What drives housing outcomes in Australia? Understanding the role of aspirations, household formation, economic incentives and labour market interactions

authored by

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EXECUTIVE SUMMARY

Aims of the Study

- The sequence of housing stages that an individual moves through over their lifetime forms the 'housing career' of that individual. While each housing career follows a unique path, a set of general forces act to influence the overall direction taken by individual housing careers. These drivers include:

  - Housing tenure preferences and housing market signals (house prices, rents etc.);

  - Household formation aspirations and outcomes;

  - Labour market effects (wages, employment, unemployment, and retirement);

  - Lifetime wealth accumulation objectives, and,

  - Housing assistance, income support, tax, and welfare programs.

- In this project, we map out how these (and other) drivers influence the trajectory of Australian housing careers. We focus attention on three distinct life-cycle stages: (1) Early adulthood when the first, independent housing career transitions are made (ages 15-34); (2) the middle age stage (ages 35-49); and (3) The mature phase of the life cycle (ages 50-69).

- The aim of the study is to increase our understanding of what drives housing outcomes in Australia and what determines the structure of Australian housing careers.

Policy Focus

- This project is important from a policy perspective for two main reasons.

  - First, it provides Commonwealth and State policy makers with an understanding of the drivers of housing market and housing career outcomes. In so doing, it aims to improve the information base on which Australian housing assistance programs are based thereby increasing their potential effectiveness.

  - Beyond its role in providing policy makers with vital background information on Australian housing careers, the present project is also important, from a policy perspective, because it directly examines the role specific Commonwealth and State housing assistance (and related income support and welfare) policies play in influencing the direction of Australian housing careers. Improving our understanding of the effectiveness of these housing assistance policies in achieving their housing outcome (and other economic and social) objectives represents an important aim of the present project.

Points of research focus

- One key issue we are interested in exploring in this study is the degree to which present-day Australian housing careers conform to a sequencing in which individuals move quickly from the parental home through the private rental market and into home ownership (the last stop representing the 'great Australian dream' in popular discourse). Australian housing careers in the immediate post-war decades increasingly followed this particular housing career pathway making it the *reference*, or traditional, housing career pathway against which other housing careers could be positioned.

- Some housing market commentators argue, however, that Australians are increasingly departing from this reference-point Australian housing career. In this project, we shall test whether this conjecture is substantiated by the evidence together with a number of hypotheses concerning the question of the deviation of housing careers from the reference pathway.

  - The first hypothesis concerning deviations from the reference Australian housing career, is that Australians are taking *longer* to undertake key housing career transitions than they previously did.

– The second hypothesis that we shall test in this study is that Australians are increasingly experiencing an *interrupted* housing career trajectory. Interrupted housing career trajectories occur when unfavourable household formation, housing market and labour market shocks force individuals sharply back down their reference housing career pathway. Those who lose their jobs, for example, may be unable to sustain mortgage repayments and so make a slide from home ownership back into the private rental market. Separation and divorce are household formation forces, which may act in a similar fashion.

• In this context, we are interested in exploring whether a '*hysteresis*' effect (history dependence where the present state is a function of its past history) is evident for those experiencing downward movements in their housing careers. Hysteresis in housing careers occurs when the movement down the housing ladder, in itself, creates or is associated with negative effects such that when the initial negative shock is 'removed' (e.g., remarriage or reemployment), the individual does not bounce back to where they were prior to the shock.

– The third hypothesis, which we shall examine in this study, is that the housing career goals or *aspirations* of Australians have changed in recent times and that this has led to a change in the direction of housing careers themselves.

• Departures from the reference-point housing career as a result of changing preferences stand in contrast to departures arising because Australians are blocked from making key housing preferred transitions as a result of severe housing-related constraints. If governments can effectively adjust policy settings so as to reduce the impact of such constraints then they will enable more Australians to achieve their housing goals.

• To examine these hypotheses and to model effectively the drivers which influence the housing outcomes of Australians, we divide our analyses into three life-cycle stages.

– *Young Adulthood (15-34)*. The first independent housing-career transition that individuals make is to leave the parental home and move into independent living. In the reference-point housing career, a relatively quick movement is then made into home ownership. Our interest lies in whether delays have been experienced in both leaving the parental home and entering homeownership and the role major drivers have played in these outcomes.

– *Middle age groups (35 to 49)*. In the reference point Australian housing career, those aged 35 to 49 are engaged in a process of home ownership consolidation. This involves a reduction in mortgages and/or a process of trading up in the housing market. Higher levels of owner-occupier housing wealth are accumulated. We are interested in the extent to which those in this category are following the traditional housing career path or rather are experiencing an interrupted housing career profile.

• *The Mature Age Group (50 to 69).* The final stage of the housing career we shall focus on in this study involves, what we shall refer to as the 'mature age group', those aged 50 to 69. In this age group, we are again confronted by the possibility of a splintering in the housing career pathways experienced by individuals.

• The main focus of this study is on the role played by the drivers of the housing system in influencing the housing careers of Australians. However, we shall also examine the reverse causation channel. That is, how does the housing system influence labour markets and household formation? The issue we focus on is the impact that housing tenure has on labour market outcomes. Specifically, we ask: What is the impact of home ownership, rental accommodation and public housing on the incidence and duration of unemployment?

Key Housing System Drivers

• Our generalised housing careers model contains five key sectors. The first relates to household formation decisions. The second to the demand and supply of housing and housing tenure decisions, the third sector relates to the labour market and provides inter-connections between the housing market and the labour market, the fourth takes into account housing assistance, income support and welfare policies, while the fifth accounts for wealth accumulation objectives.

- Household formation. We begin with the household formation decisions taken by individuals. Key household formation decisions include: The decision to stay in or leave the parental home and so begin an independent housing career. The decision to cohabit with a partner (or to leave a partner) and to have children. Lying behind housing formation decisions are a range of demographic determinants, educational outcomes (particularly important in the process of leaving the parental home) economic and other constraints, and social, economic and housing aspirations.

- The demand and supply of housing. As individuals form themselves into households, households are, in turn, deciding whether to own or rent housing. Households are also determining whether to invest in the private residential accommodation market. The first set of decisions relate to the demand side of the housing market while the latter relate to the supply side of the housing market.

- Labour markets. Individuals are not only making household formation and housing tenure decisions, they are also deciding whether or not to participate in the labour market. Those deciding to participate may not find work (the unemployed), be hours constrained (in the sense that they work fewer hours than they wish) or not match to a job suitable given their skill base and location. In such circumstances, incomes fall below levels that the individual aspires to. This in turn feeds into borrowing constraints and liquidity impacts, which influence housing tenure choices and the extent of housing services demanded.

- Housing assistance, income support, and welfare programs. Housing assistance programs directly affect the demand side of the housing market by influencing the relative prices of various housing options.

- Wealth and consumption objectives. Individuals are forward-looking. If individuals wish to maintain relatively high consumption levels in retirement, for example, or provide bequests to their children they must accumulate wealth during their lifetime. They cannot simply consume all their current income as their consumption in periods of much lower income flows will be drastically cut.

- Interactions. The interaction between housing demand and the existing stock of housing determines relevant outcomes in the housing market while the supply of labour and the demand for it determines employment and real wage outcomes in the labour market. There are substantial feedbacks from the housing market to the labour market and vice versa. Income support programs, housing assistance programs and tax measures all impact on the labour market/housing market interface.

- Finally, our model of housing careers takes into account hysteresis effects which occur when negative shocks that force individuals down housing career ladders have long-lasting effects so that individuals do not return to their original housing career position once the shock is reversed. We take up this theme when considering the position of those in the middle and mature phases of the life cycle.

Data

- The key database which we shall utilise is the Household Income and Labour Dynamics in Australia (HILDA) survey. In addition to the HILDA database this study shall also utilise the Australian Bureau of Statistics' *Survey of Income and Housing Costs* (SIHC) Confidentialised Unit Record Files.

- HILDA represents arguably the most comprehensive longitudinal survey of the Australian population relevant to social, housing, labour market, and mobility modelling. It contains a wealth of variables that will be utilised in this study. These include:

  – People's aspirations and values;

  – Housing circumstances;

  – Family, education, and labour market histories;

  – Personal and socio-demographic information;

  – Household formation;

- Mobility;
- Labour market circumstances; and
- Income sources.

The Next Stages of the Research

- The first piece of research we shall undertake in this study is to examine the age at which a respondent first left the parental home (the first stage of the housing career) and the pattern of independent and non-independent living among respondents (defined here as not living in the parental home). The detailed analyses to be undertaken in respect to the parental home leaving decision include the following components:

    - We Our first piece of analysis sets the leaving the parental home in the context of other key life cycle events experienced by Australians *over the generations (in the 20th Century)*. We shall compare the median ages of leaving the parental home with the median age of first leaving full-time education, the median age of first cohabitation with a partner, and the median age of the first time legal marriage. In each case, the median age will be derived from survival analyses of each life cycle event.

    - We then move on to model the process of exit from the parental home (the 'hazard') for all those aged 20. The hazard function in this case gives the probability that an individual leaves the parental home at a particular age conditional on being in the parental home prior to that point. We shall utilise Cox's proportional hazards model.

    - We shall then model, in detail, using contemporaneous information, the determinants of the leaving the parental home process of those *currently* aged 15-24.

- The decision to leave the parental home is the first housing career move made by young Australians. Having completed a study of this process, the project will move to an examination of the household formation and housing tenure patterns of those individuals in young adulthood and in the middle age categories.

    - We shall model the housing tenure moves of both those in the young adulthood and middle age groups focussing on the five fundamental drivers of housing careers listed above.

- For the housing careers of mature age Australians there are three particularly important specific forces influencing housing outcomes:

    - *Globalisation*. The more open Australian economy features corporate downsizing in response to more strident international competition and technological change. Jobs are less permanent, self-employment is more common and mobility and flexibility is becoming an increasingly important demand on workers. These developments are not conducive to acceptance of the long-term financial responsibilities accompanying mortgages.

    - *Deregulation of labour and housing finance markets*. Labour market deregulation has accentuated the impacts of globalisation by permitting more flexible wage outcomes that increase the volatility of earnings. Deregulation of housing finance circuits has arguably increased the amplitude of house price cycles; 'boom and bust' cycles expose highly leveraged home purchasers to the risks of negative equity, and increase uncertainty for prospective home purchasers.

    - *Increasing rates of household dissolution*. Divorce and separation are increasingly common phenomena among the young and middle aged. The housing market consequences of household dissolution are typically severe due in part to economies of scale that reduce the economic cost of housing for families.

- These three drivers have fundamentally changed the nature of Australian housing careers. The uncertainties/risks introduced by the three forces means that a significant number of Australians in the middle and mature phases of the life cycle can unexpectedly fall off housing career paths because of unexpected shocks such as redundancy, ill health,

household dissolution and so forth. Furthermore, it may prove difficult to restore the housing status achieved prior to the shock event, even when it has been reversed.

- Our study will first present a snapshot of the housing tenure circumstances of those in 35 to 64 age categories at the time of the HILDA Wave 1 survey.

- Following a review of housing tenure patterns, we shall examine the motivations for income units who have moved in the past 12 months or who are likely to move in the following year. Respondents to the HILDA survey who have moved in the previous twelve months are asked to give the main reason for this move. We shall group the reasons for moves into the following categories: Labour market reasons; Changing housing consumption including a set of reasons that capture amenity value issues; Household dissolution and formation (including the breakdown of a relationship); Other reasons such as poor health, recently moved to Australia and personal/family reasons (The number of income units citing these reasons is too small to allow a more disaggregated analysis).

- The third and fourth components of our examination of the housing careers of those in the mature age categories shall focus on the impact of labour market outcomes and household dissolution events on housing careers. We shall test for evidence of hysteresis effects. This involves comparing current housing status with that of cohort members who have not undergone a similar household dissolution event.

- The fifth and final component of our study of the mature age category will examine those income units whose housing careers have stalled. This group includes income units who have not followed the normal trajectory into owner-occupation that characterises the mainstream housing career. Long Term Public Tenants; and Long Term Private Tenants.

- Finally, we shall turn our attention from an examination of the drivers of housing outcomes to the impact that housing outcomes themselves have on the labour market. The housing to labour market link was first examined in the UK in relation to the impact that council housing has on unemployment (More recently, Andrew Oswald has argued forcefully, based upon analysis of time series and cross-section data for OECD countries and regions within selected OECD countries, that home ownership causes unemployment.

- In the present study we shall test the Oswald thesis for Australia. We shall examine the Oswald thesis using both individual-level data and locality-level data. The individual-level analysis utilises the Australian Bureau of Statistics (ABS) *Survey of Income and Housing Costs* (SIHC) Confidentialised Unit Record Files (CURFs) for the years 1994-95 to 1997-98. The SIHC micro datasets are based on a sample of individual respondents and are particularly strong both on the labour market position of the respondents and their housing status.

- Four tests will be employed in the present study to deduce the impact of homeownership, public housing and leverage on unemployment. First, we estimate a model explaining the probability of being unemployed including housing outcomes as explanatory variables. Second we shall estimate a hazard equation explaining the factors influencing duration of a spell of unemployment.

1 INTRODUCTION

1.1 The aims of the project

The sequence of housing stages that an individual moves through over their lifetime forms the 'housing career' of that individual.[1] While each housing career follows a unique path, a set of general forces act to influence the overall direction taken by individual housing careers. Key among these are the following five determinants:

(a) Housing tenure preferences and housing market trends (house prices, rents etc.);

(b) Household formation aspirations and outcomes;

(c) Labour market effects (wages, employment, unemployment, and retirement);

(d) Lifetime wealth accumulation objectives, and,

(e) Housing assistance, income support, tax, and welfare programs.

In this project, we map out how these (and other) drivers influence the trajectory of Australian housing careers. We focus attention on three distinct stages: (1) Early adulthood when the first, independent housing career transitions are made (ages 15-34); (2) the middle age stage (ages 35-49); and (3) The mature phase of the life cycle (ages 50-69).

Our aim in this project is to increase our understanding of what drives housing outcomes in Australia and what determines the structure of Australian housing careers. The project also has an important policy objective: To illustrate how the output from a formal modelling of housing careers can be used in the development of an evidence-based housing policy. The project aims to shed light on how a range of specific government policy actions (e.g., rent assistance programs, public housing programs, etc.) impact on the direction taken by Australians in their housing careers.

1.2 Points of research focus

One key issue we are interested in exploring in this study is the degree to which present-day Australian housing careers conform to a sequencing in which individuals move quickly from the parental home through the private rental market and into home ownership (the last stop representing the 'great Australian dream' in popular discourse).[2] As documented by Kendig (1981, 1984, and 1990), Australian housing careers in the immediate post-war decades increasingly followed this housing career pathway making it the *reference*, or traditional, housing career pathway against which other housing careers could be positioned. Some housing market commentators argue, however, that Australians are increasingly departing from this reference-point Australian housing career (see, for example, Winter and Stone, 1999). However, more evidence needs to be assembled on the extent to which contemporary Australian housing careers are deviating from the reference housing career and the structure and major causes of such variations from the reference Australian housing career pathway.

The first hypothesis concerning deviations from the reference Australian housing career, which we test in this study, is that Australians are taking longer to undertake key housing career transitions than they previously did. Are young Australians today, leaving the parental home later than Australians from previous generations and are they taking longer to make the transition to home ownership and experiencing delays in paying off their mortgages? A fall in Australian age-specific home ownership rates (Yates, 1999) provides indirect evidence that delays are being experienced in making housing career transitions but we need more direct evidence on the timing of major housing career transitions in the current generation as

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[1] The term 'housing career' has an analogous meaning to that of a 'career' in the labour market where it is used to refer to an individual's profession or vocation or to the moves the individual makes up a job ladder. In the labour market, entry into full-time employment and a movement up through rungs on a job ladder involving better-paid and more challenging work represents an ideal career for many employees. Likewise, in the housing market, an ideal housing career may involve a quick transition from the parental home to outright home ownership and period of trading up in the housing market.

[2] One group excluded from this traditional pathway is, of course, public housing tenants. The public housing sector has never dominated the Australian housing market but it has represented a significant feature of it.

compared with previous generations before we can give a more definitive answer to the question of whether the time taken to make housing career transitions has lengthened. If delays are being experienced in making housing career moves we need to understand *why* these delays are being experienced.

The second hypothesis that we shall test in this study is that Australians are increasingly experiencing an *interrupted* housing career trajectory. Interrupted housing career trajectories occur when unfavourable household formation, housing market and labour market shocks force individuals sharply back down their reference housing career pathway.[3] Labour market events are perhaps the most important of these shocks. Those who lose their jobs, for example, may be unable to sustain mortgage repayments and so make a slide from home ownership back into the private rental market. Separation and divorce are household formation forces, which may act in a similar fashion. If a movement back down housing career pathways is increasingly being experienced by Australians we need to know why that is so.

We are also interested in exploring whether a 'hysteresis' effect is evident for those experiencing downward movements in their housing careers. The term 'hysteresis' is a Greek word meaning 'shortcoming', 'to be late', 'fall short' or 'coming behind' and has been used in physics for over a century and in economics over the last thirty years to refer to the 'history dependence' (the present state is a function of its past history) of physical systems or economic phenomena. In the world of physics, a hysteresis effect is evident (in 'layman's terms') when a force applied to a body is released but the body doesn't spring back completely. In an economics context, the hysteresis effect is applied in the context of models of unemployment — if an adverse demand shock, for example, occurs and forces up unemployment, a hysteresis model suggests that the rate of unemployment will not fall back symmetrically to its previous point when that shock is removed. This is because the experience of high unemployment creates its own negative adverse consequences (e.g., loss of human capital among the unemployed) which partially help steer the time-path of unemployment. In the context of housing careers, events such as divorce and unemployment may create a negative shock to an individual's housing career and the movement down the housing ladder in itself creates negative outcomes such that when the negative shock is 'removed' (e.g., remarriage or reemployment), the individual does not bounce back to where they were prior to the shock.

The third hypothesis, which we shall examine in this study, is that the housing career goals or *aspirations* of Australians have changed in recent times and that this has led to a change in the direction of housing careers themselves. Have Australians become less oriented towards home ownership than before. That might have occurred, for example, if there is a greater desire to be mobile as those constantly on the move would simply not find it economically rational to be a homeowner in most circumstances — the transaction costs in frequently buying and selling property are prohibitive — preferring instead to remain in the private rental market.

Departures from the reference-point housing career as a result of changing preferences stand in contrast to departures arising because Australians are blocked from making key housing preferred transitions as a result of severe housing-related constraints. For example, those who fail to achieve a sustained period of full-time employment following the completion of their education, may be unable to ever break into home ownership because they fail to overcome binding income and deposit constraints; particularly in high-price housing markets. The role played by such constraints in influencing housing career trajectories represent the final point of interest in this study. It also represents perhaps the key point of focus from a policy perspective. If governments can effectively tweak policy settings so as to reduce the impact of such constraints then they will enable more Australians to achieve their housing goals.

To examine these hypotheses and to model effectively the drivers which influence the housing outcomes of Australians, we divide our analyses into three life-cycle stages.

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[3] What we have in mind here is a 'snakes and ladders' model of the housing career. In a 'snakes and ladders' representation of the housing career, individuals experience both 'good' (ladders) and 'bad' (snakes) events and outcomes in their housing careers and do not necessarily follow a simple linear progression.

Young Adulthood (15-34). The first independent housing-career transition that individuals make is to leave the parental home and move into independent living. In the traditional Australian housing career, children live at home with their parents and then, as young adults, leave the parental home and enter the private rental market (or, alternatively, move straight into home ownership). The transition from the parental home to independent living in young adulthood has traditionally been aligned or followed by two key household formation events — marriage and the birth of a first child. Homeownership and marriage are connected (in an economic sense) because the new unit has combined savings and income and so are more likely to be able to meet income and borrowing constraints.

While these housing career transitions no doubt remain dominant for young adults in Australia, significant social, housing, and labour market changes have occurred in recent decades, which can be expected to have had major impacts on the housing career pathways for young Australians.

- First, the mid-1970s saw a break in the previously absolute nexus between marriage and cohabitation (cohabitation increasingly occurred without a preceding registered marriage). The gap between these two states has widened considerably from this point. Moreover, there has been a move to delayed first childbirth and smaller families (see, for example, Weston, Stanton, Qu, and Soriano, 2001).

- Second, there was rising unemployment and a consequent restriction in the income and wealth generating opportunities of many young people. Higher unemployment, in turn, implied an increased role for income support, welfare support, and housing assistance programs. At the same time, labour force participation rates for women rose while for men they fell and there was an increase in the role of part-time employment (see, for example, Australian Bureau of Statistics, 2002).

- Third, high school completion rates and tertiary education participation rates increased significantly, particularly from the late 1980s. This had the effect of delaying the advent of independent income streams for young people.

- Fourth, in the housing market, real house prices in a number of markets (particularly Sydney) rose significantly. This created potential accessibility problems for those totally reliant on low to middle earnings.

Yates (1999) has shown that there has been a reduction in homeownership propensities among young Australians in the past 20 years. Entry into homeownership is being increasingly delayed particularly in the Sydney housing market. Furthermore, Winter and Stone (1999) have shown that the sequencing of key life course events and the transition into home ownership has become disconnected. Among younger Australians it is no longer typical for marriage and birth of a first child to precede the transition into home ownership. These findings are in line with the social and labour market trends outlined above but there is a need for formal modelling of the way in which these various forces affect the housing career pathways of young Australians.

Middle age groups (35 to 49). In the reference point Australian housing career, those aged 35 to 49 are engaged in a process of home ownership consolidation. This involves a reduction in mortgages and/or a process of trading up in the housing market. Higher levels of owner-occupier housing wealth are accumulated.

As in the case of younger Australians, this traditional housing career pathway remains significant in the present day. However, some of the same drivers that caused the housing careers of younger Australians to deviate from the traditional reference point may also have influenced the pathways of those in the 35 to 49 age group. It is likely that additional drivers also come into play in relation to this age group.

Despite lower unemployment rates experienced by those in the 35 to 49 age group (relative to young adults), some in this age group have experienced only sporadic periods of employment (their formative years being spent in periods of high unemployment more than a decade previously). Others, in response to significant economic restructuring, have experienced a loss of employment for the first time but may find it difficult to get back into full-time employment. Increasing numbers also suffer marriage and relationship breakdowns, which place significant

financial, health and emotional stresses on households. These negative shocks may create slides back down housing career pathways for those affected.

The Mature Age Group (50 to 69). The final stage of the housing career we shall focus on in this study involves, what we shall refer to as the 'mature age group', those aged 50 to 69. In this age group, we are again confronted by the possibility of a splintering in the housing career pathways experienced by individuals. Labour market influences again are important. Labour force participation rates for mature-aged males in the labour market fell significantly in the late 1970s and have failed to recover since. In some cases, men are retiring earlier because they can access superannuation, early retirement packages, and significant private savings. In other words, early retirement reflects real wealth effects. In other cases, we are seeing the effects of labour market disruption and the inability of mature age people to meaningfully find work. On top of this, marriage and relationship breakdowns also influence the position of many mature-aged Australian households. This means that while many mature aged Australians are making their last mortgage payments and refining retirement options others experience a sharp reversal in their housing careers.

The main focus of this study is on the role played by the drivers of the housing system in influencing the housing careers of Australians. However, we shall also examine the reverse causal connection. That is, how does the housing system influence labour markets and household formation?

We focus on two important areas. Firstly, in relation to labour markets we shall explore the relationship between housing tenure states and unemployment. There is now an extensive literature, which suggests that both public housing and home ownership may impede the flexibility of the labour market as both housing tenures are associated with significant mobility transaction costs relative to the private rental market. In recent times, this thesis is associated with work of Oswald although its origins can be found in U.K. research in the 1980s and early 1990s (see the AHURI report 'Housing Assistance and Non-shelter Outcomes'). Second, in relation to household formation, we examine the question of how housing market conditions affect the household formation decisions of young adults. Do high home prices and large mortgages influence household formation decisions of the young?

To sum up: The research questions addressed in this research project are as follows:

1. What is the role of household formation aspirations and outcomes; housing market states; labour market outcomes; and, housing assistance, income support, tax, and welfare programs in influencing the housing careers of Australians?

2. Does the impact of fundamental drivers of housing careers change as we move through major life-cycle stages?

3. Are significant numbers of Australians failing to achieve their housing career goals?

4. How do housing assistance, income support, tax, and welfare programs affect housing market outcomes either directly or through their impact on household formation and tenure decisions, housing affordability, and labour market outcomes?

5. How does an understanding of the drivers of the housing system inform the development of Commonwealth and State housing programs and policies?

6. What actions and measures could Commonwealth and State policy makers adopt to ameliorate identified deficiencies in both the housing system and in other relevant markets so that the goals and aspirations of the Australian people in relation to housing are better met?

Our report is structured as follows. In chapter 2 we place our research work in a policy context. Chapter 3 sets out in detail the study's methodology. Chapter 4 details the data to be used in the study.

2 THE POLICY CONTEXT

This project is important from a policy perspective for two main reasons. First, it provides Commonwealth and State policy makers with an understanding of the drivers of housing market and housing career outcomes. In so doing, it aims to improve the information base on which the settings of Australian housing assistance programs are based thereby increasing their potential effectiveness.

Beyond its role in providing vital background information on Australian housing careers for the purposes of improving the setting of housing policy, the present project is also important from a policy perspective because it directly examines the role specific Commonwealth and State housing assistance (and related income support and welfare) policies play in influencing the direction of Australian housing careers. Improving our understanding of the effectiveness of these housing assistance policies in achieving their housing outcome objectives represents an important component of the present project.

2.1 Housing careers and the setting of housing policy

Before Commonwealth and State Governments can develop their housing policy agendas measures they need to first develop a detailed picture of the Australian housing system and the structure of Australian housing careers. This data-gathering task represents a vital stage in the development of good housing policy.

This project represents an important input into this process because it aims to provide robust, quantitative, Australia-wide and policy-relevant information on the Australian housing system and housing careers. It does so by its answers to five key policy relevant questions.

1. What are the key sources of housing need in Australia at various stages of the life cycle and what is the magnitude of these various sources of housing need?

2. In which ways are Australians not achieving their housing career aspirations and what role can policy makers play in helping Australians achieve their housing career aspirations?

3. What effect do current housing assistance, income support and welfare policies have on meeting sources of housing need and/or enabling Australians to meet their housing career aspirations?

4. What impacts do housing assistance, income support and welfare policies, designed to meet housing objectives, have on non-shelter outcomes?

5. What is the best way for policy makers to intervene taking into account both housing and non-shelter objectives.

The general policy relevance of the project is underlined by the fact it examines interactions between housing assistance measures, the income support and welfare support systems, and the labour and housing markets. The study connects to current Welfare Reform objectives that seek to establish better links between income support programs on the one hand and improved labour market and social participation on the other. State and federal housing policy makers cannot rely solely on information from studies that focus on the housing system alone. Rather, they require research findings founded on an integrated model. A whole-of-government policy perspective is required to account for the causal links between the housing system and other markets.

This project will, therefore, aid policy development in general terms by:

- Identifying actions and measures Commonwealth and State policy makers may take and adopt to ameliorate identified deficiencies in both the housing system and in other relevant markets.

- Informing the development of system-wide Commonwealth and State housing policies.

2.2 Specific policy issues

The proposed research will aid policy development in terms of specific policy areas by:

- Assessing the extent to which poor housing career outcomes for different age cohorts emanate from poor labour market outcomes.

  – Policy makers from all areas of government need to focus more than ever on developing policies that are aimed at improving labour market outcomes for individuals. A whole-of-government approach recognises that poor labour market outcomes *spill over* into the housing market and significantly impede housing career transitions. In reducing labour market disadvantage, policy makers go a long way to fixing housing career problems. It is not only the existence of poor labour market outcomes that needs to be considered, but also the increasing uncertainty and volatility of those outcomes.

- Assessing the extent to which poor labour market outcomes for different age cohorts represent, in part, the *unintended* effect of housing assistance programs. If so then, housing assistance programs intended to improve the housing outcomes of those assisted may not do so to the extent thought because they result in adverse labour market outcomes.

  – Evidence needs to be The Commonwealth's rent assistance program and State government public housing allocation mechanisms and rent setting methods need to be examined to determine whether and in what ways they may create poverty trap lock-in effects or impede or contribute to the residential mobility of public housing tenants and private tenants receiving rent assistance and their participation in the labour market.

- Assessing the extent to which housing market conditions and policies impact on the profile of housing careers for different age cohorts.

  – Policy makers need to examine the extent to which housing assistance policies meet identified housing need objectives and housing career aspirations. The benefits and costs of policy measures meeting housing needs and aspirations needs to be considered. Beyond the role of housing assistance measures, policy makers need to consider the extent to which transaction costs (including government-based transaction costs such as the state government stamp duty) impede the residential mobility of unemployed and discouraged job seeker homeowners and lengthen periods of unemployment.

- Examining how low *labour force participation decisions among mature-aged Australians* impact on their housing outcomes. Are housing assistance programs cushioning the impact of poor labour market outcomes? Do housing assistance programs, including the preferential treatment of homeowners and/or tax and social security provisions, encourage non-participation by mature-aged Australians?

- Outlining the manner in which largely *exogenous* factors such as housing and household formation *aspirations* and preferences of different age cohorts, and trends in *education participation* are influencing housing career patterns and the structure of the housing market.

  – Policy makers need to be cognisant of these influences on the housing market but not necessarily intervene to offset the impact of these forces.

To provide more concrete examples of how the project shall inform policy development consider the case of Australians in the mature age phase of the life cycle. There are a number of important policy related issues to examine in relation to the position of Australians in this phase of the life cycle.

Firstly, it will be important from the perspective of the government's welfare reform agenda to explore any incentive effects that arise as a result of housing assistance received by mature age Australians not in the labour force. The obvious candidate for investigation is Commonwealth Rent Assistance (CRA), and its contribution to high effective marginal income tax rates that deter re-entry into the labour force. Less obvious are the contribution of tax expenditures that promote homeownership and the accumulation of wealth that can facilitate

early retirement, and public housing where the non-portable nature of housing assistance may deter mobility with adverse consequences for unemployment.

Investigation of these links requires examination of the residential movement patterns of mature age Australians on withdrawal from the labour force. Is there evidence of residential relocation by mature age homeowners from high house price metropolitan housing markets to lower house price coastal settlements following withdrawal from the labour force? Is there evidence that public housing tenants are less likely to relocate on becoming unemployed as compared to private rental tenants?

A second policy issue is the implications for housing affordability of changes to government cash transfers. Most important here is proposed changes to Disability Support Pension. With nearly one-half of mature age non-participant males receiving Disability Support Pension, changes to eligibility and entitlement rules could have profound impacts on the housing affordability problems of persons affected.

Finally, discrete life course events such as divorce and separation are likely to place strains on the ability of affected persons to maintain their homeownership status. The typical housing career of Australians was thought to be one characterised by permanence of home ownership status once it has been attained (see Kendig op cit). Yet Wood, Watson and Flatau (2003, forthcoming; table A4.1) use the confidentialised unit person records from the ABS 1999 Australian Housing Survey to show that 35% of persons aged 45 and older and currently residing in private rental housing have previously been a homeowner at some stage in their housing careers. Among those aged 65 and over some 50% have been a homeowner at some earlier stage of their housing career. There are then a substantial number of older private renters who have not been able to sustain homeownership as they approach retirement age, and hence enter retirement without owner occupied housing assets as a protection against poverty.[4] As noted previously, a snakes and ladders representation of the housing career as compared to the linear housing career path has become more and more relevant.

The issue we wish to address concerns the link between household dissolution and failure to sustain homeownership into old age. Will the demographic trends that show increasing rates of household dissolution lead to falling rates of homeownership among future cohorts of older Australians? There are considerable budgetary consequences for the Commonwealth Government if this link proves to be important, since it implies an increasing reliance on CRA and income support programmes.

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[4] This is another instance of an increasing disconnectedness between housing careers and key life course events (see Winter and Stone, 1999).

3 METHODOLOGY

In this chapter, we outline the key features of our model of housing careers, apply that model at three life-cycle stages, and then consider the role of feedback effects (the drivers of housing career outcomes are themselves influenced by housing outcomes).

3.1 A model of housing careers

Our thinking on the development of a model of housing careers reflects our understanding of the numerous changes that have occurred in household formation trends in Australia, housing assistance and income support policies and in housing and labour markets during the last decade. These changes are almost certain to continue in the next. This means that it is important to bring together a broad range of forces in an integrated housing system model rather than focussing on the housing market alone.

To illustrate these changes, between 1990 and 2000, the percentage of 25-34 year olds living with their parents rose by 30 per cent, and the median age of first marriage rose by two years for both men and women. In terms of housing tenure trends, Yates has emphasized the importance of recent declines in home ownership rates among certain household categories (e.g., the home ownership rate among 25-44 year old households declined by 5.5 per cent between 1986 and 1996 — see her recent AHURI report *Housing implications of social, spatial and structural change*).

Similarly, significant changes in labour market behaviour have occurred. While the labour force participation of females has risen markedly over the last two decades, the proportion of Australian males aged 55-59 who participate in the labour force has declined by 10 percentage points (82 per cent to 72 per cent) (see, for example, ABS, 2001).

Labour economists have studied this phenomenon, but the housing outcomes of these people have not been examined. Nor has the possible impact of the housing market on the labour force participation rate itself. With the recent relative growth in this age category and forecasted rises in the Australian dependency ratio, concern has grown. Also noteworthy is a rise in the proportion of workers employed part time (less than 35 hours a week) from 20 to 26 percent in just the last decade, and the fact that nearly a quarter of part time workers would like to work more hours. Labour market constraints of this form are ultimately felt in terms of households in the housing markets failing to meet their aspirations. And this is where policy comes in. When labour or housing market constraints drive outcomes, policy needs to be tuned to respond.

To take these various forces into account, we develop a model of the housing market that goes beyond the confines of the housing market itself and takes into account interactions between the housing and labour markets and incorporates an important role for household formation mechanisms.

Our generalised housing careers model contains five key sectors. The first relates to household formation decisions. The second to the demand and supply of housing and housing tenure decisions, the third sector relates to the labour market and provides inter-connections between the housing market and the labour market, the fourth takes into account housing assistance, income support and welfare policies, while the fifth accounts for wealth accumulation objectives.

Household formation. We begin with the household formation decisions taken by individuals. These decisions determine the number and structure of households in the population that will be demanding housing and what form of housing they will demand. Key household formation decisions include:

- The decision to stay in or leave the parental home and so begin an independent housing career. (Young people do not always remain in independent living. Many return home. A return home represents a deviation from the traditional linear Australian housing career pathway and is indicative of an interrupted housing career path.)

- The decision to cohabit with a partner (or to leave a partner) and to have children. (Relationship dissolution is a fundamental component of our analysis. Evidence from various sources suggests that relationship dissolution is a fundamental determinant of deviations from the linear housing career path in middle and mature life-cycle stages).

Behind housing formation decisions lie demographic determinants, educational outcomes (particularly important in the process of leaving the parental home) economic and other constraints, and social, economic and housing aspirations. We will begin by compiling the data in the HILDA survey (see chapter 4 below) on changing tastes and aspirations regarding partnering, marriage and having children. We will then estimate equations explaining the leaving home process, the probability of cohabitation with a partner and marriage and having children. We will employ the compiled data on tastes and aspirations as determinants along with other socio-economic variables (including housing and labour market effects) to model key housing formation outcomes and decisions.

The demand and supply of housing. As individuals form themselves into households, households are, in turn, deciding whether to own or rent housing. Households are determining whether to invest in the private residential accommodation market. The first set of decisions relate to the demand side of the housing market while the latter relate to the supply side of the housing market.

Our model of the demand and supply of housing is 'driven', in the first instance, by two fundamental economic forces.

- The first describes the economic costs (or user costs) of a landlord. The user costs of the landlord include the opportunity cost of capital and tax deductible business expenses, the capital gain component of an investor's return, and the present value of capital gains taxes, transaction costs, and building write-off allowances. We would also argue that agency costs incurred by landlords (e.g., tenant screening costs, property inspection and rent collection costs) play an important but often neglected role in the determination of the landlord's user costs.

- The second describes the maximum rent a housing 'consumer' is prepared to pay a landlord before choosing to purchase housing. Households will choose to rent if the maximum amount they are prepared to pay a landlord is greater than or equal to the market rental rate determined from the economic costs that are incurred by landlords. The maximum amount households will offer a landlord will be determined by their user cost of capital as home owners (the bid rental rate). If their user cost of capital exceeds the market rental rate it is cheaper to rent rather than purchase their optimal housing consumption. The ratio of the bid rental rate to the market rental rate is the relative price variable in our tenure choice model. We place emphasis on the wealth and income constraints that limit households from deciding to own a home rather than buy.

These forces place emphasis on the importance of economic determinants in the housing tenure choice decision. However, household formation decisions directly influence the underlying preferences of housing consumers and indirectly feed into key parameters. Likewise, labour market outcomes affect significantly the income and wealth constraints that play a crucial part in the demand side of the housing component of the model.

Labour markets. Individuals are not only making household formation and housing tenure decisions, they are also deciding whether or not to participate in the labour market. Those deciding to participate may not find work (the unemployed), be hours constrained (in the sense that they work fewer hours than they wish) or not match to a job suitable given their skill base and location. In such circumstances, incomes fall below levels that the individual aspires to. This in turn feeds into borrowing constraints and liquidity impacts, which influence housing tenure choices and the extent of housing services demanded. We shall model the probability that an individual becomes unemployed (influenced by a range of socio-demographic determinants, and the relative price of employment to non-employment) and the duration of that spell of unemployment. The income consequences of these labour market states will be analysed and linked to the housing component of the integrated model.

<u>Housing assistance, income support, and welfare programs</u>. Housing assistance programs directly affect the demand side of the housing market by influencing the relative prices of various housing options. An example of this is the rent assistance program, which reduces the price of rental accommodation. The first home owners grant allows many households to overcome the down payment constraint which deters entry into homeownership. However, an integrated model will allow for deeper channels through which housing assistance programs may influence the housing market. Housing assistance programs together with income support programs, for example, shape household formation decisions and impact on labour supply decisions made by individuals and households. Feedbacks into the housing market can then be expected to eventuate.

<u>Wealth and consumption objectives</u>. Individuals are forward-looking. Decisions individuals make in the present are influenced by the path they want to follow in the future. If individuals wish to maintain relatively high consumption levels in retirement, for example, or provide bequests to their children they must accumulate wealth during their lifetime. They cannot simply consume all their current income as their consumption in periods of much lower income flows will be drastically cut. Many Australians, no doubt, have preference structures that mean that they do not just live for the here and now. When one considers the tax and social security advantages that accrue to owner-occupied wealth, it is no wonder that many households consider wealth accumulated in their home is an effective way to prepare for their retirement, low income points, and to build up bequests for future generations.

The role of wealth accumulation in housing careers begins in the first stages of the housing career. Remaining in the parental home can act as an effective mechanism for the young to raise both housing and non-housing consumption levels above the levels that their income would allow them to achieve. It may also allow them to build up wealth and so more easily meet down payment constraints when purchasing their first home.

<u>Interactions.</u> The interaction between housing demand and the existing stock of housing determines relevant outcomes in the housing market while the supply of labour and the demand for it determines employment and real wage outcomes in the labour market. There are substantial feedbacks from the housing market to the labour market and vice versa. Income support programs, housing assistance programs and tax measures all impact on the labour market/housing market interface. These forces will be given prominence in the integrated model. We wish to know, for example, whether State stamp duties raise the cost of unemployed home owners moving to new locations to take up employment opportunities and hence lengthen the duration of unemployment or whether the Commonwealth's rent assistance program provides sufficient incentive for unemployed private renters to make employment-related moves.

Finally, our model of housing careers takes into account <u>hysteresis effects</u> which occur when negative shocks that force individuals down housing career ladders have long-lasting effects so that individuals do not return to their original housing career position once the shock is reversed. We take up this theme when considering the position of those in the middle and mature phases of the life cycle.

3.2 The housing careers of younger Australians

Our modelling framework considers two key decisions of young adults. The first is the decision on whether or not to stay or leave the parental home. The second decision relates to the first tenure choice and household formation choices made by the individual having left the parental home.

Figure 3.1 describes the various choices of young individuals that we will analyse. The first choice is whether to leave the parental home and, if so, whether to live alone, with a partner (including one's child), or in a group. The housing careers of young adults begin when an independent decision is made by the individual to continue to stay in the parental home or to leave the parental home. And each of these new households has to select a housing tenure: owning, renting privately or renting public housing. Three other choices are shown in the figure. "Stayers" can pay rent while at home and owners must select a leverage ratio. Finally, those out of the parental home can return.

The decision to remain in or leave the parental home represents the first major housing career choice of young people. We treat for the time being the decision to leave the parental home as a separate housing career decision at this stage disconnected from future housing tenure choices concerning the moves into home ownership and the like. We shall return, however, to the theme of connectedness between the decision to leave the parental home and the decision to move into home ownership to the following subsection. Chapter 5 provides some early findings from out project on the process of leaving the parental home.

Each of our five prime determinants of housing careers influences the decision to leave the parental home (see Jones, 1995; and Heath, 1999 for general reviews of the literature on the transition from the parental home).

The two key household formation drivers influencing the decision on whether or not to leave the parental home are the preference to live independently and the desire to cohabit in a separate dwelling with a partner. Quite clearly those who wish to cohabit with a partner (live in a separate dwelling with a partner) are much more likely to leave the parental home than others. It is important here, however, to distinguish between trends in formal marriage arrangements and trends in cohabitation. Australian social mores, influenced strongly by religious belief and practice, traditionally dictated that formal marriage was the passport to cohabitation. In other words, the decision to live with a partner required, as a pre-condition, formal marriage. However, preliminary analyses by the authors of the HILDA data suggest that the nexus between legal marriage and cohabitation weakened considerably from the late 1960s in Australia. An increasing gap between legal marriage and cohabitation with a partner is evident and it is preferences in terms of first cohabitation that are critical to the examination of the leaving home decision.

There are important housing-related influences on the decision to leave the family home. The price of living outside the parental home relative to the price of living in the parental home (generally a rent-free arrangement) is one important housing-related factor. If the relative price of living outside the parental home rises then the individual is more likely to stay at home all other things being equal. Here the individual wishes to remain in the parental home because it represents a cheaper housing option than independent living. Housing assistance, income support, and welfare programs affect the relative (inclusive of subsidy) price facing the young adult in their decision to stay in or leave the parental home.

Labour market opportunities and constraints play a large part in the decision to exit the parental home. Obtaining stable employment can act as an important catalyst to parental home exit. The inability to find work may, on the other hand, constrain the individual to staying at home longer than otherwise or may force a return to the parental home.

Finally among our five determinants there is an important role for wealth accumulation in early housing career moves. In the economics literature, there has been a shift in the emphasis of theoretical models of tenure choice. Instead of permanent income and the relative prices of ownership and renting driving the decision, the work of Jones (1995) and others emphasise wealth, gifts/inheritances and the real asset price of housing as the relevant variables. The dominance of wealth over other variables in the tenure choice decision implies that policies to expand home ownership should concentrate on relaxing deposit (down payment) constraints rather than payment to income requirements.

Young adults commonly live rent free (or at below market rents) when residing with their parents.[5] Living at home rent free can be interpreted as part of a gift or inheritance that eases transition to home ownership (the accumulation of wealth) and transition through a period of full time study (the accumulation of human capital). The hypothesis that will be tested is: *Those young adults with strong preferences to own a home located in housing markets with high real rents, delay transition to independent living.*

The analysis is of policy significance if the wealth and incomes of parents are a factor determining the availability of rent-free accommodation to offspring. Living rent-free and the

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[5] According to the ABS Survey of Income and Housing Costs 21.4 % of young adult income units < 35 years lived rent-free in 1996-'97.

timing of departures from the parental home could be a potentially important mechanism for the inter-generational transmission of wealth.

Beyond our five fundamental determinants of housing career transitions, there are a number of specific forces influencing the decision of whether or not to remain in the parental home. Education has a strong influence on the timing of housing career moves for young adults. As more and more young people are staying on to complete high school and undertake tertiary education so they are more likely to stay at home longer. Of course, tertiary students may leave home for study-related reasons. In some cases, the decision to leave the parental home is not a permanent one but reflects short-term accommodation decisions.

Another specific determinant of the young adult's housing career transitions is the parental home environment. The environment in the parental home is a potentially crucial factor in affecting the decision of an individual to stay in the parental home or to leave it. Instability, stress, parental-child conflict, and parental death or dissolution within the home are more likely to result in young people leaving the parental home earlier than expected (Goldscheider and Goldscheider, 1989; Mitchell, Wister, and Burch, 1989; and Kiernan, 1992). Poor quality housing and overcrowding within the parental home (large number of siblings in a small house) can also be determinants.

The level and type of resources provided by parents to their children is also a potentially important influence on the decision to leave the family home (Ermisch and Di Salvo, 1997; and Holdsworth, 2000). Transferable resources (such as untied cash payments) are resources that young people may utilise outside the parental home. The higher the level of transferable resources, the more likely is it that the individual decides to leave the family home. Non-transferable resources, on the other hand are tied to the parental home. These resources come in a variety of forms such as in-kind support such as washing, cooking and cleaning, family support and care together with rent-free accommodation. The higher the level of non-transferable resources, the greater is the chance of exit from the parental home.

The parental home may act as a refuge when an individual experiences labour market, health or personal difficulties in the outside world. The decision is not to leave the parental home but to return to it (see Mitchell, Wister and Gee, 2000). As with the labour market, where individuals may churn between spells of unemployment and jobs, individuals may churn between the parental home and independent living.

The project will also explore how economies of scope may be contributing to a fall in homeownership rates among younger Australians. The increasing (decreasing) incidence of single person (couple) income units has been well documented. Housing has certain 'fixed' attributes such as kitchen, bathroom and toilet that are required in a housing unit whether it be occupied by a single person income unit or a couple. The economies of scope are the lower effective price paid by the couple for a house with such fixed attributes. There is also a source of economies of scale related to family size. Larger families are more expensive to move, and are hence less mobile. Since they are less mobile they have a longer expected period of residence over which to amortise transaction costs. The economic costs of owner occupancy with respect to any given housing unit are then typically lower the larger is family size. The increasing numbers of sole person income units, who must pay higher effective prices, is then one factor that could be explaining the fall in homeownership rates among the young.[6]

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[6] To clarify the notion of an economy of scope the reader should note that two individuals would find it cheaper to satisfy their individual demand for housing services by jointly renting or purchasing a property, than they would if they each purchased or rented a separate property. These economies of scope also play a role in the formation of group households made up of unrelated individuals.
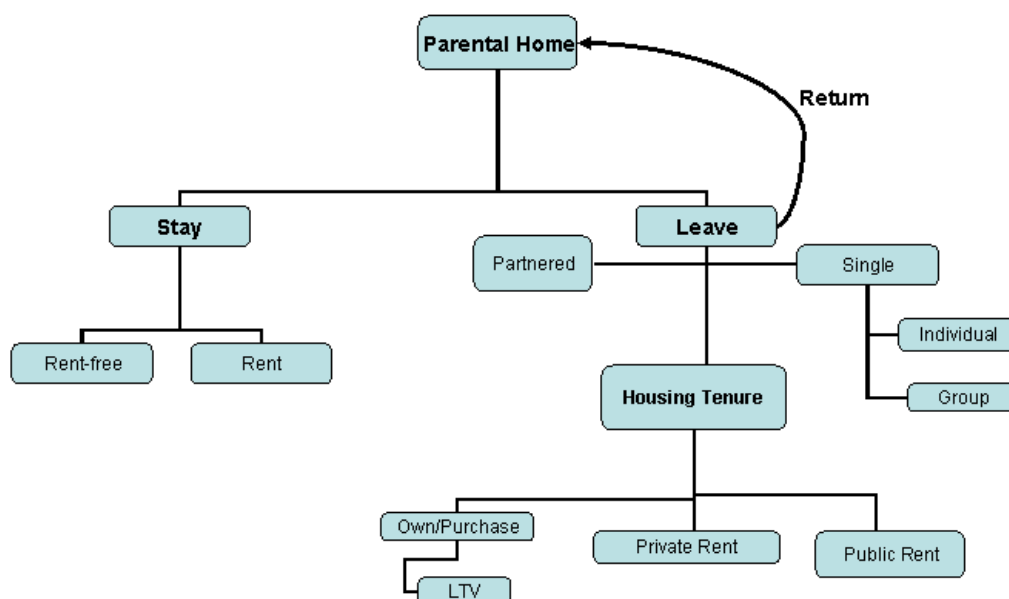
Household Formation and Housing Tenures

Figure 3.1 The Household Formation and Housing Tenure Choice Decisions of Young Adults

3.3 The housing careers of middle aged and mature Australians

In Figure 3.2 we concentrate on the factors that are thought to shape the housing decisions and outcomes of middle and mature age Australians (35 – 69 years of age). In this stage of the life cycle, discrete events such as separation, divorce, death of a partner, permanent disability and withdrawal from the labour force occur with increasing frequency as a person ages, and there are potentially profound impacts on housing careers.

Labour force participation rates have been consistently lower in this age band than among younger age groups.[7] These rates have been falling for males in this age band. For males aged 45 – 54 the labour force participation rate has fallen from 95.9% in 1970, to 86.5% in 1997. Among the 55-59 years and 60 – 64 years age bands the falls have been even more precipitous. The male 55 – 59 year old group's participation rate has fallen (between 1970 and 1997) by 19.3 percentage points from 91.2% to 71.9%, while over the same time period there has been a fall of 32 percentage points for males in the 60-64 years age group (from 77.4% to 44.7%).

The reasons for not being in the labour force are unclear. The ABS Survey of Income and Housing Costs elicits reasons and classifies according to whether the person is permanently unable to work, engaged in unpaid voluntary work, studying full-time or unclassified other reasons. These other reasons are by far and away the most prominent ranging from 85% of male respondents aged 45-49 years, to 95% of respondents aged between 60-64 years.

It might be thought that such figures imply voluntary early retirement on generous occupational pensions. But the main source of income for males not in the labour force is government cash transfers, with 76% of males aged 45-49 citing this as their main source, the proportion falling to 67% among 60-64 year olds. The most frequently received government cash transfer by males in these age bands is disability support pension. Among males aged 45 – 64 that are not in the labour force 48.6% are receiving disability support pension.

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[7] The information in this and the following paragraphs is based on unpublished work by Rachel Ong of Murdoch University.

The housing outcomes of this group have received little attention. We will document the economic wellbeing of income units containing mature age males not in the labour force. We will use the labour market history information in HILDA to trace the careers of these males before interruption to their careers, and withdrawal from the labour force. The housing circumstances of income units containing mature age males not in the labour force will be contrasted with a control group comprising income units containing mature age males who are participants in the labour market. This comparison allows us to gauge whether the incidence of housing affordability and housing stress problems (e.g., the ability to sustain homeownership) suffer following withdrawal from the labour force in the middle years of a career.

A similar comparison will be drawn with respect to the discrete life cycle events of separation, divorce and death of a partner. Table 3.1 shows that the 1.6% of all persons aged 45-54 have been widowed. This increases to 5.1% of persons aged 55-64. For persons aged between 65 and 74 years 14.3% have been widowed. Persons aged less that 65 years are more likely to have been divorced or separated in the past with 13.0% of persons aged 45 – 54 having either divorced or separated, and 11.1% of persons aged 55-64 have experienced the breakdown of a relationship.

These descriptive statistics are important because they show that large numbers of persons have suffered household dissolution, which can be accompanied by a sharp fall in income and wealth.[8] As successive waves of HILDA are released it will be possible to chart declines in income and wealth following these life cycle events, and link them to developments in mature age housing careers. It will also be possible to chart the mature age housing careers of income units that have not experienced these discrete events, and this cohort can be employed as a control group to measure differences in housing outcome that are attributable to death of a partner, separations and divorce.

Table 3.1 Discrete Life Cycle Events among Mature Age Australians.

	% of Persons	
Age Band	*Widowed*	*Divorced or Separated*
35-44 years	0.3	10.9
45-54 years	1.6	13.0
55–64 years	5.1	11.1
65-74 years	14.3	7.7
Source: HILDA (2003).		

The first release of HILDA permits a more limited exercise. The history component of the survey can be used to date these life cycle events, and current income, wealth and housing circumstances can be linked to chart the deterioration and possible recovery of economic wellbeing at different points in time subsequent to the event. A control group of persons and income units can also be constructed and cross section comparisons of the housing circumstances of the two groups can be drawn.

3.4 Feedback effects: How housing effects labour markets

There has been considerable discussion of the consequences of labour market developments for housing outcomes. But the interrelationships can be in the reverse direction as figure 3 illustrates.

As pointed out above, housing assistance programmes can blunt the incentive to work and consequently increase rates of unemployment. The hypothesis that higher rates of home ownership cause unemployment has received a considerable amount of attention in recent years (Oswald, 1996, 1997; Pehkonen, 1997; Partridge and Rickman 1997; Nickell and Layard 1999; Green and Hendershott 2001, 2002; Coulson and Fisher, 2002; Flatau et al. 2002).

Homeownership is thought to increase unemployment because the costs of buying and selling residential property is higher, and this may make home owners less willing to accept job transfers or job opportunities that necessitate residential relocation (see figure 3). There is a

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[8] Using the population weights in HILDA we find that just over 134,000 mature age Australians in the 45 – 64 age bracket have experienced death of a partner, and 545,349 have experienced divorce or separation.

second potential causal mechanism. Home owners may have a propensity to elect local government councils that enforce restrictive planning and land development laws that stifle business start ups and business expansion, thus increasing unemployment. Our project has thoroughly investigated these hypotheses and our method and findings are reported in chapter 2 of this positioning paper.

Older homeowners (> 65 years of age) confront a complex decision when considering alternative housing arrangements, and the alternatives are diverse. The older homeowner can choose to release part of their housing equity by trading-down, or liquidating it completely by becoming a renter. Homeowners with physical impairments may choose to modify their current housing design or choose some sort of dependent living arrangement. Wealthy elderly homeowners can choose to trade-up and increase housing equity.

There is overseas evidence to suggest that demographic factors, rather than financial factors, are much more important determinants of elderly homeowner choices (see Vander Hart, 1994). Demographic factors such as health, the death of a partner and being or becoming retired tend to precipitate housing changes. Such findings shed some light on Wood, Watson and Flatau's (forthcoming, 2003) evidence that many older Australian homeowners would be financially better off if they became renters.

There is potential policy significance to these findings, as they appear to imply that older homeowners will make substantial financial sacrifices to remain in their own home. These financial sacrifices could be the cause of housing stress. Indeed recent work by Ong (2003b) shows that 5.6% of elderly outright homeowners are in after-housing cost poverty and 12.7% of elderly homeowners with a mortgage are in after-housing cost poverty.[9] These rates of after-housing cost poverty exceed that among public renters (at 4.7%).

A key research question is whether the demographic factors that precipitate changes in housing choices are also the cause of challenges that policy should address (Vander Hart, 1994, p221). The history component of HILDA will be employed to measure the significance of key demographic factors previous research has indicated as important. The control group type exercises described earlier will aid diagnosis of the factors driving housing outcomes among the elderly.

FIGURE 3.2

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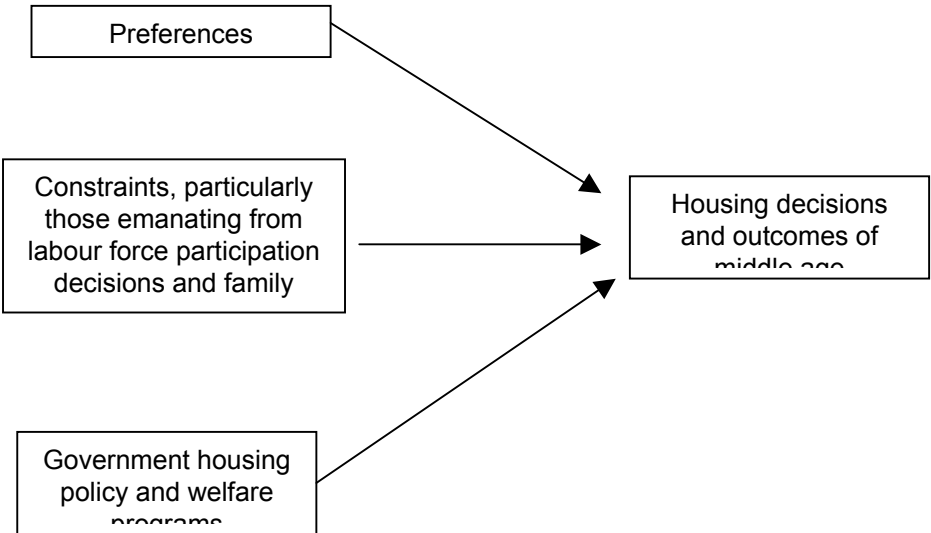
[9] Though only 5% of homeowners aged over 64 years had a mortgage in 1996-'97, there are reasons to believe that this share will increase in the future (see Ong, 2003b, p4).

FIGURE 3.3

Differential transaction costs (across housing tenures) → Residential mobility

Public housing allocation methods → Residential mobility

Residential mobility → Labour market outcomes

Public housing rent setting formula, Commonwealth rent assistance (CRA) and other direct and indirect incentives → Work incentives → Labour market outcomes
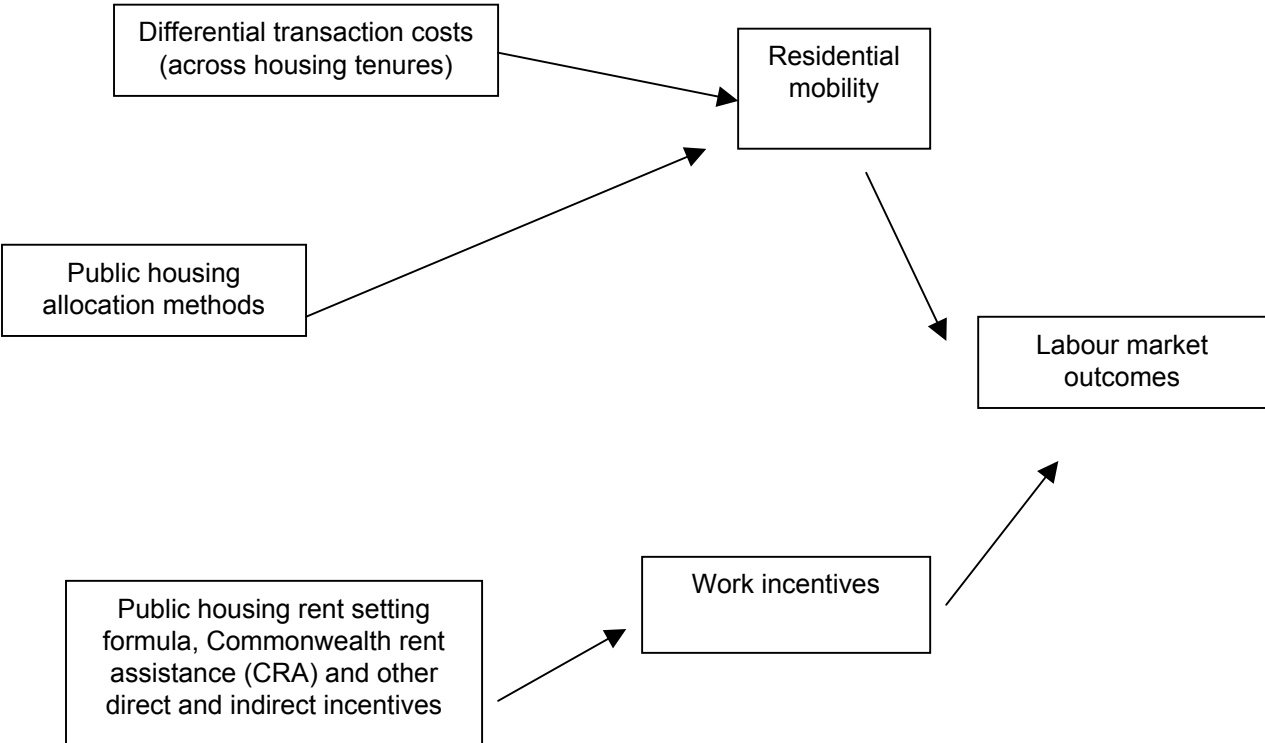
4 THE DATA

4.1 Introduction

In this chapter, we briefly outline the data sets that will be used in this project. The key database, which we shall utilise, is the Household Income and Labour Dynamics in Australia (HILDA) survey and we shall focus primarily on this dataset in this chapter. In addition to the HILDA database this study shall also utilise the well-known Australian Bureau of Statistics' *Survey of Income and Housing Costs* (SIHC) Confidentialised Unit Record Files.

HILDA represents arguably the most comprehensive longitudinal survey of the Australian population relevant to social, housing, labour market, and mobility modelling. It contains a wealth of variables that will be utilised in this study. These include:

- People's aspirations and values;
- Housing circumstances;
- Family, education, and labour market histories;
- Personal and socio-demographic information;
- Household formation;
- Mobility;
- Labour market circumstances; and
- Income sources.

At the time of writing only the first wave of the HILDA survey is available.[10] Future wave releases will add to the already rich data set contained in HILDA.

Comprehensive cross-sectional surveys such as the Australian Housing Survey (AHS) conducted by the Australian Bureau of Statistics have collected historical information on housing outcomes in Australia. However, these surveys have been limited in terms of the extent of historical information that they provide users with. For example, the AHS provides limited information on housing histories but does not provide accompanying information that links these housing histories to causal factors such as income and labour market outcomes. In addition, the accuracy of retrospectively collected historical information depends on the memory of those surveyed. HILDA addresses these shortcomings because it tracks the same individuals over time, collecting contemporaneous housing, financial and labour market information as it does so. As a result, it will now be possible to examine continuous housing histories and to undertake much needed analysis of the factors that drive these housing outcomes.

4.2 The HILDA Survey

The reference population for Wave 1 of the HILDA survey is all adult members of private dwellings in Australia with a small number of excluded groups.[11] Dwellings that were not primary places of residence, for example holiday homes, were also excluded. While the rules used to determine the survey population are consistent with those employed by the ABS in setting the survey population for the Monthly Population Survey (MPS) there are two key differences:

- Individuals residing in boarding schools, halls of residence and university colleges are included in the reference population; and
- Military personnel residing in private dwellings are included.

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[10] A 'wave' is a single release of data based on one survey round.

[11] Those excluded from the survey are diplomatic representatives of overseas governments, overseas residents in Australia for less than one year, members of overseas defence forces stationed in Australia and people living in remote and sparsely populated areas.

The sample population of Wave 1 were selected from 488 census collection districts (CDs) throughout Australia. Within each CD a sub-sample of between 22 and 34 dwellings was then identified and individuals within these dwellings surveyed. Allowing for dwellings that did not fall within the reference population, 11,449 dwellings containing 11,693 households were surveyed.[12] Allowing for refusals by potential respondents, Wave 1 contains the results of interviews with all eligible members of 6872 households and interviews with at least one eligible member for a further 810 households. Household level survey information is recorded in one of two HILDA datasets (Melbourne Institute of Applied Economic and Social Research, 2002).

The HILDA dataset contains person specific survey results for 13,158 eligible individuals who completed both person level components of the survey.[13] Table 4.1 provides a comparison of the sample characteristics of the HILDA survey population with the MPS population used by the ABS. In most respects, the HILDA sample accurately captures the characteristics of the wider population derived from the ABS population. However, there are some important differences. First, Sydney residents are underrepresented in the HILDA sample. Second, women are over-represented. Third, married persons are over-represented. Fourth, immigrants from non-English speaking backgrounds are under-represented (Melbourne Institute of Applied Economic and Social Research, 2002).[14]

Longitudinal datasets such as HILDA attempt to track all persons who were initially surveyed on a regular basis, updating the changes to their circumstances. In fact, HILDA is more ambitious in terms of the scope of persons interviewed in future waves. The survey will be expanded to include the children of participating households who have turned 15 since the previous interview, adults in participating households who were not interviewed in the previous wave, and new adults who enter into a household as the result of family formation and changing household composition (Melbourne Institute of Applied Economic and Social Research, 2002, p.27). For example, a person who becomes a boarder in a household that participated in the first wave of the survey will be interviewed in the second wave. This will provide an increasingly detailed picture of evolving housing and labour market outcomes for the Australian population, which takes at least some changes in the composition of the Australian population into account.[15]

Table 4.1 Selected Wave 1 Individual Sample Characteristics & ABS Population Compared (%)

Characteristic	ABS[a]	HILDA[b]
Area of Usual Residence		
4.2.1 *Sydney*	21.5	17.3
Rest of NSW	12.2	13.7
Melbourne	18.4	18.0
Rest of Victoria	6.7	7.7
Brisbane	8.6	8.3

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[12] A 'household' is defined on the basis of a housekeeping concept. As such it consists of a group of people living together and having common arrangements for food and other essential of living. It is then possible for a dwelling to have more than one household if provision for food and other essentials is separate between individuals or groups within the dwelling (ABS, 1997).

[13] Respondents to the HILDA survey are interviewed to complete the person questionnaire (PQ) component of the survey and also complete a self-completion questionnaire (SCQ).

[14] The over representation of women is a characteristic of voluntary surveys and the over-representation of married persons is attributed to the exclusion of persons living in institutions in the HILDA sample and the difficulties involved in contacting lone persons (MIAESR, 2002, p.12).

[15] Changes to the composition of the Australian population resulting from immigration will not be accurately captured by the sample updating methods.

Table 4.1 Selected Wave 1 Individual Sample Characteristics & ABS Population Compared (%)

Characteristic		ABS[a]	HILDA[b]
	Rest of QLD	10.0	10.6
	Adelaide	5.8	6.2
	Rest of SA	2.0	3.1
	Perth	7.3	7.2
	Rest of WA	2.5	2.7
	Tasmania	2.4	2.9
	Northern Territory	0.9	0.5
	ACT	1.6	1.7
Sex			
	Male	49.3	47.4
	Female	50.7	52.6
Age (years) at 30 June 2001			
	15-19	8.8	8.9
	20-24	8.9	7.3
	25-34	18.7	18.7
	35-44	19.0	21.5
	45-54	17.1	17.2
	55-64	11.8	11.9
	65 or over	15.6	14.4
Marital status			
	Married (Including de facto)	58.7	63.3
	Not married	41.3	36.7
Birthplace			
	Born in Australia	72.4	74.5
	Born overseas		
	Main English-speaking country	10.2	10.9
	Other country	17.5	14.5
Indigenous status			
	Indigenous	1.7	1.8
	Non-indigenous	98.3	98.2
Labour force status			
	Employed		
	Full-time	42.1	41.5
	Part-time	17.4	19.5
	Unemployed	4.3	4.4
	Not in the labour force	36.3	34.6
Employment status in main job			
	Employee	86.0	86.5
	Employer	3.6	4.1

Table 4.1 Selected Wave 1 Individual Sample Characteristics & ABS Population Compared (%)

Characteristic	ABS[a]	HILDA[b]
Own account worker	10.0	8.6
Contributing family member	0.4	0.8

a.   The ABS estimates come from the Monthly Population Survey for October 2001 (or August 2001 in the case of indigenous status and employment status). With the exception of the country of birth, the population that these estimates apply to is all civilians aged 15 years and over. The figures for country of birth exclude people living in an institution.

b.   The HILDA estimates are for people aged 15 years and over, but include defence force personnel and exclude people living in remote areas of Australia and those in special dwellings.

c.   In contrast to the usual ABS definition, full-time work is defined solely on the basis of usual hours worked (rather than a combination of usual hours and actual hours worked).

d.   This table is reproduced from the HILDA Survey Annual Report 2002 (Melbourne Institute of Applied Economic and Social Research, 2002).

4.3 The advantages of longitudinal data sets

Myers (1999) discusses the difficulties inherent in using cross-section data to investigate peoples' housing careers. While historical changes reflecting past housing outcomes are well understood, Myers notes that such changes are often the product of generational changes, that is, housing career paths for the most recent generation may by different to those of preceding generations. At the same time, changes in the housing stock and key price variables can also lock a particular generation into a housing career path that is different from those followed by earlier generations. When cross-section data is used to generate a picture of housing career paths, such as that provided by the ABS using the 1994 and 1999 Australian Housing Surveys (ABS, 2001) it is implicitly assumed that households will follow the stages observed in a single cross-section. This need not be the case. Take home ownership as an example. If we observe that a high proportion of persons aged 50-55 years are outright owners does it then follow that this is the path that people aged between 20 and 25 years will take? Home ownership is a status that is attained over long periods of time. Whether a large proportion of the current cohort of 20 to 25 year olds will be outright owners in 30 years time will reflect their current housing preferences, the current housing stock and relevant prices today. There is little reason to believe that these will be the same as those faced by today's 50 to 55 year olds thirty years ago.

Longitudinal data also has advantages over cross section data because the latter can be severely biased due to changes in earning capacity over time and deaths among respondents. A longitudinal data set allows the researcher to plot the correct cohort age-wealth and income profiles. This is not to say that longitudinal data sets are themselves the perfect statistical source for modelling housing outcomes. As noted above, the chains of causation that determine housing outcomes span many years so that many waves of a longitudinal survey are necessary to answer some questions a researcher may have about housing careers. Longitudinal surveys track the same individuals through time so that the sample becomes less representative of the population over time. HILDA addresses this issue by expanding the scope of included individuals each wave by surveying both the children of households who have turned 15 since the last wave and new entrants into participating households.

The HILDA survey covers an exceptionally broad range of topics. As a result, the available housing related information is limited when compared to what can be found in a survey such as the Australian Housing Survey. The information provided about housing outcomes is, however, comparable to that which can be found in the Survey of Income and Housing Costs (SIHC). Given that information such as labour market experience, family history and circumstances, and health outcomes reported in the HILDA survey are far richer than in the SIHC, the benefits to be gained from using the survey exceed what is lost due to the limited housing information.

The household level data file of the HILDA survey contains the following information on housing outcomes:

- The type of dwelling, number of bedrooms, and the dwellings condition;

- The ownership of the dwelling and the type of landlord if the dwelling is rented;

- Monthly rents and information on the presence and identity of any boarders in the dwelling.

- Whether the household are first home buyers, the value of the residence, whether a loan (either institutional or non-institutional) was used to purchase the property and the amount owing and monthly repayment on such loans. Further information is provided as to whether the household is on schedule with its loan repayments.

- The amount owing on loans secured against the dwelling for purpose other than purchase and the amount of repayments on these loans.

- Where the household is in a rent-free tenure the provider of the housing is identified and an estimated rental equivalent is reported.

A limited amount of housing related information is also provided in the person level data file of the HILDA survey. This includes:

- The age at which a respondent ceased living with their parents. This provides insights into the timing of household formation decisions.

- Information on mobility including the date that the person began living at their current address, the number of residences the person has had in the previous 10 years and if the person moved in the previous twelve months, then the reason for this move is reported.

- Information on whether the person is likely to move in the next twelve months.

- A series of questions on aspects of the neighbourhood in which the respondent resides that contribute to the amenity value of their housing.

- A series of questions about the adequacy of the persons housing circumstances.

The strength of HILDA is the capacity it provides to precisely capture changing circumstances of respondents and to identify the causal factors that led to a change in circumstances.

4.4 Longitudinal studies of housing outcomes: A brief review

A limited amount of research has been published that uses longitudinal data to examine the relationships between housing outcomes and causal factors such as labour market experience. Vanderhart (1994) uses pooled cross sectional data from the Panel Study of Income Dynamics to examine the factors that determine the housing decisions of older homeowners. The empirical model is based on a theoretical life cycle consumption model that has been modified to include homeownership. The choice facing an elderly homeowner in this model is to maximise their welfare by trading off owner occupied housing against the consumption of other goods and services. Such a choice recognises that many elderly persons have significant wealth tied up in the family home. Releasing this wealth to fund other consumption may play an important role in their housing decisions. [16] The use of multi-nomial logit techniques allows Vanderhart to examine how financial and demographic factors impact on the choices of homeowners who can increase their housing equity, decrease it by moving to a smaller home, eliminate housing equity altogether by becoming renters, or stay in their existing home. The results of the statistical analysis suggest that demographic variables such as the death of a spouse or the onset of disability are more important than financial factors in terms of the housing decisions of the elderly. This suggests that while policies such as reverse mortgages may benefit elderly homeowners they will not have any significant impact on the propensity of the elderly to remain in the family home. Policies that address non-financial barriers to remaining in the home may be more important in this respect.

Using the panel data, Jones (1995) estimates a transition equation using tenure status in 1983 and 1986, with the focus on saving in the intervening period as the relevant variable. His model is predicated on the assumption that households exhibit a fundamental preference for home

[16] This is the rationale for reverse annuity mortgage policies that allow homeowners to access the equity in the family home.

ownership. Ultimately, the probability that a household becomes a homeowner depends on its current liquid (or at least, readily liquefiable) wealth. The timing of any transition into homeownership then depends on the deposit requirements mortgage lenders and the ability of the household to meet these requirements. The transition model is tested using a discrete choice logit model. Net worth is obtained by estimating wealth functions on relevant predetermined and exogenous variables available in the data set. Since the author is interested in the 'initial' choice of homeownership, the sample is restricted to households with heads less than 35. This minimizes the impact of past tenure decisions on current net wealth.

Haurin, Hendershott and Wachter (1996) employ the National Longitudinal Survey of Youth (NLSY) to examine the wealth accumulation of American youth and relate it to their housing choices. They find that relationship formation between young adults is an important factor in the type and timing of housing choices. Since the wealth of two singles (typically sole person households) is combined, there is a significant increase (more than doubling) of mean wealth in the year of marriage. Given the importance of wealth constraints, it is not surprising to observe that two years before marriage the homeownership rate is 0.08, and the rate for those youth married two years is 0.48. The increase is from 0.11 in the year prior to marriage to 0.35 in the marriage year. They also find that wealth is an important leading indicator of the move into home ownership. Again, the advantages of a longitudinal data set when analyzing dynamic issues of housing choice are underlined by these findings. The ability to observe the pattern of wealth accumulation and the associated timing of housing decisions is difficult to reproduce with a cross-section data set.

Haurin, Hendershott and Wachter's 1996 paper takes a descriptive approach to their data. In an unpublished paper (2001) the authors undertake an econometric analysis of the same data set. They argue that while the tax advantages of home ownership increase the desire of middle and high income renters to become home owners, a disincentive is the distortion of consumption decisions in order to meet the deposit requirements. Employing their findings from the 1996 paper the authors note that wealth available to meet the deposit requirement is closely intertwined with the household formation decision, and with decisions made in respect of working hours, and saving from earned income. Whereas Jones (1995) has argued that having a deposit is the major determinant of homeownership, the position advocated by Haurin, Hendershott and Wachter is that the desire to become a homeowner drives the wealth accumulation decision. The authors adopt a two-step regression model to analyse the panel data. In the first stage they estimate a probability of home ownership both in the current year and three years into the future for every year of the panel. In the second step, they estimate a real wealth equation that relates wealth accumulation to the estimated probabilities of home ownership from the first stage and real house prices. Clearly, this methodology exploits the panel data aspects of the NLYS and would not be feasible with a cross-section data set. The results reported support the author's position outlined above. A falling probability of homeownership is associated with a decline in real wealth accumulation.

Ermisch and Di Savlo (1997) used the British National Child Development Study to investigate the household formation decisions of Britons born in 1958. The construction of their empirical model is based on the observation that when a child or young adult resides in the parental home, the characteristics of both the child and the parents will have a bearing on the timing and nature of household formation decisions made by the child. Parents care about the welfare of their children. From this perspective, providing support in the form of costless, or at least highly subsidised housing, is one way of guaranteeing the current welfare of children.[17] Parents choose their own housing, consumption and transfers to their children so as to maximise their own welfare. Children then take parental support received when living in the family home and when living outside the family home as given. Taking into account their own income and cost of housing the child then choose whether to remain in the family home or to

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[17] This form of intergenerational support can also increase the child's welfare in the future if it means that the child can more rapidly save a deposit and become an owner-occupier at an earlier date than might have otherwise been the case.

move out. [18] This is not to suggest that the child's own preferences for living in the family home relative to living outside the family home do not matter. They capture these individual idiosyncrasies by specifying an underlying probability (the hazard function) of leaving the family home that is itself age dependent. The longitudinal data with which they work allows them to specify a hazard model and to capture the age dependent preferences of individuals. As the authors note, previous cross-sectional studies have been restricted in their capacity to capture the role of changing preferences in the household formation decision.

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[18] Parents, can of course, manipulate the decisions of their children by varying the level of support they provide when the child remains at home relative to the support they are willing to provide if the child leaves the family home.

5 THE NEXT STAGES OF RESEARCH

The purpose of this chapter is to flesh out how the HILDA and other datasets will be utilised in this project to develop a comprehensive picture of the housing careers of Australians from their first housing career moves to their last. We focus on three themes, the early housing career moves of young Australians,

5.1 The first housing career moves

The Household Income and Labour Dynamics (HILDA) dataset provides a unique opportunity to examine the housing formation decisions and trajectories of Australians. As a panel dataset, the key benefit of the HILDA dataset arrives with the arrival of future waves of the data, as these will enable the tracking of individuals over time. Nevertheless, the first wave of the data, treated as a cross-section, provides an impressive snapshot of the housing formation decisions of both young and older Australians (given the utilisation of recall questions). The HILDA database contains information on a 6872 fully-responding private dwelling households and 13159 fully responding persons (aged 15 or over) in these households. The size of the HILDA dataset is five times that of the Australian datasets listed in the previous section. It also has the advantage of not being restricted to a particular age or gender category. It, therefore, affords the researcher the ability to follow the family formation and housing career trajectories of all current Australian birth cohorts.

Our key point of interest in examining the first housing career moves of Australians is in determining the age at which a respondent first left the parental home and the pattern of independent and non-independent living among respondents (defined here as not living in the parental home). A personal household relationships grid is provided in the HILDA dataset from which it is possible to establish whether an individual in the household is a child, step-child or foster child of another resident in the dwelling. We shall use this information to designate persons as a child of a parent in resident in the household (or not as the case may be).

The second crucial piece of information on household formation that we shall use is a question in the Person Questionnaire (PQ) of the HILDA survey (administered by a trained interviewer) relating to the age when the respondent first left the parental home. This is the means by which we shall determine when a person leaves the parental home. Hence, age when first left the parental home is measured by using a self-identified indicator rather than on the basis of tracking information. The precise wording of the question (B5; PQ) is:

How old were you when you first moved out of home as a young person (or are you still living at home with your [parents/guardians])?

The first part of the question is clear enough as to its intention. However, the second part of the question (if put by the interviewer) opens up a number of potential interpretations. It is possible that the question was misconstrued by some respondents as referring simply to whether they are residing in the same dwelling as their parents. Respondents who have left the parental home but have now returned may, on this interpretation, answer that they had not yet left the parental home. A matching of responses from the personal relationships grid and this question of age first left the parental home reveals the presence of returnees (defined as individuals who are currently residing in the parental home but who left the parental home some time in the past) so that clearly these respondents recognised the emphasis on the question was related to the age at which the respondent first left the parental home. However, we do not know whether or not any problem of interpretation occurred and if so how large the problem was.

The second interesting feature of the data is that some respondents are recorded as never left the parental home even when they reside in a dwelling that does not contain their parents. This outcome could have occurred because the person believed that they were only temporarily outside the parental home and had not 'left' the home in the sense of making a break from it. Alternatively, they were still living in the parental home but their parents had died or had left the home and they were residing in the parental home by themselves or with others (including with other relatives such as grandparents) or with their own-formed family. Whatever the reason, we shall accept this response as given and treat this group as not having left the parental home in the analysis of age since leaving the parental home. We shall, however,

separately identify these individuals when we consider other housing formation issues and refer to this group as identifying to the parental home but having left it.

One final issue in the interpretation of data flowing from the question is that the question refers to moving out of home as a young person. Those that moved much later in life may not recognise the question as being relevant to them. Interviewing prompting should, however, overcome this difficulty in the main. The question on age first left the parental home is asked of all respondents to the HILDA survey. Importantly, that means that we can assess the issue of leaving the parental home across all currently living generations in Australia. We propose to divide up respondents into five-year age intervals beginning with those aged 15 to 19 through to those aged 75 to 79. An open-ended category of those aged 80 and over is also used defined. This means that we have 14 cohorts corresponding to different periods in which a decision to leave the parental home is being made. These cohorts are specified in Table 1 below.

Current Age	Birth Cohort	Birth Cohort in their Early 20s
15-19	Mid-1980s	Early 2000s
20-24	Early-1980s	Late 1990s
25-29	Mid-1970s	Early 1990s
30-34	Early-1970s	Late 1980s
35-39	Mid-1960s	Early 1980s
40-44	Early-1960s	Late 1970s
45-49	Mid-1950s	Early 1970s
50-54	Early-1950s	Late 1960s
55-59	Mid-1940s	Early 1960s
60-64	Early-1940s	Late 1950s
65-69	Mid-1930s	Early 1950s
70-74	Early-1930s	Late 1940s
75-79	Mid-1920s	Early 1940s
80 +	Pre-1920s	Late 1930s

The vast majority of those located in the middle age and older generations have, of course left the parental home prior to the interview date. That means we face very few difficulties in plotting the age-related profile of the leaving the parental home trajectory for these cohorts (the survival curves). In the language of time analysis, there exist few problems of 'right-censoring' (i.e., at the interview date the respondent has yet to leave the parental home and so we don't know when or even if they will ever leave). While right-censored spells (the spell is defined as the time since birth the person remained in the parental home) are not an issue for the older age cohorts there is one potential selection bias problem that occurs for older age cohorts. Namely, as a cohort ages over time more people are lost from it due to death. This is a sample selection problem when the age at which those who leave the parental home is correlated with age of death. (In effect this 'survivor' bias is there for all age groups but one suspects it is a greater potential problem for older age groups.) Individuals are also increasingly 'lost' over a certain age category because they may not easily complete a long survey. This may create a sample selection bias problem, but this bias cannot be reduced using the HILDA data.

For younger generations, the problem of right censoring looms larger as an issue. The 15 to 19 age cohort in particular and to a lesser extent the 20 to 24 age cohort is affected by right censoring problems. Consider the 18 year old who still resides with their parents. Their spell is right censored in the sense that their time spent in the parental home has not come to an end. We cannot answer precisely the question: How long will the person aged 18 who has not yet left the parental home stay there for? We shall study the leaving the parental home process for the current generation of young adults in some detail in the project.

One of the unique properties of the HILDA dataset is that we have some information on the parental background and early life of the respondent. This information allows us to assess the role of a variety of causal factors that have influenced the leaving home decision in Australia over a number of generations. For all persons, we know, the country of birth of both the individual and their parents, the number of siblings the individual had, the early schooling

background of the person, the age the individual left full-time education, whether the parents of the person were separated prior to age 15, whether the father and/or mother were present in the household at the age of 14, the occupational background of both the mother and the father and whether the father had been unemployed. This list of early-life determinants allow us to consider a range of causal factors such as family structure, family dissolution, culture background, socio-economic status and income (via occupation) in affecting the exit process from the parental home.

One natural limit to a cohort-based analysis of leaving the parental home is that most of the data in the HILDA is contemporaneous data. Contemporaneous information is, of course, crucial when considering the position of younger generations making their early housing formation decisions (and is particularly relevant when future waves of HILDA arrive) but cannot be used when considering the position of older generations. Hence, we shall incorporate more of this contemporaneous data in the modelling of the parental home leaving process of those in the current generation of 15-24 year olds.

The detailed analyses to be undertaken in respect to the parental home leaving process include the following components:

- Our first piece of analysis sets the leaving the parental home in the context of other key life cycle events experienced by Australians over the generations (effectively from the 1930s in terms of the HILDA data). We shall compare the median ages of leaving the parental home with the median age of first leaving full-time education, the median age of first cohabitation with a partner, and the median age of the first time legal marriage. In each case, the median age will be derived from survival analyses of each life cycle event.

- We then move on to model the process of exit from the parental home (the 'hazard') for all those aged 20. The hazard function in this case gives the probability that an individual leaves the parental home at a particular age conditional on being in the parental home prior to that point. We shall utilise Cox's proportional hazards model.

- We shall then model, in detail, using contemporaneous information, the determinants of the leaving the parental home process of those *currently* aged 15-24.

The decision to leave the parental home is the first housing career move made by young Australians. Having completed a study of this process, the project will move to an examination of the household formation and housing tenure patterns of those individuals in young adulthood and in the middle age categories.

Preliminary examination of the HILDA dataset indicates that school students in the 15-19 age category remain largely in the parental home (see Tables 5.1 and 5.2). The majority of those aged 15 to 19 year who are no longer still at school, also continue to reside in the parental home but the proportion falls as we move from full-time tertiary students to part-time tertiary students. Among the latter we also pick up evidence of the parental home boomerang effect with 7.9 per cent of part-time tertiary students having left the parental home at some point in the past and then returned so that at the time of the HILDA survey they were residing in the parental home. This figure only represents a point-in-time estimate of the boomerang phenomenon; the proportion of respondents who had returned to the parental home at some point during their history is a potentially much larger number (particularly as we move into older age categories).

When we consider the position of non-students in the 15-19 age category, we find a lower proportion of those currently unemployed, and those marginally attached to the labour force in the never left the parental home category, but a higher proportion in the return to the parental home category. This suggests that those who are less successful in the labour market (ex post) actually leave home earlier than others but that the parental home acts as a refuge magnet for this group. The vast majority of full-time employed persons aged 15-19 remain in the parental home and have never left it (65 per cent). When they do leave the parental home they are likely to be either in a group house or a partnering formation rather than on their own. They will also typically reside in the private rental market. (both in the private rental market). The same is also true of tertiary students who had left the parental home.

Table 5.1 Household Formation Positions by Age by Study and Labour Force Status, Per Cent, HILDA Wave 1, Aged 15 to 24

	Studying		Not Studying						
	Student at School	Tertiary Full-time Student	Tertiary Part-time Student	Employed Full-time	Employed Part-time	Unemployed	NILF - Marginally Attached	NILF - Not Marginally Attached	Total
				Household Formation					
Aged 15 to 19									
Living at Home with Parents - Never Left	96.2	74.9	69.8	65.0	77.9	57.1	43.3	53.3	84.0
Living at Home with Parents - Returnees	0.6	2.9	7.9	4.9	2.6	10.7	13.3	6.7	2.7
Not Living at Home with Parents - Person Identifies to Parental Home	0.6	0.6	1.6	3.9	0.0	5.4	0.0	13.3	1.3
Single Person Household	0.3	5.1	3.2	3.9	3.9	3.6	6.7	6.7	2.1
Group Household - Unrelated Persons	0.2	5.7	4.8	8.7	3.9	5.4	0.0	0.0	2.5
Family Household - Partners & Sole Parents	2.1	10.9	12.7	13.6	11.7	17.9	36.7	20.0	7.4
	100.0	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Aged 20 to 24									
Living at Home with Parents - Never Left	100.0	39.4	38.5	27.7	35.3	28.4	15.3	29.3	32.2
Living at Home with Parents - Returnees	0.0	6.6	6.4	6.5	8.6	11.9	6.8	14.6	7.4
Not Living at Home with Parents - Person Identifies to Parental Home	0.0	1.2	0.9	0.0	0.0	1.5	0.0	0.0	0.5
Single Person Household	0.0	10.0	10.1	12.2	11.2	10.4	1.7	2.4	10.2
Group Household - Unrelated Persons	0.0	13.3	11.0	13.2	7.8	11.9	3.4	0.0	11.1
Family Household - Partners & Sole Parents	0.0	29.5	33.0	40.4	37.1	35.8	72.9	53.7	38.6
	100.0	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*

Table 5.2 Housing Tenure Positions by Age by Study and Labour Force Status, Per Cent, HILDA Wave 1, Aged 15 to 24 (Cont'd)

	Studying		Not Studying						
	Student at School	Tertiary Full-time Student	Tertiary Part-time Student	Employed Full-time	Employed Part-time	Unemployed	NILF - Marginally Attached	NILF - Not Marginally Attached	Total
				Housing Tenure Position					
Aged 15 to 19									
Living at Home with Parents	96.8	77.7	77.8	69.9	80.5	67.9	56.7	60.0	86.7
Outright Owner	0.9	0.6	3.2	1.0	2.6	1.8	3.3	6.7	1.3
Owner with a Mortgage	0.8	2.3	3.2	1.0	0.0	1.8	3.3	0.0	1.2
Private Renter	1.1	17.1	14.3	22.3	13.0	25.0	26.7	20.0	8.8
Public Renter	0.2	0.6	0.0	2.9	1.3	3.6	6.7	6.7	0.9
Other Rent Payer	0.3	0.6	1.6	1.9	1.3	0.0	3.3	6.7	0.8
Rent-free	0.0	1.1	0.0	1.0	1.3	0.0	0.0	0.0	0.3
	100.0	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Aged 20 to 24									
Living at Home with Parents	100.0	46.1	45.0	34.2	44.0	40.3	22.0	43.9	39.6
Outright Owner	0.0	5.4	1.8	3.6	3.4	4.5	0.0	9.8	3.9
Owner with a Mortgage	0.0	3.3	9.2	13.5	11.2	6.0	5.1	14.6	9.4
Private Renter	0.0	41.5	33.9	45.3	34.5	40.3	50.8	24.4	41.0
Public Renter	0.0	0.8	2.8	0.8	3.4	6.0	6.8	4.9	2.2
Other Rent Payer	0.0	1.2	2.8	1.0	1.7	0.0	5.1	2.4	1.6
Rent-free	0.0	1.7	4.6	1.6	1.7	3.0	10.2	0.0	2.4
	100.0	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*

As we move from the 15-19 age category into the 20-24 age category, the proportion of those still in the home falls dramatically. It still remains somewhat higher for tertiary students and part-time employees than full-time employees and the unemployed. What also begins to take on greater importance (and is clearly linked to the leaving of the parental home) is the role of partnering. While around 7.5 per cent of 15-19 year old respondents are either with a partner or are a sole parent, among the 20-24 age group that proportion rises to 38.6 per cent and by the early 30s close to 80 per cent are in the household formation category.

In the project, we shall model the housing tenure moves of both those in the young adulthood and middle age groups focussing on the five fundamental drivers of housing careers namely, (a) Housing tenure preferences and housing market trends (house prices, rents etc.); Household formation aspirations and outcomes; (c) Labour market effects (wages, employment, unemployment, and retirement); (d) Lifetime wealth accumulation objectives, and, (e) Housing assistance, income support, tax, and welfare programs.

5.2 Housing careers among middle age and mature age Australians

As indicated in the introduction, the 'reference' Australian housing career has been characterised by young, single adults departing the family home for private renting, typically in inner city locations. With marriage and child bearing the couple household enter homeownership in the outer suburbs. The household trades-up as the family unit grows, and remains in home ownership until old age forces them into serviced accommodation. This picture of the typical housing career featuring a ladder whose rungs are systematically climbed by the aspiring household, is being redefined given rising divorce rates, falling marriage and fertility rates and the proliferation of diverse household forms. Sociologists see these changes as the product of uncertainty in the risk society and individualisation, where the latter is linked to the breakdown of more traditional forms of social group including the nuclear family.

For the housing careers of mature age Australians there are three particularly important drivers of housing outcomes:

Globalisation. The more open Australian economy features corporate downsizing in response to more strident international competition and technological change. Jobs are less permanent, self-employment is more common and mobility and flexibility is becoming an increasingly important demand on workers. These developments are not conducive to acceptance of the long-term financial responsibilities accompanying mortgages.

Deregulation of labour and housing finance markets. Labour market deregulation has accentuated the impacts of globalisation by permitting more flexible wage outcomes that increase the volatility of earnings. Deregulation of housing finance circuits has arguably increased the amplitude of house price cycles; 'boom and bust' cycles expose highly leveraged home purchasers to the risks of negative equity, and increase uncertainty for prospective home purchasers.

Increasing rates of household dissolution. Divorce and separation are increasingly common phenomena among the young and middle aged. The housing market consequences of household dissolution are typically severe due in part to economies of scale that reduce the economic cost of housing for families.

These three drivers have fundamentally changed the nature of Australian housing careers. The linear path or ladder thought typical featured clearly identified connections between key life cycle events and housing transitions. The uncertainties/risks introduced by the three drivers above make a 'snakes and ladders' path a more accurate representation of the contemporary housing career. In the snakes and ladder model, Australians can unexpectedly fall off housing career paths because of unexpected shocks such as redundancy, ill health, household dissolution and so forth. Furthermore, it may prove difficult to restore the housing status achieved prior to the shock event, even when it has been reversed. Two mechanisms are thought to be important:

Borrowing capacity. The Australian who unexpectedly 'falls out' of homeownership, will suffer progressive erosion in borrowing capacity if house price increases outpace earnings and 'voluntary' savings fall short of the 'forced' savings a person may accumulate on paying off mortgages. The ladder back into homeownership has an 'increasing number of rungs to climb',

and these housing consumers can become discouraged ex-homeowners who are permanently locked into renting.

Homelessness. Australian who 'fall off' the ladder altogether are left with no housing career whatsoever and without a permanent address, are confronted by barriers that can impede the resumption of housing careers (and labour market career paths). If the effects of these impediments are cumulative then resumption of housing careers becomes increasingly difficult the longer is the interruption to housing careers.

Our study will first present a snapshot of the housing tenure circumstances of those in 35 to 64 age categories at the time of the HILDA Wave 1 survey.

Table 5.3 The Tenure Distribution of Mature-Age Australians

	Age Band			
	35-44	*45-54*	*55-64*	*Total*
Owner-Occupiers				
Owners	18.3	39.9	61.6	36.2
Purchasers	44.9	34.5	13.4	33.6
Rental Tenants				
Private	24.2	13.5	10.9	17.3
Caravan Park	0.3	0.3	0.1	0.3
Public	4.6	4.8	7.8	5.5
Community	0.7	0.2	0.8	0.6
Employer	0.5	0.5	0.3	0.5
Complex/Village	0.2	0.1	0.1	0.1
Other	0.3	0.1	0	0.2
Rent-Free	6	6.2	5	5.8
N	2081	1663	1227	4971

Table 5.3 provides a preliminary overview from HILDA of the housing tenure distribution of mature-age income units across Australia. Owner-occupation is the dominant form of tenure with the share of income units who are purchasers declining as the income unit head becomes older. Owner-occupation also becomes more common as the income unit head becomes older. For income unit heads aged between 35 and 44 years of age owner-occupation represents 63.2% of all tenures. For income unit heads aged 55 to 64 years owner-occupation represents 75% of all tenures. The transition toward owner-occupation is also evident in the proportion of income units who are private rental tenants. This rate falls from 24.2% for income unit heads aged 35-44 to 10.9% for income unit heads aged 55-64 years. The significant proportion of income units who remain private rental tenants suggests that a caveat must be applied to any picture of the housing career that emphasises the goal of owner-occupation. While for many Australians their housing career is directed toward owner-occupation 25% of income units are not in this tenure by the time they reach the last decade of their working life. The extent to which this outcome is the result of personal choice or the consequence of unanticipated shocks such as long-term unemployment of household dissolution is a key issue investigated in the study.

Following a review of housing tenure patterns, we shall examine the motivations for income units who have moved in the past 12 months or who are likely to move in the following year. Respondents to the HILDA survey who have moved in the previous twelve months are asked to give the main reason for this move. We group the reasons for moves into the following categories:

1. Labour market reasons.

2. Changing housing consumption including a set of reasons that capture amenity value issues.

3. Household dissolution and formation (including the breakdown of a relationship).

4. Other reasons such as poor health, recently moved to Australia and personal/family reasons (The number of income units citing these reasons is too small to allow a more disaggregated analysis).

Respondents to the HILDA survey are also asked whether they intend to move in the next year. It is possible to base an analysis of the reasons for an intended move using the information relating to satisfaction with both housing and the neighbourhood reported in the survey.

The third and fourth components of our examination of the housing careers of those in the mature age categories shall focus on the impact of labour market outcomes and household dissolution events on housing careers. Part of this process shall involve the examination of the sub-sample of recent and intending movers who have experienced these events.

(a) The impact of labour market events can be analysed using HILDA by linking the employment history contained in the survey to the change in housing circumstances. This can be further linked not only to the financial and income information contained in the survey but also to the information on the occurrence of stressful financial events (such as the inability to pay rent or mortgage on time) reported in the survey.

(b) The impact of household dissolution. The HILDA data can be used to link household dissolution events to housing moves in the last 12 months (around 90 households moved in the 12 months prior to the survey due to such an event).

We shall test for evidence of hysteresis effects. This involves comparing current housing status with that of cohort members who have not undergone a similar household dissolution event.

The fifth and final component of our study of the mature age category will examine those income units whose housing careers have stalled. This group includes income units who have not followed the normal trajectory into owner-occupation that characterises the mainstream housing career.

(a) Long Term Public Tenants.

(b) Long Term Private Tenants.

The labour market information contained in HILDA provides three ways in which to look at the influence of labour market outcomes on housing outcomes. These are:

• Comparisons of housing outcomes based on labour market experience over a persons potential working life (the time since that person left school).

• Comparisons of housing outcomes based on the length of time in their current labour force status.

• Comparisons of housing outcomes based on a detailed 12 month calendar of labour market experience.

Table 5.4 provides preliminary evidence from HILDA of the important role of employment histories in housing careers. There is a clear relationship apparent between labour market experience and housing outcomes evident from these results. Where income unit heads have spent more than 75% of their potential working lives in paid employment they are far more likely to be owner-occupiers than those who have spent 25% or less of their working life in paid employment. For the full sample of mature age income units the gap between homeownership

rates for these two groups is 30.6%. For younger income unit heads aged 35-44 years this gap is 41.8% suggesting that early entry into homeownership is in part a function of the stability and continuity of employment.

Table 5.4 Homeownership Rates by Age Band and Proportion of Working Life in Paid Employment

Proportion of Working Life in Paid Employment		35-44	45-54	55-64	Total
	<25%	27.50%	55.40%	57.40%	44.10%
		109	56	91	256
	25%-50%	41.70%	59.60%	65.20%	54.10%
		132	114	92	338
	50%-75%	52.80%	65.10%	67.40%	60.50%
		284	212	175	671
	>75%	69.30%	78.00%	79.30%	74.70%
		1555	1281	1227	3705
	Total	63.10%	74.30%	74.90%	69.80%
		2080	1663	1227	4970

Note – Working life is calculated as the time elapsed since the respondent first left full time education.

5.3 How Housing Impacts on the Labour Market

In this section, we turn our attention from an examination of the drivers of housing outcomes to the impact that housing outcomes themselves have on the labour market. The housing to labour market link was first examined in the UK in relation to the impact that council housing has on unemployment (Engleman, 1977; Hughes and McCormick, 1981, 1985, 1987 and McCormick, 1983).[19] More recently, Andrew Oswald (1996, 1997) has argued forcefully, based upon analysis of time series and cross-section data for OECD countries and regions within selected OECD countries, that home ownership causes unemployment. He concludes that if the rate of home ownership rises by five percentage points, unemployment will rise by one percentage point, an effect so large that it would place home ownership at the centre of explanations for the rise in the natural rate of unemployment since the 1960s in OECD countries. Oswald (1996, p.2) suggests '[M]ass unemployment exists because of a secular change that has happened in all but a few Western housing markets – the rise of home ownership and the decline of private renting'.

Two straight-forward rationales have been offered for the Oswald result. First, home owners face higher selling and buying costs compared to renters when they consider a move to a new location to accept a job offer. As a result, home owners may be more likely to become unemployed (may be less willing to accept job transfers to or job opportunities in distant locations) and may remain unemployed longer, given their greater reluctance to search in distant locations. Second, home owners may, through their voting power in local government,

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[19] The issue of labour mobility and the housing market is further addressed in Bover, Muellbauer and Murphy (1989), Cameron and Muellbauer (1998), Coulson, and Fisher (2002), Henley (1998), Partridge and Rickman (1997), and Wadsworth (1988). Housing market impacts are also cited, but not fully developed, in the Australian literature on inter-state unemployment differentials and labour mobility (see, for example, Debelle and Vickery (1999).

enforce restrictive planning and land development laws depressing employment options and thus increasing unemployment.

Oswald's claim about the size and direction of the relationship between unemployment and home ownership has attracted attention of both housing and labour economists. A number of studies have mimicked Oswald's aggregate regional analysis, analysing data from different regions and adding additional covariates. Nickell and Layard (1999) add covariates in an analysis of the original OECD country data. Green and Hendershott (2001) and Partridge and Rickman (1997) both analyse US state data, adjusting for age composition and other factors, while Pehkonen (1997) examines Finnish data. All of these studies find confirmation of Oswald's result, with the magnitude of response ranging from a one to two percentage point increase in the unemployment rate for a ten percentage point increase in the home ownership rate.

Two studies have tested the Oswald thesis using US micro datasets. Coulson and Fisher (2002) find that home owners have significantly lower probabilities of being unemployed and typically earn significantly higher wages than renters. They also find that home ownership exerts a significant negative influence upon the length of the spell. Green and Hendershott (2002) examined the duration of unemployment of roughly 2500 Americans who became unemployed during the 1985-92 period. In a two-component analysis, they first estimate a probit explaining home ownership and then relate the duration of unemployment to predicted home ownership. Rather than Oswald's predicted positive relationship, they, too, find a negative relationship.

In the present study we shall test the Oswald thesis for Australia. We shall examine the Oswald thesis using both individual-level data and locality-level data. The individual-level analysis utilises the Australian Bureau of Statistics (ABS) *Survey of Income and Housing Costs* (SIHC) Confidentialised Unit Record Files (CURFs) for the years 1994-95 to 1997-98. The SIHC micro datasets are based on a sample of individual respondents and are particularly strong both on the labour market position of the respondents and their housing status.

The regional-level data is based on Census-based information on housing tenure, labour force status, and other relevant socio-demographic variables for localities at different levels of aggregation for the 1986 to 2001 Censuses. Our regional dataset has three important attributes. First, the dataset is structured so that Oswald's thesis can be tested at various levels of geographical aggregation. Three spatial units of analysis are used in this paper: (1) the Collection District (CD), the most disaggregated spatial unit available in the Census geographical structure, (2) the Local Government Area (LGA), the basic government-level unit in Australia, and (3) the Statistical Local Area (SLA) unit. The use of a variety of regional categories allows us to determine the robustness of any conclusions drawn from testing Oswald's thesis. Second, we include important controls (such as the age composition of the region and the educational qualification profile of the region) that micro-based research on unemployment emphasises as being important to explaining unemployment differentials between individuals (see, Le and Miller, 2000). Third, a detailed housing tenure type classification is allowed for.

Four tests will be employed in the present study to deduce the impact of homeownership, public housing and leverage on unemployment. First, we estimate a model explaining the probability of being unemployed using (actual or predicted) homeownership as a determinant (the choice between the two options being made on a prior test for exogeneity of homeownership). Second we estimate a hazard equation explaining the factors influencing duration of a spell of unemployment. We also estimate a probit explaining the probability of being unemployed for longer than one year.

The first two tests are in keeping with the Oswald thesis, which focuses on the relationship between the aggregate housing tenure type 'homeownership' and unemployment. Our final two tests move away from this broad specification. We consider, in turn, the role of leverage in influencing the incidence and duration of unemployment of homeowners and the impact each housing tenure position has (outright owners, mortgages, public renters, and private/Other tenure (rent-frees) on unemployment outcomes.

In the regional based analysis, the focus will be on establishing whether there exists a relationship between housing tenure and labour market outcomes for regions controlling for confounding influences such as the educational and age profile of the locality.

6 CONCLUSION

There is currently a great deal of interest in Australia in housing issues and, in particular, in whether there has been a shift away from the 'traditional' Australian housing career involving relatively rapid movement from the parental home, through private rental accommodation and into homeownership. The popular conception appears to be that high house prices in large urban tracts (but particularly in the larger capital cities) together with greater economic uncertainty have created an environment in which more and more people are finding it harder to achieve movements up the housing career ladder and maintain and consolidate their position once an upward move has been made.

In this study we seek to test the conjecture that there has been a shift in the profile of Australian housing careers. We also seek to assess the nature of that shift (if it exists) and determine what drives housing outcomes at different stages of the life cycle.

To address the first issue—that of the nature of possible shifts in housing careers—we shall consider three possible scenarios: (1) Increasing *delays* in making housing career transitions are being experienced by Australians (e.g., by those moving from the parental home to the private rental market and then into home ownership); (2) More and more Australians are experiencing *interrupted* housing careers (what we have referred to in this positioning paper as evidence of a 'snakes and ladders' model of the housing market); (3) The housing career *aspirations* of Australians have changed perhaps in line with changes in housing formation aspirations?

In terms of the drivers of housing career outcomes we shall study five key forces: Housing tenure preferences and housing market trends (house prices, rents etc.); household formation aspirations and outcomes; labour market effects (wages, employment, unemployment, and retirement); lifetime wealth accumulation objectives, and, housing assistance, income support, tax, and welfare programs. The impact of these drivers will be assessed concurrently via the use of econometric models so that the relative importance of each of them can be evaluated. These drivers are likely to have different impacts depending on the life cycle stage being considered. Hence, our emphasis on estimating models at each life cycle stage.

By analysing the structure of Australian housing careers and evaluating the drivers which influence these careers, this project hopes to add to the Australian housing knowledge base so necessary for the development of good policy. We also hope to shed further light on the impact of specific housing assistance measures (as one of five identified crucial drivers of housing system outcomes) on Australian housing careers.

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