' – use of a 1999 survey undertaken for the Department of Family and Community Services to investigate the impact of rent assistance on young people's decisions concerning education, work and living arrangements.

- 'Rent assistance: issues of adequacy and incentives for families with children' – empirical investigation and modelling of the relationship between rent assistance and the labour market behaviour of families with children.

- 'Comparative assessment of housing evaluation methods: evaluating the economic, health and social impacts of housing' – review methods and commence development of evaluation tools that will allow more comprehensive evaluation of housing assistance.

- 'A comparison of the locational advantages and disadvantages for low and moderate income home-buyers compared to those for public and private renters' – comparison of the locational advantages and disadvantages associated with different forms of housing assistance in Western Australia.

The above is not an exclusive list of the current AHURI projects with relevance to this area of research. But it is enough to demonstrate the considerable research effort in this area. An interesting feature of the projects is the extent to which they have identified opportunities to exploit existing datasets – datasets generally designed for other purposes – in addressing the issues at hand. Completion of these research projects will see a substantial increase in the empirical evidence about the relationship between Australian housing assistance and non-shelter outcomes, and we can expect a commensurate advance in our understanding of this relationship.

3.2   The lifetime perspective

Much housing research and analysis takes a lifetime perspective. The process of home purchase, for example, is sensibly seen in the context of lifetime asset accumulation or as an element in the provision for retirement (Senate Select Committee on Superannuation 1994, Econtech 1996, King and Baekgaard 1996). More generally, investment in housing – by owner-occupiers, private investors or housing authorities – typically involves some analysis of the financial costs and returns over people's lifetimes or over the lifetimes of the physical investment. There is also a continuing interest in housing careers – changes in housing as circumstances and needs change across the life course (Kendig 1990, Winter and Stone 1998). Collectively, there is a central lifetime dimension – in terms of an area's population moving through the life course – running through much analysis of urban change (see, for example, Department of Infrastructure 1998).

The lifetimes perspective is thus a very common strand in housing studies. But a review of the literature shows it to have hardly found its way into the evaluation of housing assistance programs. It does emerge naturally in comparisons of rental assistance and home purchase assistance – in terms of the lifetime profile of reducing housing costs with home-ownership – and, at least, indirectly in studies of housing subsidies (Flood and Yates 1987, Flood 1993). However, consideration of the lifetime perspective in studies of housing assistance is certainly the exception rather than the rule. This stands in contrast to other areas of policy evaluation concerned with 'investments in people's future well-being' – notably education,

health and retirement income policy – where a lifetime perspective is the rule rather than the exception (see, for example, Quiggin 1999 and King 1999 on education; Mathers and Stephenson 1999 and Walker 1999 on health; Tinnion and Rothman 1999 and King, Baekgaard and Harding 1999 on retirement incomes).

A notable exception in the case of the evaluation of housing assistance policy is the recent work undertaken by Spiller Gibbins Swan Pty Ltd (1999) on the evaluation of estate renewal programs. Spiller Gibbins Swan began with a review of the Australian and overseas experiences with housing estate renewal. One of the lessons gleaned from overseas was that a common theme was 'realisation of the necessity to improve the life position of people in disadvantaged areas' (p93). Non-shelter outcomes, such as education and employment, were important, as were long-term results. Thus, we have recognition of both the non-shelter (or whole of government) and lifetime dimensions.

Spiller Gibbins Swan proceeded with an overview of alternative evaluation techniques before coming down on the side of cost benefit analysis – a framework amenable to the incorporation of a wide range of different impacts and the time profile of these impacts. Application of the technique involves identifying the direct and indirect costs/benefits of a project, valuing them, and discounting future costs or benefits. The aim is to arrive at a bottom line figure which encompasses the future streams of the range of different costs and benefits. The report includes examples of how this might be applied in the case of evaluation of estate renewal – what are the direct and indirect costs and benefits, how they might be valued – and a useful discussion of conceptual issues in cost benefit analysis. In practice, the report recommended applying any such cost benefit analysis in a stepwise manner, starting with consideration of the direct impacts over the short-term and then extending to include indirect and longer-term impacts.

3.3   Where does this research fit in?

This research aims to bring the non-shelter (or whole of government) and lifetime dimensions of housing assistance together in a method for more fully assessing the value of housing assistance and comparing alternative forms of housing assistance. These two dimensions are both recognised as important, though have not been incorporated in measures of the value of housing assistance. Spiller Gibbins Swan Pty Ltd (1999) has proposed the use of cost benefit analysis as a means of doing so. While this study will use a different method, it has much in common with the techniques of cost benefit analysis (see section 4).

The project will develop a framework for considering the whole of government lifetime impacts of housing assistance, and produce first estimates of these impacts. Given the considerable amount of related empirical work underway (see section 3.1), might it be premature to be embarking on this project before the findings from the other research efforts emerge? Obviously, we believe it is not premature. It will be some time before the findings

from the other relevant research become available – particularly those from the AHURI Sydney Research Centre project on 'Housing Assistance and Non-Shelter Outcomes'. In the meantime, it will still be possible to provide early indicative results (particularly with the sensitivity element of this study). The framework will be amenable to elaboration and the entering of firmer numbers as other research results come in.

In terms of the AHURI research agenda, the research sits within the 'Housing Assistance Programs' theme, with particular relevance to the following two research outcomes required under the agenda:

- framework and first estimates for a whole-of-government socio-economic cost-benefit analysis of the provision of housing assistance (in research area 1.1 'Housing: a whole of government perspective'); and

- developments to fill other identified gaps in currently available evaluation methods and techniques (in research area 1.3 'Evaluation methods').

4   The approach of this study

4.1   Scope

The study is founded on the belief that the type of approach put forward by Spiller Gibbins Swan (1999), in the context of the evaluation of estate renewal projects, has value for the assessment of housing assistance in general and, in particular, for the full comparison of alternative forms of housing assistance. That approach is a general cost-benefit framework, the essence of which is an attempt:

1. to capture the broad range of direct and indirect costs and benefits;

2. to express these as far as possible in comparable terms (typically financial); and

3. to deal with the time profile of future costs and benefits (through discounting).

There is an important difference, though, between the approach to be used in this research and a general cost-benefit framework. The latter is typically applied in a population-wide manner, enumerating aggregate impacts and, accordingly, suffering the limitation of being able to reveal little about distributional impacts. In this research, we will be applying the key concepts of cost-benefit analysis (as listed above) to the cases of individual households. By comparing the results for different types of household, we will get a picture of the distributional impact of housing assistance, but we will not be in a position to readily estimate the aggregate impact.

Filling all the potential elements of a cost-benefit framework – for different forms of housing assistance – can be an enormous task. Reference to the range of elements identified by Spiller Gibbins Swan Pty Ltd (1999) in the context of estate renewal, for example, would reveal the extent of research and valuation that would be required. Being unable to do it all at once, however, does not negate the value of moving in the direction of a comprehensive cost-benefit analysis. Advances can be made in a step-wise manner, progressively adding to and improving our measures of the value of housing assistance – progressively drawing closer to a fuller understanding of the value of housing assistance and the way we measure it.

The focus of this study is on selected aspects of the impacts of housing assistance within a cost-benefit framework. Specifically, the study covers the direct impacts of housing assistance and the possible indirect impacts on education, labour force participation (including earnings) and health. It also covers the further impacts that flow from these indirect impacts – such as impacts on social security entitlements and taxation. The appeal

of the particular focus of this study on indirect impacts in the areas of education, the labour market and health stems from a number of points.

- The aspects under consideration (education, labour force activity and health) are increasingly recognised as important considerations in the value of housing assistance (see section 3.1).

- These aspects each have potentially large lifetime effects which have not received direct attention in the housing research literature (see section 3.2).

- These aspects can be reasonably readily incorporated into a framework for assessing housing assistance by drawing on research undertaken in other areas of public policy analysis – research in the areas of education, labour market and health policy (see section 3.2).

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

1. the value of housing assistance in general; and

2. the value of different forms of housing assistance.

The forms of housing assistance which will be covered include:

- rent assistance (means-tested income support);

- public housing;

- community housing; and

- assistance with owner-occupation.

As such, the indirect effects need to be placed in perspective. This will be provided by their consideration alongside an accounting of the direct costs and benefits of housing assistance – that is, those elements of a cost-benefit analysis of housing where only a narrow view of the impact of housing assistance is undertaken. This will then allow us to present the effect of incorporating the indirect lifetime effects in the assessment of the value of housing assistance. Are the likely impacts marginal, particularly after discounting future returns, and the inclusion of these considerations in our assessment thus unlikely to change our picture of the value of housing assistance? Or are the possible impacts of such a magnitude that they can substantially alter the picture?

Three steps in this research can be distinguished:

1. development of the framework;

2. first estimates; and

3. sensitivity analysis.

Each step is described in more detail below.

4.2 Developing the framework

The framework will involve elaborating an established technique used in other areas of lifetimes policy research; namely, the construction of a 'hypotheticals' model as a tool for policy analysis. This type of model operates on the basis of assumed (plausible) lifetimes of people. To take a simple example, cases for single people might be defined in terms of someone who has average weekly earnings over their working life, someone who has half average weekly earnings, and someone who has twice weekly earnings.

This is a technique which is commonly used, for example, in the estimation of the lifetime returns from education to individuals and government (Maglen 1994, King 1999, Johnson and Lloyd 2000) and in the analysis of retirement income policy alternatives (Tinnion and Rothman 1999, ASFA Research Centre 1999). As such, the research has close parallels with some recent NATSEM lifetime analyses, including development of a rates of return to education model for DETYA (Johnson and Lloyd 2000), estimates of the whole-of-government lifetime costs of early school leaving undertaken for the Dusseldorp Skills Forum (King 1999), a cost-benefit model of the health and cost impacts of diabetes prevention strategies (Walker 1999), and some current work on superannuation. Such lifetime models/frameworks can be developed relatively quickly, while providing very relevant insights into lifetime impacts on people and on government.

The framework will thus be an extension of tried and tested 'models' used for other research applications. The required framework is best described with a simple example. Let us take the case of a single person, assume that there is only one type of housing assistance – rent assistance – which is received when the person is not working, and consider only one possible indirect impact of housing assistance – a possible increase in labour market activity. There are then four elements in the hypothetical model:

1. the modelled lifetime in the absence of any indirect impact;

2. the modelled lifetime with the indirect impact;

3. a comparison of the two lifetimes; and

4. an estimate of the likelihood of the indirect impact occurring.

What the first part of the model (the lifetime in the absence of any indirect impacts) will look like is illustrated in figure 2. In the left hand column is the person's age (which will be handled in single years in the actual model). Then we have two defining characteristics of their lifetime – an assumed housing career (private rental over the whole period in this example) and an assumed labour force career (including some periods of unemployment). Attached to these characteristics are assumed rent levels and earnings and these are used to calculate entitlements to income support (including rent assistance) and income tax.

Figure 2 **An example of a lifetime with only direct impact of housing assistance**

Age	Housing		Labour force		Social security		Income tax
	Tenure[a]	Rent	Status[b]	Earnings	Base	Rent assistance	
		$/year		$/year	$/year	$/year	$/year
20-24	PR	7500	UN	0	7500	2000	0
25-29	PR	7500	W	30,000	0	0	5500
30-34	PR	7500	UN	0	9500	2000	0
35-39	PR	7500	W	30,000	0	0	5500
40-44	PR	7500	UN	0	9500	2000	0
45-49	PR	7500	W	30,000	0	0	5500
50-54	PR	7500	UN	0	9500	2000	0
55-59	PR	7500	W	30,000	0	0	5500
60-64	PR	7500	UN	0	9500	2000	0
65-69	PR	7500	NILF	0	10000	2000	0
70-74	PR	7500	NILF	0	10000	2000	0
75-79	PR	7500	NILF	0	10000	2000	0
Total[c]				**$600,000**	**$377,500**	**$80,000**	**$110,000**

a PR = private rental
b UN = unemployed, W = working, NILF = not in labour force
c Total is the sum multiplied by 5 (because lifetime is shown in 5-year age ranges)
Note: Dollar figures are illustrative.

The impacts of housing assistance shown in figure 2 are restricted to the direct impacts. Over the lifetime shown, these amount to $80,000 in rent assistance received by the private renter, and an identical outlay by government.

Now, what happens if we consider a possible indirect impact? Suppose rent assistance improves the person's ability to remain employed – to the extent that one of the 5-year periods of unemployment now becomes a period of working. The outcome is shown in figure 3 which represents the second element of the model – the case where indirect impacts are taken into account. The change in labour force status has led to changes in earnings, income support (including rent assistance) entitlements and in income tax.

Figure 3 **An example of a lifetime including indirect impact of housing assistance**

Age	Housing		Labour force		Social security		Income tax
	Tenure[a]	Rent	Status[b]	Earnings	Base	Rent assistance	
		$/year		$/year	$/year	$/year	$/year
20-24	PR	7500	UN	0	7500	2000	0
25-29	PR	7500	W	30,000	0	0	5500
30-34	PR	7500	UN	0	9500	2000	0
35-39	PR	7500	W	30,000	0	0	5500
40-44	PR	7500	W	30,000	0	0	5500
45-49	PR	7500	W	30,000	0	0	5500
50-54	PR	7500	UN	0	9500	2000	0
55-59	PR	7500	W	30,000	0	0	5500
60-64	PR	7500	UN	0	9500	2000	0
65-69	PR	7500	NILF	0	10000	2000	0
70-74	PR	7500	NILF	0	10000	2000	0
75-79	PR	7500	NILF	0	10000	2000	0
Total[c]				**$750,000**	**$330,000**	**$70,000**	**$137,500**

[a] PR = private rental
[b] UN = unemployed, W = working, NILF = not in labour force
[c] Total is the sum multiplied by 5 (because lifetime is shown in 5-year age ranges)
Note: Dollar figures are illustrative.

The third element of the model is a comparison of the simulated lifetimes before and after consideration of the possible indirect impacts of housing assistance. In practice, this will involve consideration of when the changes in circumstances occur, but here we will simply compare the totals from figures 2 and 3. Remember that, with consideration of only the direct impacts, the picture was of a simple transfer of $80 000 from government to the individual. When we take into account the indirect impact, the picture looks very different for both the individual and for government.
The individual:

- receives an extra $150,000 in gross earnings;

- pays an extra $27,500 in income tax;

- receives $47,500 less in base social security; and

- receives $10,000 less in rent assistance.

So, when the indirect impact is taken into account, the individual looks $65,000 better off over their lifetime than they did with a simple accounting of the direct impact.

The government:

- receives an extra $27,500 in income tax;

- outlays $47,500 less in base social security; and

- outlays $10,000 less in rent assistance.

In this case, the returns to government ($75,000) outweigh the outlay (only $70,000 now on rent assistance) – a very different picture to that obtained from looking at the direct impact alone. As mentioned above, we have not taken any account in this example of the timing of costs and benefits. Doing so would reduce the value of the future returns, but the two pictures would still look very different.

The fourth (and final) element of the model concerns the likelihood of the indirect impact occurring. So far, we have assumed that there is an indirect impact of housing assistance in this example. Our evidence, instead, is likely to suggest that there is a certain chance of such an impact. In this illustration, we may have grounds for estimating that there is say a 20 per cent chance of someone enjoying the indirect impact under consideration. This would then dilute the indirect impacts. If we simulated the lifetimes of five people, they would on average be $93,000[1] better off over their lifetimes, with an average net outlay by government of $63,000[2].

Developing this framework beyond the simple example presented above will involve the following elaborations:

- coverage of different family types, with complexity increasing from the case of a single person, to a couple, to families with children;

- specification of the hypothetical lifetimes with more sophistication (compared to the simplistic labour force and housing careers in the illustrative example);

- provision to examine different forms of housing assistance (with distinction at least between rent assistance, public rental, community housing, and assistance with owner-occupation)

- distinction of a wider range of direct impacts (for example, administrative costs could be included in the above example) and indirect impacts (education, labour force and health) – while maintaining the distinction between costs and benefits which are incident on government and those which are incident on families and individuals;

- specification of impacts (costs and benefits) on a year-by-year basis over lifetimes;

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[1] The average for the individual of four cases with no indirect impact (4 x $80,000) and one case with an indirect impact ($145,000).

[2] The average for government of four cases with no indirect impact (4 x $80,000 outlays) and one case with an indirect impact ($5,000 net revenue).

- provision to examine housing assistance provided at different points in the life course; and

- a discounting facility to allow the conversion of future costs and benefits to net present value terms.

In practice, this framework will be set up as an Excel spreadsheet and can be visualised with rows representing years of a lifetime and the columns representing the various impacts (costs and benefits) – as in figures 2 and 3. For example, a number of columns will cover housing assistance and will identify the period of receipt of a particular form of housing assistance and the direct benefits to families (or individuals) and costs to government of this housing assistance. Other columns will cover the potential areas of indirect housing assistance impacts – for example, labour force activity, earnings, taxation etc. Such items would be specified as year-by-year labour force status, earnings, tax liabilities respectively.

People's lifetimes do, of course, exhibit considerable diversity. The diversity evident in cross-sectional views of the circumstances of the population is multiplied when we extend the view to take in changes over time. A hypotheticals model like this one is not, however, designed to incorporate all this diversity. To do so, would involve running thousands and thousands of simulations to incorporate all the possible variations in people's lifetimes. To capture the full diversity, a detailed dynamic population model would be required. Rather, a hypotheticals model is designed to examine a limited number of specified cases. That said, there are clear patterns that are revealed by research into people's lifetimes – typical patterns, for example, in education and labour force participation, and in housing careers. The model will be representing a simplification of reality, operating with stylised lifetimes which can be considered to be 'typical' for groups in the population. Specification of these lifetimes will be grounded in what we know about actual lifetimes and, importantly, in what we believe to be likely lifetime patterns in coming years.

4.3 First Estimates

Given the above framework, the elements will be quantified to the extent possible using readily available material or reasonable bases for estimation. This will require the construction of hypothetical lifetimes, assembly of evidence on the range of benefits/costs of housing assistance including, importantly, assumptions about the extent to which these impacts can be attributed to housing assistance, and the development of argument for estimates of the dollar values of these impacts.

Some elements of the framework can be filled out in a reasonably straightforward manner; others will involve a degree of complexity and uncertainty. With the scope of this study requiring a reliance on existing readily available information, some parts of the framework will necessarily be based on assumptions about impacts and effects. Where this is the case, the research will need to justify the selection of particular values, or ranges of values, for these

assumed items. It is because of the inevitable role of important assumptions in the model, in the absence of good empirical data, that the basic findings to be generated by the model are to be termed 'first estimates'.

In due course, other work will generate further empirical evidence which will reduce the level of reliance on assumptions in the model. Such evidence is, for example, promised by a number of other AHURI research projects (see section 3.1). With regard to information gaps, an important role of the current study will be to identify the important gaps – those aspects of the model to which the findings from the model are particularly sensitive.

So, how will these first estimates be made? The remainder of this section details the approach to be taken with aspects of the framework – setting out the nature of the information required, specifying data sources, and highlighting areas where assumptions will be required. The aspects covered are:

- the lifetimes;
- direct housing impacts; and
- indirect impacts.

(A) The Lifetimes

The basis for the model is a set of specified lifetimes – a set of selected hypothetical lifetimes which are, if possible, typical or are at least illustrative of the lifetimes of the population likely to receive housing assistance. The aspects of these lifetimes which will be specified are lifetime profiles of:

- household composition;
- housing tenure;
- educational attainment;
- labour force activity;
- health status;
- earnings;
- social security entitlements;
- household expenditure (housing, education, health and work costs);
- government costs (housing, education, health);
- income tax;
- superannuation contributions;
- asset income (any superannuation income).

These will in effect be base case lifetimes. They will be specified as cases of lifetime private rental (without any provision for rent assistance, as this will be one of the forms of assistance to be assessed) with this then providing the benchmark against which the direct impacts of housing assistance will be estimated. For example, how do housing costs with housing assistance compare with those which would prevail in private rental with no assistance? The indirect impacts of housing assistance will then have the possibility of altering these lifetime profiles. Their consideration may result, for example, in a change in educational attainment, labour force status, earnings, or health status with related changes in incomes, taxation, superannuation and so forth.

These base case lifetimes will be constructed using information we have about the characteristics of the 'housing assistance' population – that is the population receiving housing assistance or broadly eligible to do so. This information will be taken from data sources such as the ABS national Surveys of Incomes and Housing Costs and a first step in the research will be to compile this picture.

A fundamental issue which needs to be addressed at the outset of the specification is the question of what is a lifetime. Do we look at someone over their lifetime from birth to death, introducing housing assistance at an appropriate stage? What about the issue of two generations? In the case of a family with children, the provision of housing assistance may well have a greater lifetime impact on the children than on the adult(s). There is no easy solution to these questions about the length of a lifetime and about the number of generations to cover. Here, it is proposed to limit the model analysis to two generations, covering:

1. the first generation (adults in the household) from the age of, say, 25 years through to death (the starting age will be determined after analysis of household formation data); and

2. the second generation (any children in the household) from birth through to, say, age 25.

This does not imply that any impacts on children beyond their reaching the age of 25 years will be ignored. Rather, they will be treated in a more qualitative manner in the presentation of results instead of being part of the core quantitative framework. For example, we might conclude that some housing assistance program has the potential to increase children's likelihood of completing secondary schooling. Only part of the effects of this will be covered by the model. We will, however, be able to make inferences about the impacts in later life of such increased schooling from that part of the model dealing with older adults.

Data sources – The Lifetimes

Household composition	Limited number of assumed 'typical' or illustrative households
Housing tenure	Assumed private rental in base case
Educational attainment	Characteristics of 'housing assistance' population as revealed by major ABS surveys, such as Survey of Incomes and Housing Costs and National Health Survey.
Labour force activity	
Health status	
Earnings	
Social Security	Application of eligibility and entitlement rules
Household expenditure	ABS Household Expenditure Survey
Govt costs (housing, health, education)	Published data from Productivity Commission and AIHW (note no govt. housing costs in base case)
Income Tax	Application of tax rules
Superannuation contributions	Application of 9% Superannuation Guarantee rate
Asset stock and income	Restricted to housing and superannuation wealth (note that housing wealth is zero in the base case)

Developing these base lifetimes would be a major task in its own right were it not for the fact that much of it is in common with base lifetime scenarios developed for other applications at NATSEM. By drawing on this previous work, the emphases of this study can be placed on the other elements of the framework.

(B) Direct Housing Impacts

This element entails specifying the direct housing impacts of alternative forms of housing assistance. These include impacts on households in terms of housing costs and housing quality and impacts on government expenditure.

Housing costs – Specifying these impacts is reasonably straightforward through the application, for example, of rent or rent subsidy formulae or specified mortgage arrangements.

Housing quality – This is a more difficult aspect. How should we value a change in housing quality? Consideration of the merits of alternative approaches will be an aspect of this research. One simple possibility is to use change in rent (real or imputed) as a measure of change in housing quality.

Government costs – These include, for example, direct or indirect rent subsidies, administrative overheads, capital costs. Data sources for these aspects will be a combination of program rules and published material from sources such as the AIHW and Productivity Commission. Note that this information coincides in large part with the data compiled for the standard framework of housing assistance performance measures used by AIHW and Productivity Commission (see section 2.2). If available, there may also be some use of information obtained directly from individual housing authority sources.

(C) Indirect impacts

Specifying the link between housing assistance and indirect impacts is arguably the most uncertain part of this exercise. Given our concern with impacts in the areas of health, education and labour force activity, what we need here are estimates of the impact of housing assistance on these aspects of people's lives. As noted above, measurement of these links has been identified as a gap in our understanding of the effects of housing assistance – a gap which has prompted a number of other current AHURI research projects. Until the findings from this other research become available – and, in the case of the longitudinal survey being undertaken by the AHURI Sydney Research Centre, this may be some years away – we are constrained to rely on indicative estimates of these linkages.

For this model, the linkages need to be specified in the form of the propensity of housing assistance to have an impact on another aspect of people's lives. For example, a given type of housing assistance has an x per cent chance of changing someone's education, labour force or health status. Such status changes will be expressed in the following types of terms:

- education – highest level of educational attainment;

- labour force status – years in different labour force states (employed full-time, employed part-time, unemployed, not in labour force)

- health – life expectancy, disability-adjusted life years

Care will be taken to use consistent scenarios for these linkages, recognising the relationships – independent of housing status – between education, labour force and health characteristics. In line with the uncertainties attached to this element of the framework, variation in the specification of these links will be a major part of the sensitivity analyses conducted in the third part of the study.

Given the linkages between housing assistance and educational attainment, labour force activity and health, the full indirect impacts will then need to be estimated. These include impacts such as those on:

- earnings;

- social security entitlements/outlays (including age pension in later life);

- taxation liabilities/receipts; and

- service costs (e.g. costs to government and individuals of education and health services).

The data sources for these 'secondary' aspects of the indirect impacts will be a combination of internal calculations (used, for example, for social security entitlements, income tax liabilities and superannuation) and secondary sources on cost-benefit analyses of changes in education, labour force and health status. These will include, for example, previous NATSEM work in these areas and studies in the health area such as that by Mathers, Vos and Stephenson (1999).

4.4 Sensitivity analysis

There are two aspects to the sensitivity analyses to be conducted as part of this study.

The first concerns the sensitivity of the findings to assumptions about the future environment – looking, for example, at the sensitivity to assumptions about long-term interest rates or real earnings growth rates. This part of the analysis will provide an indication of how robust the findings are across alternative views about the future.

The second aspect of the sensitivity analyses concerns the sensitivity to the central assumptions about the linkages between housing assistance and non-shelter outcomes. As noted earlier, this is an area of particular uncertainty in the model. As such, testing the sensitivity of the findings to a range of alternative specifications of the strength of these links is a natural part of the study. It can also provide a pointer to priority areas of research. We can undertake the analysis using high and low estimates to reveal the sensitivity of the results to a particular factor. We can then make a judgement about how important it is to get a handle on this particular aspect for our overall picture of the value of housing assistance. Perhaps it is crucial; perhaps it is swamped by other impacts.

This sensitivity analysis can also be usefully turned around to answer questions of the following form. Suppose one form of housing assistance looks better than an other in terms of direct housing costs and benefits, but the second one is known to have more positive indirect impacts. How strong do these impacts need to be in order to offset the difference measured only in terms of the direct housing impacts?

5   The research plan

The timetable for this research sees completion in mid August 2001 marked by publication of a Final Report and associated Findings Paper.

A Work in Progress report will be prepared in early July. It is anticipated that this report will include presentation of material on:

- the model framework, including derivation of the base lifetimes;

- the direct impacts of housing assistance over lifetimes; and

- some of the results on the indirect impacts over lifetimes.

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