



Moving, downsizing and housing equity consumption choices of older Australians

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Acronyms and abbreviations used in this report

ABS	Australian Bureau of Statistics
ACLD	Australian Census Longitudinal Dataset
ACOSS	Australian Council of Social Services
ACT	Australian Capital Territory
AP	Age Pension
AHURI	Australian Housing and Urban Research Institute Limited
ATO	Australian Taxation Office
HILDA	Household, Income and Labour Dynamics in Australia
LCH	Life-cycle hypothesis
LGA	Local government area
MEW	Mortgage equity withdrawal
NILF	Not in the labour force
SIH	Survey of Income and Housing
UK	United Kingdom
US	United States

Glossary

A list of definitions for terms commonly used by AHURI is available on the AHURI website www.ahuri.edu.au/research/glossary.

Executive summary

Key points

The Australian population is ageing, and this presents both challenges and opportunities for Australian policy-makers. The key challenge is that there are likely to be increasing fiscal demands from an older demographic for services such as long-term care and programs such as the Age Pension (AP). On the other hand, there are opportunities to meet this challenge. The opportunities are made available via the high rates of home ownership and related high levels of housing wealth of older Australians. This accumulated wealth provides governments and individuals with the means to maintain appropriate levels of consumption throughout retirement, thus minimising reliance on government support. By implementing appropriate policy development, governments can assist older Australians to make geographic mobility and downsizing decisions that ensure they are housed appropriately, according to their needs and circumstances, as they age.

This study analyses current geographic mobility and downsizing behaviours among Australians aged over 55. Key findings include the following.

- Few Australians aged over 55 years move homes on an annual basis.
- Geographic mobility declines with age and is higher among renters—varying from 3 per cent per annum among owner-occupiers aged 75 years and over, to around 18 per cent among renters aged 55–64 years.
- An analysis of barriers to geographic mobility identified by a set of older Australians highlights that the majority of individuals report either health or affordability as the primary barrier to moving.
- Downsizing behaviour is generally correlated with specific life events, such as change in partnership status, adult children leaving the parental home, or change in health status.
- Evidence suggests that the AP assets test (but not the AP income test or age eligibility rules) discourages downsizing.
- Among older Australians, both geographic mobility and downsizing are associated with an increase in financial and life satisfaction, but a decrease in housing and neighbourhood satisfaction.
- Negative impacts of moving on wellbeing, as measured by satisfaction, appear to moderate over time, potentially reflecting individuals' adaptation to their new living arrangements.

Like other developed countries, Australia faces economic and fiscal challenges associated with demographic changes posed by an ageing population. Central to this issue is the need to ensure that housing markets function efficiently and facilitate housing choices or adjustments

that meet the needs of older Australians. Such an outcome is critical, not simply for the welfare of older Australians, but to ensure the efficient functioning of the economy more generally.

A key concern in this context is whether—and by what means—older Australians are able to adjust their housing consumption so that it matches their housing and non-housing needs at a critical part of the life cycle. Such changes are commonly referred to as ‘downsizing’. Transitions into retirement and other major life events, such as changes in health and the departure of dependent children from the family home, have important implications for the housing needs and aspirations of older Australians. Moreover, the wealth locked up in housing assets provides an opportunity to meet the non-housing consumption needs of older Australians.

These issues are likely to become more pronounced in Australia in coming years, as individuals and governments face the fiscal challenges associated with an ageing population that requires additional expenditure while the proportion of working individuals shrinks.

The central aim of this report is to describe the nature of downsizing decisions, along with the facilitators, barriers and consequences of those decisions.

Key findings

The research team analysed quantitative data from a variety of sources to address the research questions, including the Survey of Income and Housing (SIH), the Household, Income and Labour Dynamics in Australia (HILDA) Survey, and the Australian Census Longitudinal Dataset (ACLD).

Over the past five decades, owner-occupation has been the dominant form of housing tenure for Australians. Housing careers (i.e. the movement of a household into different tenures across the life-cycle) often involved a transition from the parental home around the time an individual partnered or completed their full-time education. Typically, a spell of rental tenure was followed by the purchase of a home, and this provided an opportunity to accumulate wealth, in the form of housing equity, over the course of the individual’s working life. Until the early 2000s, upon entering retirement individuals were generally mortgage free, and owner-occupied housing represented an important source of welfare during retirement. This pattern was particularly important in light of the limited availability of superannuation for older generations and the relatively low rate at which the AP was paid.

Analysis of the SIH highlights important developments that younger generations have experienced in terms of their housing careers. Although we do not observe significant differences across cohorts in rates of home ownership, there is evidence that fewer individuals in more recent birth cohorts are outright home owners relative to their older counterparts. Hence, many elderly individuals now enter their retirement years while holding significant mortgage debt. Given the maturation of the superannuation system and the rules embedded in the current AP system, this has potential implications for older Australians, who will face a number of decisions upon retirement. Households that have not paid off their home could, for example, choose to transfer assets across their portfolio at the time of retirement to eliminate their mortgage debt. By doing so, individuals and households could potentially maintain access to the means-tested AP. Alternatively, they could choose to reduce or eliminate mortgage debt by downsizing. How retirees’ decision-making behaviours in this area evolve over time may have important implications for government finances and the sustainability of the tax and transfer system.

Like many developed countries, there is evidence that Australians tend to retain high levels of housing wealth throughout their retirement. This is consistent with a pattern whereby individuals choose not to downsize: neither by moving to a smaller dwelling (downsizing in a physical sense) nor by transitioning to a dwelling of lower value (financially downsizing). Analysis of the

HILDA data indicates that among owner-occupiers in 2001 aged over 54 years, more than 75 per cent remained in the same dwelling 15 years later. While downsizing in a financial sense is somewhat more common than physical downsizing, both scenarios remain the exception among older Australians rather than the norm. For example, among all age groups 55 years and older, fewer than 20 per cent of individuals had transitioned into another owner-occupied dwelling and reduced their net level of housing equity in the process.

International research suggests that geographic mobility and downsizing behaviours are often associated with demographic and work transitions. Evidence from the HILDA data and the ACLD confirms these patterns for Australia. In particular, we find several important factors associated with housing mobility at older ages in Australia, including demographic transitions (particularly those associated with partnership status or children leaving home), and labour force transitions (primarily at the age of retirement).

Among those individuals who do downsize, there is little evidence that their financial wellbeing and overall satisfaction improves as a direct result. Analysis of the HILDA data indicates that reported satisfaction with housing circumstances immediately following the move actually decreases. However, this appears to represent a temporary shock, perhaps associated with the substantial disruption to social and community ties that occurs when an older individual moves. Unsurprisingly, downsizing behaviour is generally associated with a significant rebalancing of the household portfolio, with an increase in wealth held in the form of liquid financial assets.

The conceptual framework that shapes the analysis in this report is the life-cycle hypothesis (LCH), which posits that individuals plan their consumption and savings behaviour over their life-cycle. A key consideration in this context is how economic constraints, such as tax and transfer rules, shape decisions over the life cycle. This is particularly pertinent in the Australian context given the unique nature of the AP program and the generous treatment of owner-occupied housing in the tax system. Analysis of the HILDA data shows some evidence that decision-making around geographic mobility and downsizing is associated with parameters of the AP means test. In particular, we observe that individuals who are not at risk of losing their eligibility to AP benefits are more likely to move, relative to individuals who are at risk of losing eligibility.

Policy development options

This report does not focus on a single economic policy that may facilitate or represent a barrier to downsizing behaviour among older Australians. Rather, the analysis provides an opportunity to understand the patterns of downsizing that occur, how these patterns have changed over time, and how they may be shaped by a range of economic factors. The analysis provides insight into how policy may be formulated in a way that limits the barriers to downsizing for older Australians, facilitates housing choices that are appropriate at each stage of the life cycle, and provides an opportunity for governments to address approaching fiscal challenges.

A review of the literature identifies patterns, observed both in Australia and internationally, that highlight the relatively limited degree of downsizing engaged in by older households. Like their international counterparts, older Australians do not tend to decumulate housing wealth as they enter into the retirement part of the life cycle. Rather, they tend to 'age in place',¹ and downsizing behaviour tends to be associated with significant life events, such as the death of a spouse, retirement, or a health scare. The economic approach argues that downsizing behaviour is likely to be driven, at least in part, by the costs and benefits associated with

¹ Remain in one's own home after retirement; not move into a smaller home, assisted living, or a retirement community.

alternative arrangements. Those costs and benefits will in turn be shaped by the policy context in which housing decisions are made, including tax and transfer policies. The analysis in this report suggests that tax policy may have a limited impact on downsizing decisions. Nonetheless, over the life cycle, it is likely that tax and transfer policies will form an important component of any policy actions directed towards shaping the downsizing behaviours of older Australians.

The current settings with respect to owner-occupied housing, in the Australian AP program and the tax system more generally, are relatively generous. They provide clear incentives for individuals to retain relatively large amounts of wealth in the form of housing equity in owner-occupied housing over the course of the life cycle, and a larger share of their wealth in housing equity than they would if housing were treated more neutrally relative to other assets. Recent changes to the AP assets test have meant that some AP recipients, especially homeowners with above average levels of wealth, will have received lower levels of AP payments (Australian Council of Social Service 2015a). The experience of the past 30 years (following the introduction of the AP assets test in 1985), suggests that—notwithstanding a consensus from commentators on both sides of the political divide that changes in the treatment of housing assets are justified—any such changes are likely to be adopted slowly. Moreover, a gradual approach is most likely the appropriate one. Choices around housing are critical from a life-cycle perspective and changes to policy should be introduced progressively to ensure that the parameters that shape life-cycle decisions can be adequately incorporated into long-term planning horizons.

Thus, we pose the question: ‘What is the nature of the policy changes that may be justified?’ There is a broad consensus among policy makers that housing is treated relatively generously from a tax perspective. This has important implications in terms of efficiency, as it potentially provides an incentive for individuals to rely too heavily on housing assets over the course of the life cycle. Moreover, from an equity perspective, one may argue that generous tax concessions available to older owner-occupiers provide the greatest benefit to those who already exhibit relatively high levels of accumulated wealth.

A number of changes could be made to the AP assets test regime, to make owner-occupied housing less attractive in a financial sense. For example, current thresholds that apply to the AP assets test mean that the implicit value of owner-occupied housing is equal to approximately \$200,000²; an adjustment of those thresholds could make owner-occupied housing less attractive and encourage individuals to rebalance their wealth portfolio over the life cycle. While this approach may be appealing, it is important to note one unintended consequence of such a policy: if the assets test threshold is lowered for home owners, it may reduce the incentive for existing owners to downsize, unless the proceeds from such an action are treated in a concessional manner. Of course, such a change has the potential to increase the fiscal burden associated with the AP by extending access to the publicly funded pension. A recent policy announcement revealing the option to top-up superannuation using the proceeds of downsizing is an example of such an approach. It is important to recognise that past experience would suggest that such policies tend not to be broadly embraced by individuals.

History tells us that for policy changes to be effective, they must be made with a life-cycle perspective in mind. Australians who are currently retired or near retirement have made saving and consumption decisions based on a set of tax and transfer parameters that should only be altered with careful consideration of the consequences.

² The AP assets test allows non-home-owners to hold approximately \$200,000 more in assets than home owners before the amount of AP collected is affected.

Finally, it is important to note that any changes to economic policies, such as tax and transfer arrangements, will likely only impact those individuals who are characterised as being at the margins. For example, a change to assets test thresholds for the AP generally affects the behaviour of those whose asset holdings are at or near the threshold the behaviour of others is unlikely to be impacted. In effect, without a large policy shift that fundamentally changes the costs and benefits associated with the accumulation of housing assets by older Australians, policy changes are likely to affect a relatively small subset of the cohort and change the behaviour of only a proportion of these. On the other hand, fundamental change will take both time and substantial policy reform. Furthermore, developing a political consensus around such changes is likely to require time and a concerted effort on the part of policymakers. To make a meaningful difference to behaviour and outcomes, policies must be well thought-out, pre-announced to allow for forward planning, and supported to remain in place long term.

The study

The research questions addressed in this report were shaped by the economic and fiscal challenges posed by an ageing population. As the Australian population ages, governments will be faced with increasing fiscal pressure to fund programs and expenditures demanded by older Australians; at the same time, relatively few younger Australians will be engaged in the labour force and paying tax.

The analysis examines the behaviour of Australians aged 55 and over in relation to two factors that are critical to meeting the challenges of an ageing population: downsizing and geographic mobility. The research examines a series of related, but nonetheless distinct, questions.

- What patterns are evident in the owner-occupation and equity withdrawal behaviours of older Australians since the 1990s? To what extent do such patterns reflect cohort influences? What are the implications for the future?
- What is the nature of downsizing that occurs among older Australians who move, in terms of changes in housing size and value?
- What are the characteristics and circumstances of older Australians who exhibit geographic mobility?
- What happens to the financial and general wellbeing of older home owners who downsize or move? How are the asset portfolios of these households affected?
- How do the parameters of the tax and transfer system influence decision-making around geographic mobility and downsizing among older Australians?
- What are the other key factors associated with the geographic mobility behaviours of older Australians?

An ageing population is a problem shared by many countries. While a range of policies have been put in place in Australia to encourage individuals to remain active in the labour force, the role of housing in meeting this challenge has not been systematically addressed. Housing equity is a form of accumulated wealth that remains largely untapped during retirement years, and there is potential for the consumption of this wealth by older Australians to relieve the fiscal pressure faced by future governments. Policies acting to implement such an approach may have broader implications; for instance, ensuring a more appropriate match between the housing needs and outcomes of not just older Australians but also younger Australians. Hence, policy changes aimed at shaping downsizing behaviours have the potential to ensure a more efficient allocation of housing stock across cohorts of Australians. Ultimately, such an outcome will be conducive to greater economic efficiency and welfare.

The methodological approach in this report is economic in nature and draws on the insights provided by life-cycle models of behaviour. Such models are predicated on an assumption that individuals are forward-looking agents, and that choices around work, consumption and saving are shaped by inter-temporal trade-offs. Moreover, those trade-offs are impacted by economic, social and institutional considerations. Tax and transfer policies have important implications for the costs and benefits associated with alternative choices and therefore have the potential to influence behaviours and outcomes. The analysis undertaken for this study is quantitative or statistical in nature. The analysis of the HILDA dataset, the ACLD and the SIH data allows patterns of geographic mobility and downsizing behaviours among older Australians to be described and analysed. The analysis is Australia-wide in its coverage, and mostly considers the period from 1994 to the present. The analysis of the HILDA dataset focusses on the period since 2001 only.

By drawing on the strengths of each of the datasets used, the analysis in this report provides a number of original contributions. The repeated cross-sectional nature of the SIH provides an opportunity to consider how housing-related decisions of successive cohorts of older Australians have evolved over time. The rich set of social, demographic and economic information in the HILDA dataset provides an opportunity to identify, using robust statistical techniques, the correlates of downsizing behaviour, along with the consequences of geographic mobility and downsizing. In addition, the longitudinal nature of the HILDA dataset provides an opportunity to consider the extent of geographic mobility and downsizing behaviours over the life cycle. Finally, use of the ACLD provides an opportunity to identify the nature and extent of downsizing behaviours for a large sample of older Australians.

Overall, the report's findings add to the existing evidence base around which robust policies designed to facilitate geographic mobility and downsizing can be formulated.

1 Housing equity consumption: the context

Australia's ageing population provides challenges and opportunities for government. High rates of home ownership mean that most Australians enter retirement with a large share of their wealth in the form of housing equity. Releasing this accumulated wealth, either through geographic mobility and downsizing, or financial instruments such as reverse mortgages, may help maintain welfare during retirement for individuals. Moreover, it potentially alleviates the fiscal challenges faced by governments associated with an increasing demand for social expenditure at a time when the relative number of working-age Australians is declining.

Key patterns and issues identified in this chapter include the following.

- Owner-occupation remains the preferred tenure among Australian households.
 - Housing assets represent the largest single component in the household portfolio at retirement and are naturally an important determinant of welfare during retirement.
 - Relative to earlier birth cohorts, Australians in more recent birth cohorts exhibit later entry into home ownership, and are increasingly likely to enter retirement with a mortgage.
 - Owner-occupation is treated concessionally in the tax and transfer systems, encouraging this form of tenure.
- Existing evidence from Australian and international data indicates that older individuals retain high levels of housing equity in their wealth portfolio as they age. Such a pattern reflects a reticence on the part of households to consume this form of wealth and a strong desire to age in place.
- Among owner-occupiers, accumulated housing equity may be consumed through a variety of mechanisms, including:
 - geographic mobility, which releases housing equity that can then be used to move to a lower-valued dwelling or to transition to a rental tenure
 - mortgage equity withdrawal (MEW), using a financial product such as a reverse mortgage, which allows accumulated housing wealth to be tapped into and drawn down.

Since the end of the Second World War, home ownership has been a critical part of the Australian social, institutional and economic landscape. Home ownership rates increased steadily for several decades, from a low of 53 per cent immediately following the war to approximately 70 per cent in the 1970s, and have remained relatively stable since then (Kryger 2009). The high rates of home ownership reflect, at least in part, a series of policies, implemented by successive governments, that actively supported and promoted home ownership. As described in the 2010 Henry Tax Review, these policies include grants to home purchasers, as well as rules embedded in the tax and transfer system that implicitly and explicitly favour owner-occupation over other forms of tenure (Henry, Harmer et al. 2009).

Traditionally, the housing career of a young Australian could be characterised as one in which they remained in the parental home until finishing their education. Then, following a spell in

rental tenure, there was a progression to home ownership as the individual formed their own independent household. In the past, outright ownership was achieved prior to retirement, with owner-occupied housing representing an important contributor to living standards and welfare during retirement (Yates and Bradbury 2010).

Over the past few decades, however, the housing choices and careers of Australians have been undergoing substantial change, driven by a mix of social, demographic and economic factors. Younger Australians are increasingly spending more time in education, and the departure from the parental home occurs later, as the formation of relationships, families and independent households is increasingly delayed (Cobb-Clark 2008). There is some evidence that home ownership rates have begun to decline, with younger cohorts of Australians less likely to enter into home ownership (Flood and Baker 2010; Yates and Bradbury 2010). It remains unclear whether younger cohorts will be less likely to achieve home ownership over their life cycle or will simply attain home ownership later in life. There is evidence that older Australians are less likely to enter into retirement as outright owners of their home (Ong, Jefferson et al. 2013). Burke, Stone and Ralston (2014) note a precipitous decline in outright home-ownership rates over the period 2001–11, from around two-thirds to less than one-half among those aged 55–64 years.

Economic considerations are likely to have been an important factor in some of these developments. Lower rates of home ownership among younger Australians have coincided with rapid and sustained increases in house prices, especially in the major capital cities such as Sydney and Melbourne (Stapledon 2016). Further, the maturation of the superannuation system and innovations in financial markets have meant that older Australians are more financially literate and have opportunities to manage household portfolios in ways that were not possible for earlier generations.

The housing choices of Australians as they enter into retirement have important implications for individuals and the economy more broadly. For individuals, a key determinant of their welfare will be the appropriateness and adequacy of their housing circumstances (Yates and Bradbury 2010). The ability to adjust that housing consumption as needs and circumstances change is likely to be critical to sustaining an adequate standard of living over the life cycle. From an economy-wide perspective, well-functioning housing markets—which facilitate choices that allow Australians to meet their needs and are appropriate at each stage of the life cycle—will enhance economic growth and contribute to economic efficiency (Productivity Commission 2014).

This report focusses on the housing choices of older Australians. In particular, we consider decisions around housing and the consumption of accumulated housing wealth among Australians 55 years of age and over. We examine patterns of behaviour around geographic mobility, downsizing, and in situ consumption of housing wealth (via MEW products such as reverse mortgages). These decisions are likely to have important implications for the welfare of individual households and the economy more broadly. An understanding of the choices households are currently making, and how those decisions are shaped by policy settings, is critical for formulating policy that facilitates housing choices that support individual needs and the broader functioning of the economy.

Our research concentrates on individuals aged 55 and over. In the past, the period of life around age 55 has often been associated with significant changes in housing circumstances, as children left the family home and formed independent households. For previous generations, there was also the possibility of early retirement at age 55. Moreover, many Australians approaching retirement in earlier eras would have paid off their mortgage in full. Critically, the family home would have represented the most important asset in the household wealth portfolio and contributed significantly to an individual's wellbeing during their retirement years.

Nowadays, although people retire later,³ it is around the age of 55 that individuals begin their transition into retirement, withdrawing from the workforce and becoming more likely to place increasing demands on government transfers and programs. From a policy perspective, the housing choices of individuals and how they are shaped by the policy settings will have important implications for both individuals and governments.

The remainder of this chapter describes the aims of the study in the context of policy and environment, reviews the existing research, and outlines the research methods used. In Chapter 2 we present detailed descriptive evidence of geographic mobility and downsizing for older Australian households, drawing on the ACLD and HILDA. Chapter 3 presents our analysis of the correlates of geographic mobility, downsizing and housing equity consumption, through a series of statistical or regression models, identifying the characteristics of individuals and the institutional settings that are associated with the key behaviours of interest. In Chapter 4 we focus on the barriers to, and consequences of, geographic mobility and downsizing identified by respondents in the SIH and HILDA data. A series of multivariate statistical models are presented, which isolate how individual characteristics are related to the outcomes of interest. Finally, in Chapter 5, policy development options are described.

1.1 Why this research was conducted

The research in this report was motivated, in part, because the Australian government faces policy challenges and opportunities shaped by long-term social, economic and demographic trends. Those developments are creating fiscal challenges associated with the provision and funding of programs, including health, long-term residential care, and social welfare programs such as the Age Pension (AP). An understanding of how existing policy settings are related to observed behaviours will add to the evidence base upon which policy settings can be developed to facilitate better housing decisions of individuals and support the long-term growth of the economy. In this section, we describe the economic environment and policy issues which our research aims to inform.

Like many other countries, Australia is experiencing an ageing of its population (Creedy and Taylor 1993; The Treasury 2010; 2015). While this shift is perhaps not as pronounced in Australia as elsewhere (The Treasury 2015), it is likely that the country's population will yet experience profound changes over the next four decades. The Department of the Treasury's latest *Intergenerational Report* notes that the number of Australians aged over 65 is projected to approximately double over the next forty years. Over the same period, the number of individuals aged over 85 will likely increase from around 1 per cent of the population today to around 5 per cent (The Treasury 2015).

The challenges for governments presented by an ageing population are well documented (see for example The Treasury 2010; 2015). With lower rates of population growth and fewer people of working age, economic growth is likely to be lower. Moreover, fiscal pressures faced by governments are likely to be accentuated, as the number of individuals who are working declines relative to the number who are retired. The so-called 'dependency ratio' (i.e. the number of people aged between 15 and 64 for every person aged over 65) has already declined from 7.3 people in 1974/75 to 4.5 people today. By 2054/55, The Treasury projects that this ratio may halve again. Successive governments have put in place a range of policies designed to mitigate the fiscal effects of an ageing population—for example, increases in the AP eligibility

³ Although there is no set retirement age in Australia, eligibility for the AP begins at 65.5 years—rising to 67 years by July 2023. In recent years, the average age of retirement has been around age 63 (ABS 2017a).

age, policies designed to encourage Australians to remain in the workforce for longer, and the superannuation system.

While much attention has been focussed on the impacts of ageing on the dependency ratio and the challenge of maintaining high rates of productivity growth, the associated housing issues and opportunities have generally garnered less scrutiny. Estimates from the most recent Australian Census show that older Australians retain high rates of home ownership even in the older age cohorts (see Table 1). Owner-occupation is highest among couples aged 65–74 years (approximately 90%) and remains close to 70 per cent for couples aged over 80 years. These patterns are similar for singles (see the upper panel of Table 1) and individuals who are part of a couple or partnered (see the lower panel), though the rates of singles who are owner-occupiers are around 15–20 per cent lower than for couples in each age group.

Table 1: Tenure of older Australians, by age (2016)

	Age (years)					
	55–59	60–64	65–69	70–74	75–79	80+
Singles						
Owners-occupiers						
Outright owners (%)	34.14	43.47	54.72	60.28	63.74	58.16
With mortgage (%)	29.27	22.86	14.88	10.40	8.52	5.98
Total (%)	63.41	66.33	69.6	70.68	72.26	64.14
Renters						
Private renters (%)	15.06	12.14	9.28	6.97	5.08	2.43
Social housing renters (%)	7.88	8.34	8.08	7.47	6.71	4.03
Other (%)	9.63	9.20	8.38	8.12	7.27	5.34
Total (%)	32.57	29.68	25.74	22.56	19.06	11.80
Other						
Nursing home (%)	0.22	0.55	0.82	1.61	2.92	12.26
Accom. For aged & retired (%)	0.16	0.20	0.41	0.75	1.48	5.68
Other tenure (%)	3.64	3.23	3.43	4.4	4.29	6.11
No. of observations	17,972	16,302	15,509	12,755	11,309	24,042
Couples						
Owners-occupiers						
Outright owners (%)	42.40	58.51	72.52	78.10	79.47	75.00

	Age (years)					
	55–59	60–64	65–69	70–74	75–79	80+
With mortgage (%)	44.35	29.90	16.71	10.17	7.08	4.98
Total (%)	86.75	88.41	89.23	88.27	86.55	79.98
Renters						
Private renters (%)	6.05	4.52	3.42	2.69	2.26	1.73
Social housing renters (%)	1.46	1.50	1.45	1.74	1.79	2.08
Other (%)	3.75	3.56	3.30	3.60	4.15	3.91
Total (%)	11.26	9.58	8.17	8.03	8.20	7.72
Other						
Nursing home (%)	—	—	0.14	0.28	0.94	4.57
Accom. For aged & retired (%)	—	—	0.04	0.13	0.28	1.59
Other tenure (%)	1.95	1.96	2.44	3.29	4.02	6.13
No. of observations	48,082	43,207	39,991	28,930	19,718	18,327

Note: The unit of analysis is the individual.

Source: Authors' own calculations, using the ACLD 2011–16.

Analysis of the Survey of Income and Housing (SIH) can provide a longer-term view, by allowing us to consider how such patterns of home ownership have developed over time for successive cohorts of Australians. Cross-cohort evidence from the repeated cross sections of the SIH (see Table 2) reveals that these high rates of home ownership are persistent. In Table 2, cohorts are defined by year of birth, and the analysis indicates that as each cohort ages it tends to maintain a high rate of home ownership. Moreover, for all but the youngest birth cohort (who are yet to reach age 65), around 85 per cent of each cohort own their home, either outright or with a mortgage, by the age of 65.

Table 2: Home ownership rates of older Australians, by birth cohort and age (2016)

Age (years)	Birth cohort						
	1925–29	1930–34	1935–39	1940–44	1945–49	1950–54	1955–59
55–64 (%)	—	85	87	85	85	84	82
65–74 (%)	87	86	86	87	85	—	—
75+ (%)	88	86	87	—	—	—	—

Note: The unit of analysis is the individual.

Source: Authors' own calculations, using the SIH 1994–2016.

The relatively large amount of wealth held in the form of housing equity in owner-occupied dwellings presents opportunities for both individuals and governments. It is well documented that owner-occupied housing forms the largest single asset class in the wealth portfolio of Australian households (e.g. Finlay 2012; Headey, Marks et al. 2005). Analysis of Wave 14 of the Household, Income and Labour Dynamics in Australia (HILDA) data, which contains detailed information on the wealth of Australians, shows that home equity remains the single most important asset in the household wealth portfolio, both pre and post retirement (see Table 3). Moreover, in a relative sense, it is a more important asset for older households, representing approximately 50 per cent of gross wealth among those aged over 75 years (see Whelan, Atalay et al. 2018).

Table 3: Wealth portfolios of Australian households (2014)

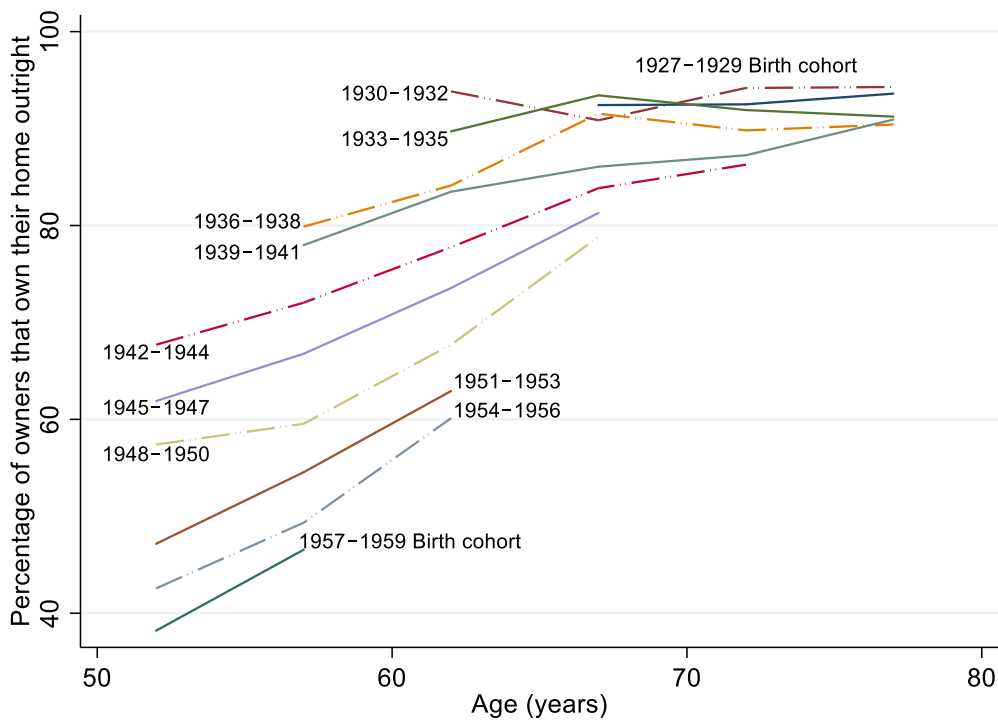
	Age of household head (years)		
	55–64	65–74	75+
Value of assets (\$)			
Net financial assets	142,016	230,874	215,087
Pension assets	352,405	329,489	100,419
Home equity	442,287	502,337	415,464
Lifestyle assets	198,559	183,315	95,480
Business equity	37,855	47,280	15,400
Total assets	1,173,123	1,293,295	841,850
Asset allocation (rate)			
Net financial assets	12.1	17.9	25.5
Pension assets	30.0	25.5	11.9
Home equity	37.7	38.8	49.4
Lifestyle assets	16.9	14.2	11.3
Business equity	3.2	3.7	1.8
No. of observations	1,490	1,103	850

Note: The unit of analysis is the household.

Source: Authors' own calculations, using HILDA Wave 14.

Notwithstanding the consistently high levels of wealth held in the form of owner-occupied housing, there are important differences in the experiences of successive generations. Using data from the SIH, we observe that for the earliest birth cohorts (those born in the years prior to 1938), approximately 90 per cent of Australian home owners over 65 years of age own their home outright (see Figure 1). The average home equity for these same early cohorts once they reach age 65 is high, and remains high (i.e. equivalent to or greater than 95% of the value of the house) (see Figure 2). However, Figures 1 and 2 also reveal a striking difference in the levels of home equity on approach to retirement, and at typical retirement age, between these early cohorts and more recent birth cohorts. Specifically, it is clear that among individuals and households that own rather than rent, for those born in the 1940s and since, each birth cohort is less likely than the preceding one to own their own home outright. Similarly, when we compare each age group across cohorts, there is an observable decline in home equity. This reflects both the decline in the proportion of people owning their own home outright, but also an increase in the relative size of the mortgages still outstanding for those who have not yet paid off their home. These trends no doubt reflect a response to a mix of social, demographic and economic factors, as noted above.

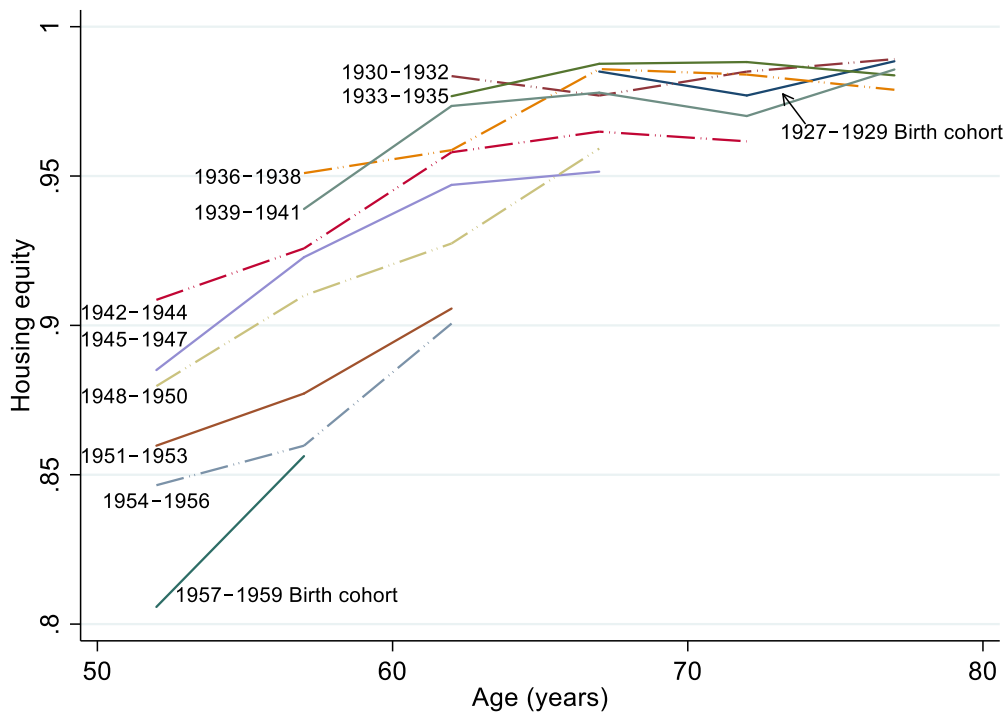
Figure 1: Percentage of home owners that are outright owners, by birth cohort and age



Note: The unit of analysis is the individual.

Source: Authors' own calculations, using SIH data (1994–2016).

Figure 2: Home equity among older Australian home owners, by birth cohort and age



Notes: The unit of analysis is the individual. Housing equity is measured as a proportion of the self-reported value of the house.

Source: Authors' own calculations, based on SIH data (1994–2016).

These patterns are noteworthy, in part, because housing wealth has traditionally been used to support standards of living as individuals and households enter retirement. In particular, the stream of housing services provided by owner-occupied housing has meant that older Australians generally have one of the highest *income* poverty rates among OECD countries, but one of the lowest poverty rates after housing is taken into account (Yates and Bradbury 2010). This reflects the relatively high rates of owner-occupation among older Australians and important design characteristics of the Australian AP system. In particular, the AP in Australia is highly targeted through means testing, and paid at a flat but relatively low rate that is unrelated to earnings over the working life (Whiteford 2010). While means testing is applied to both the income and assets of potential AP recipients, the relatively generous treatment of owner-occupied housing in the AP means test has generated concern that the eligibility criteria create incentives for households to accumulate and retain higher levels of wealth in the form of housing equity than would be the case if the tax and transfer system was more neutral in its treatment of different asset classes.

It is important to stress that the prevalence of high levels of wealth held in the form of owner-occupied housing by older individuals is not unique to Australia (Chiuri and Jappelli 2010). Moreover, recognition of the high levels of housing wealth held by the baby boom generation, in Australia and internationally, has fed into the broader debate around the funding and sustainability of social welfare programs, such as the AP and long-term residential care, in the face of an ageing demographic. In particular, there is an increasing recognition that housing wealth accumulated over the lifetime has the potential to be 'tapped into' during retirement years. So-called 'asset-based welfare regimes' potentially provide a means through which reliance by households on state-funded welfare or social security can be mitigated (Doling and Ronald 2010).

Debate around asset-based welfare and the potential for housing wealth to support living standards throughout retirement years is partly a response to patterns identified both in Australia and internationally. In particular, existing evidence indicates that households generally do not decumulate housing wealth or equity following retirement (Chiuri and Jappelli 2010). Rather, studies for the United States (US), Canada, some European countries and Australia suggest that older households tend to remain in the family home following retirement (e.g. Venti and Wise 1990, 2004; Coile and Milligan 2009; Milligan 2005; Spicer, Stavrunova et al. 2016; DSS 2016; Angelini and Laferrère 2010; Blundell, Crawford et al. 2016). Among home owners, housing wealth is not consumed or decumulated either through a move to a smaller, less-expensive dwelling or through the use of financial products that allow housing wealth to be consumed in situ (such as reverse mortgages).

There are many reasons why older home-owning households might remain in their existing dwelling or choose not to consume accumulated housing wealth as they age. For one, there may be deep-seated psychological or behavioural reasons associated with attachment to the family home. The analysis of Judd, Liu and colleagues (2014), which examined the moving and downsizing behaviours of older Australians, highlighted the strong preference of individuals to 'age in place'. The psychological connection to housing and local communities that older individuals experience translates into low rates of geographic mobility, and a reticence to move to dwellings that may be more age appropriate and/or provide opportunities to increase non-housing consumption. That emotional attachment to the family home may also encourage older individuals to remain in the family home in the hope that it can be bequeathed to their children.

From an economic perspective, these stylised patterns of behaviour may reflect a range of institutional considerations. Internationally, there is evidence that social security arrangements such as the AP can have important implications for housing choices over the life cycle (Costa 1999; Engelhardt 2008). For Australia, a number of existing settings of the tax and transfer system highlight the financial disincentives for households to relocate or consume accumulated housing wealth as they age. Some of these features of the tax and transfer system are entrenched and have been well documented in the existing literature. In general, the system provides generous concessions for owner-occupied housing, including:

- exemption of owner-occupied housing from capital gains tax
- exclusion of imputed rent from owner-occupied housing from the income of individuals
- exclusion of owner-occupied housing from the assets test for the AP.

Previous analysis of the tax and transfer system, especially the retirement income system, has described the potential impacts of this treatment of owner-occupied housing. In particular, current rules around owner-occupied housing create an incentive for households to hold a greater share of their wealth in this form, relative to a situation in which owner-occupied housing was treated in a similar manner to other asset classes (Henry, Harmer et al. 2009). The effects of such rules are potentially more pronounced for older households and individuals, given the interface between the tax and transfer systems. For example, wealth held in the form of equity in owner-occupied housing is ignored for the purpose of the AP asset means test, creating an incentive to hold higher levels of equity in owner-occupied dwellings during retirement than might otherwise be the case.

An additional policy setting that has been identified on a number of occasions in regard to the housing choices of Australian households is the reliance by state governments on stamp duties. Traditionally, these taxes, imposed when the transfer of a property occurs, have been the most significant source of revenue for state governments. Economic theory generally suggests that such taxes discourage households from trading up or down and act as an impediment to geographic or residential mobility (Davidoff and Leigh 2013). An arguably more efficient alternative, such as a broad-based land tax, would remove this barrier to mobility and eliminate

an impediment to households adjusting their housing consumption so that it more accurately reflects their needs and circumstances (Henry, Harmer et al. 2009). While numerous proposals have been developed to reduce reliance on the use of stamp duties, to date only limited progress has been made. For example, the Australian Capital Territory (ACT) Government is in the process of replacing stamp duty with a broad-based land tax over a 25-year period (McLaren 2013).

Innovations in financial markets mean that in situ consumption of accumulated housing wealth has become increasingly feasible. In effect, MEW products such as reverse mortgages allow households to draw down the accumulated equity in owner-occupied housing to support non-housing consumption, while remaining in the dwelling. Existing evidence suggests that the use of such products remains limited in the Australian context, at least for older households. The reasons for this most likely reflect considerations around the range of products available, their perceived financial value, and knowledge about the products among potential users (Jefferson, Austen et al. 2017; Ong, Wood et al. 2015; Productivity Commission 2015). Nonetheless, evidence from both the US and Australia suggests that the use of such products has the potential to enhance the non-housing consumption and welfare of older home-owning individuals (Ong 2008; Kutty 1998).

The discussion above serves to highlight why the analysis in this report was conducted. The housing choices of older Australians are not only critical for the welfare of individuals, but also interact with broader challenges around the sustainability of existing policy settings. The research presented in this report takes an economic approach to examine the behaviours and choices of individuals and households. Documenting those behaviours, and providing insight into how they are shaped by the institutional arrangements that individuals and households face, is key to developing policy settings that support housing decisions that contribute to the welfare of individual households and the broader functioning of the economy.

1.1.1 Conceptualising the consumption of housing wealth

This report considers whether—and by what means—older individuals consume their accumulated housing wealth.⁴ The conceptual framework underpinning the analysis in this report is the life-cycle model of behaviour. In short, the model posits that individuals prefer to smooth their consumption over the life cycle in order to maximise their lifetime welfare, subject to a range of constraints. As a result of these preferences, they save and accumulate wealth in the early part of the life cycle, when they are engaged in employment. Following retirement and withdrawal from the labour market, households may draw on other sources of income, such as government transfer payments or accumulated wealth, to sustain consumption (Modigliani and Brumberg 1954; Carroll 1997; Deaton 1991). For many Australian households, housing equity in owner-occupied housing is a key source of wealth at retirement.

Understanding how individuals consume the housing wealth they have accumulated over the early part of the life cycle is central to the empirical analysis presented in Chapters 2 to 4. Perhaps the easiest and most direct means by which individuals may access equity in owner-occupied housing is by selling an existing property and effectively consuming all or part of the proceeds of the sale. The release of the equity through the sale of the property could be used to move to an owner-occupied dwelling that is of lower value, or to move to an alternative form of

⁴ The analysis presented in subsequent chapters generally uses the individual as the unit of analysis (unless otherwise stated). In some cases, it may be more correct to consider how households make decisions regarding geographic mobility and downsizing. For example, in a couple household, choices will reflect the preferences of both partners. Nonetheless, the use of the individual as the unit of analysis is convenient, to allow comparison of results across the range of data sources used in the analysis. Extending the analysis to capture household decision-making is beyond the scope of this report but would be a useful avenue for future research.

tenure such as renting. In both cases, accessing the accumulated housing equity will be associated with a geographic or residential move to a new dwelling, either owner-occupied or rental tenure. Such changes have been referred to as ‘downsizing and selling up’ in the literature (Ong, Wood et al. 2015). This financial downsizing is often accompanied by physical downsizing, characterised by a reduction in the number of bedrooms or a decrease in the physical dimensions of the house and garden (Judd, Liu et al. 2014).

While the focus of the analysis in this report is downsizing and the consumption of accumulated housing wealth, it is important to note that a geographic move may in fact be associated with an *increase* in the value of housing assets in the household portfolio. That is, an accumulation rather than a decumulation of housing wealth. For example, retirement may coincide with a move to a different location, with increased consumption of housing services associated with higher quality of housing or a move to a locale with greater amenities. Indeed, there is some evidence of such behaviour in the US (Venti and Wise 2004).

Innovations in financial markets, coupled with increases in house prices over the past three decades, have opened up other mechanisms by which households are able to access the wealth locked up in housing assets. Households have increasingly used redraw or MEW products to consume housing wealth in situ (Haurin and Moulton 2017; Ong, Wood et al. 2015). These financial products include mortgage redraw facilities and reverse mortgages, and they allow households to increase the outstanding mortgage on owner-occupied property to fund non-housing consumption. While potentially an important mechanism through which individuals and households can access and consume accumulated housing equity, such products are not the focus of the empirical analysis in this report. Data challenges mean that only limited insight can be provided into behaviours associated with these products.

A further strand of literature identifies the potential for older home owners to consume housing equity in situ through lower maintenance expenditures (Davidoff 2004). By forgoing maintenance expenditures, older home owners effectively consume existing housing wealth through accelerated depreciation of the existing housing stock. While this behaviour is not explicitly analysed in this report, there is some evidence in the HILDA data for a decline in the home maintenance expenditure of older Australian home owners. Specifically, we observe that the average home maintenance expenditure declines with age, from \$4,860 (in 2017 AUD) for individuals aged 55–64 years to \$3,625 for those aged 65–74 and \$3,038 for those aged 75 years and over.

An understanding of the alternative mechanisms by which households may unlock and consume accumulated housing wealth is critical, as it shapes the empirical analyses described and presented in Chapters 2 to 4. In particular, we examine behaviours including geographic mobility, physical downsizing and financial downsizing, using a variety of data sources. An understanding of these behaviours and their correlates adds to the evidence base on which policy can be formulated. The policy context in which these behaviours occur is considered below.

1.2 Policy context

In Section 1.1, above, we describe the broad economic environment and policy settings which this research informs. Within that context, the availability of wealth in the form of owner-occupied housing provides opportunities to address the fiscal burden associated with an ageing population. To assess how policy settings shape behaviour, the life-cycle model (described above) is taken as a starting point. The life-cycle model explicitly recognises that decisions such as those related to engagement in the labour market, consumption and saving are made by forward-looking agents in a dynamic setting. It follows that decisions around the consumption of accumulated wealth in the later part of the life cycle are closely linked to retirement income

policies. Like many other countries, retirement income policy in Australia has been characterised as consisting of three pillars, namely:

- 1 compulsory or mandated private savings in the form of superannuation
- 2 publicly provided pensions
- 3 voluntary private savings.

For Australia, the historical and social importance of owner-occupied housing means that it has been identified as the fourth, albeit increasingly precarious, pillar of Australian retirement income policy (Chomik and Piggott 2012; Yates and Bradbury 2010).

While becoming more significant, the superannuation system has not yet not matured, and will not do so until the 2030s (Productivity Commission 2015). Even once the superannuation system has matured, the evidence suggests that many Australians will continue to draw the AP and related benefits over at least part of their retirement.

The AP has been an integral component of Australian retirement income policy since the early 20th century. At its introduction in 1909, the AP means test included separate income and asset components. While initially treated concessionally, by 1912 the full value of the principal residence was excluded from the AP assets test. Such a change was justified, in part, on the basis that it made older Australians more independent and relieved relatives of the burden of caring for their parents.

While the assets test has undergone significant change over time, the exemption of owner-occupied housing has remained in place since 1912. The Productivity Commission (2015) argued that such an arrangement has a number of potential implications, including: creating an incentive for over-investment in principal residences; discouraging downsizing; distorting the range of accommodation and retirement income choices of older Australians; and creating inequities by favouring home ownership over other forms of tenure. Nonetheless, the entrenched status of owner-occupied housing in the AP assets test means that, despite a variety of options identified by the public sector, think tanks and private sector organisations to limit the generous treatment of this asset class, there is limited political will or support for changing current arrangements (Productivity Commission 2015).

The AP in Australia is non-contributory, and eligibility simply requires the individual to meet residency requirements and attain the appropriate age at which eligibility occurs.⁵

Notwithstanding recent changes to the means test, around two-thirds of Australians aged over 65 years still receive at least a part pension. Estimates for 2018 indicate that around 41 per cent of older Australians receive a full pension and around 25 per cent receive a part pension (Chomik, Graham et al. 2018; Productivity Commission 2015). Moreover, despite the relatively low value of the AP in Australia, current high rates of home ownership amongst those aged over 65 mean that, at least at present, the majority of older Australians maintain a satisfactory standard of living during retirement.

For this report, a key aspect of the AP that is relevant is the assets test. The importance of the assets test and why it might have implications for the consumption of housing equity can be understood by considering how the AP means test is applied. At present, individuals are subject to both an income and assets test when being assessed for the AP.⁶ The maximum value of the

⁵ Over the period 1995 to 2014, the AP eligibility age for females increased from 60 years to 65 years. From 2017, the AP eligibility age will increase progressively for males and females, to 67 years.

⁶ Note that the AP is paid at whichever is the lower rate, as determined by the income or assets means test. Details of the income test can be found at: <https://www.humanservices.gov.au/customer/enablers/income-test-pensions>.

AP received depends on the partner status of the individual (single or partnered) and the availability of supplemental benefits.⁷ For an individual or couple, the AP means test specifies a 'lower threshold' of assets that may be held before the receipt or value of any pension paid is affected. Once the lower threshold level of assets is met, a taper rate is applied so that the AP is reduced or withdrawn by \$3 every fortnight for every \$1,000 in assets held beyond the lower threshold. That lower threshold differs by tenure status, with home owners facing a lesser threshold than non-home-owners. When assets are sufficiently high (i.e. they reach the 'upper threshold'), the AP is reduced to zero and the individual is no longer deemed eligible to receive the AP. Current asset thresholds for different types of households are reported in Table 4.

Table 4: Age Pension thresholds

	Singles		Couples	
	Home owners	Non-home-owners	Home owners	Non-home-owners
Lower threshold (\$)	258,500	465,500	387,500	594,500
Upper threshold (\$)	564,000	771,000	848,000	1,055,000

Notes: Figures are correct as at 1 January 2018. The figures for the lower threshold represent the maximum amount of assessable assets the individual (or couple) may hold while still in receipt of the full AP. Since 1 January 2017, once the lower threshold is reached the AP is reduced at a rate of \$3 per \$1,000 of assessable assets. The upper threshold refers to the maximum value of assets an individual (or couple) may hold and still receive a part pension. For home owners, the asset holdings exclude the value of owner-occupied housing.

Source: Department of Human Services (2019)

From an economic perspective, the structure of the AP assets test creates an incentive for individuals to structure their wealth portfolio so that assets are held in the form of exempt assets, thereby maintaining eligibility for the AP. For the purpose of this report, it potentially creates a disincentive for individuals to financially or physically downsize, or engage in financial transactions that release the equity contained in owner-occupied housing.

The potential disincentive created by the AP means test to consume the accumulated equity in owner-occupied housing has been acknowledged through a number of government policy proposals over the past decade. In particular, in the 2013/14 Budget, the Commonwealth Government proposed a pilot scheme to facilitate downsizing by older Australians, which treated the proceeds from downsizing concessionally. That program applied to seniors over the AP eligibility age who had lived in their dwelling for a period of 25 years or more and who downsized to a home of lesser value. Up to 80 per cent of the excess sale proceeds, capped at \$200,000, were eligible to be placed into a special account, where it was exempt from the AP income test for a period of up to 10 years, or until a withdrawal was made from the account (Yeend 2013). The pilot program was, however, abandoned following the 2014/15 Commonwealth Budget.

A similar policy was announced in the 2017/18 Commonwealth Budget, to take effect from 1 July 2018. This policy allows individuals aged 65 and over, who have lived in their home for a period of more than 10 years, to downsize and place excess funds into superannuation accounts. Limits of \$300,000 apply to singles and \$600,000 to couples. Though the contribution is not exempt from the AP means test, the concessional rules associated with superannuation

⁷ Various supplemental benefits are available to recipients of the AP, including those associated with energy payments and health costs. Benefits are provided by both Commonwealth and state governments.

apply, and thus the scheme provides opportunities for households to downsize in a more financially attractive manner (ATO 2018).

While the policies described above may facilitate physical and financial downsizing, a variety of measures have also been put in place to encourage in situ consumption of housing wealth. In particular, existing policy settings provide an opportunity for individuals to access a reverse mortgage provided by the Australian government.⁸ The relevant policy, known as the Pension Loans Scheme (PLS), has been in place since 1985, and was instated partly in response to the reintroduction of the AP assets test by the Hawke government. The PLS originally allowed part pensioners to supplement their pension with additional payments that were subsequently repaid following their death. In response to the limited take-up of the scheme, the policy was broadened in 1996, but it remained the case that few individuals took advantage of the program. Specific features of the scheme that appeared to limit its popularity include: eligibility being restricted to part pensioners only; and the lack of provision for individuals to access lump sum payments (Arthur 2015). In the 2018/19 Budget, the Australian Government has proposed an extension of the PLS to include full-rate age pensioners. The expanded scheme is scheduled to begin in 2019.⁹

A final consideration in the context of the tax system relates to the potential barrier to moving and downsizing created by stamp duties on the sale of residential homes. As noted previously, transfer taxes such as stamp duty may limit the amount of geographic and residential mobility, by imposing a tax on land transfers such as those associated with downsizing and accessing owner-occupied housing equity. In this context there are two policy settings of note. The first, mentioned in Section 1.1, is the transition by the ACT Government to a broad-based property tax, in lieu of stamp duties, over a 25-year period. The second is a policy put in place by the Victorian Government in 2010, whereby a concession from stamp duty is made available to eligible pension cardholders when they purchase a property as a principal place of residence. As of 2019, an exemption from stamp duty applies if the house purchased is valued at \$330,000 or less, and concessions apply to dwellings valued up to \$750,000.¹⁰

1.3 Existing research

The analysis in this report is concerned with behaviours and outcomes directly or indirectly related to the consumption of housing wealth by older individuals. While such behaviours are generally characterised as downsizing, we begin by considering patterns of wealth decumulation among older individuals. Recall that housing wealth generally represents the largest single component of the household portfolio around the time of retirement. Identifying how that wealth portfolio evolves over time is key to understanding whether, and in what manner, housing wealth will be consumed. One mechanism that facilitates the consumption of accumulated housing wealth is the physical and financial downsizing associated with geographic mobility. Hence, we consider the patterns and correlates of such decisions among older individuals. Lastly, we discuss existing evidence around in situ consumption of housing wealth through MEW products such as reverse mortgages.

The life-cycle model of behaviour posits that individuals accumulate wealth when they are income rich and asset poor in the early part of the life cycle. Those accumulated savings are

⁸ In effect, reverse mortgages allow owner-occupiers to extract housing equity from an existing dwelling using the dwelling as collateral. Loans are usually repaid when the occupant passes away or the property is sold (Haurin and Moulton 2017).

⁹ Further details can be found here: <https://www.humanservices.gov.au/individuals/services/centrelink/pension-loans-scheme>.

¹⁰ Details can be found here: <https://www.sro.vic.gov.au/Pensionerdutyconcession>.

consumed in the later stage of the life cycle, at or around retirement from the labour force, when individuals are asset rich and income poor. While there are specific considerations around housing discussed in section 1.4, the basic premise of the life-cycle model is that, like other assets, housing wealth is in general expected to be consumed or decumulated during retirement.

In a series of papers examining the behaviours of American households, Venti and Wise (1989; 2004) did not find evidence that households rebalanced their wealth portfolios and liquidated housing wealth to support non-housing consumption as they aged. Rather, the analysis indicated that, in the absence of a shock to the household such as a marked decline in health or the death of a spouse, households tended to maintain levels of accumulated housing wealth. More recent studies for the US (Coile and Milligan 2009), Canada (Milligan 2005), the UK (Blundell, Crawford et al. 2016) and Australia (Spicer, Stavrunova et al. 2016) identified similar patterns. That is, post-retirement households do not consume their housing wealth and thus it becomes an increasingly important component of the wealth portfolio. Moreover, analysis of administrative data in Australia found that, among AP recipients, many retained or increased their wealth holdings over time (DSS 2016).

This stylised pattern of behaviour around housing wealth is a piece of a larger puzzle—identified in the literature and referred to as ‘the retirement-savings puzzle’ (Suari - Andreu, Alessie et al. 2018)—which posits that, contrary to the standard life-cycle model, households do not decumulate wealth significantly during retirement. This reticence on the part of households to consume accumulated wealth during retirement clearly extends to housing wealth.

One way that owner-occupier households can consume accumulated housing wealth is through geographic mobility coupled with financial downsizing (i.e. moving to a residence of lesser value). However, empirical evidence from a number of countries suggests that older households do not appear to adopt this strategy—see Venti and Wise (2004) for the US; Banks, Blundell et al. (2012) for the UK; Judd, Liu et al. (2014) for Australia; and Angelini and Laferrère (2010), and Chiuri and Jappelli (2010) for international cross-country studies.

The study by Chiuri and Jappelli (2010) is of particular relevance here. The analysis in that paper focussed on the home ownership rates for households aged over 65 years, across 15 OECD countries. While significant differences in home ownership rates can be observed in the cross-sectional data, this partly reflects cohort differences. Across countries, the authors found little evidence that home ownership rates decline until after age 75, and even then the declines were relatively modest. When individuals *do* release the accumulated equity in owner-occupied housing, such a change is often precipitated by a household shock, such as divorce, widowhood or children leaving the family home. Other cross-country studies suggest that differences across countries in Europe are driven by social and institutional considerations around expectations of intergenerational care (Angelini and Laferrère 2010).

From an Australian perspective, there is relatively limited empirical analysis work on the mobility rates and downsizing behaviour of older Australians. Studies such as the Productivity Commission (2014) and Whelan and Parkinson (2017) focussed on the geographic mobility of younger Australians engaged in the labour market. Judd, Liu and colleagues (2014) examined downsizing behaviour and found that older Australians are increasingly likely to be living in detached dwellings with an excess number of bedrooms relative to their needs as they age. Using Census surveys collected by the Australian Bureau of Statistics (ABS), there is some evidence that mobility rates have declined over the past 15 years. Judd, Liu et al. (2014) found that mobility rates tend to decrease with age and rise only after age 85, a pattern most likely associated with significant deterioration in the health of individuals and ability to self-care. In a separate survey of over 2,700 older Australians who had moved dwellings since turning 50, they

found 43 per cent reported physically downsizing.¹¹ Extrapolating the figures across the Australian population, their analysis suggests that around one-half of all Australians who had moved since turning 50 had downsized, representing around 9 per cent of the Australian population aged over 50 years.

The Productivity Commission (2015) focussed on older Australians and documented housing tenure transitions for two groups: younger retirees (aged 55–64 years in 2002) and older retirees (aged 66–75 years in 2002). The study found that home ownership rates increased for the set of younger retirees (from 70% to 74%) over the period 2002–13, and declined (from 82% to 72%) for the older cohort over the same period (Productivity Commission 2015: 64). While no direct evidence is available on the value of housing, and therefore the extraction of housing wealth, the analysis suggests that, like other countries, the rates of tenure transition for older people in Australia are low.

Existing research on in situ consumption of housing wealth via MEW is relatively limited, constrained in part by a paucity of data that can shed light on if, and how, households draw on the accumulated equity in owner-occupied dwellings. Haurin and Moulton (2017) compared the institutional settings and behaviours of households in the US and Europe. The analysis in that paper identified the significant overall value of home equity held by households in both the US (5 trillion euro as of 2013) and in Europe (8 trillion euro). Nonetheless, only a small fraction of home owners in the US and Europe use financial instruments such as reverse mortgages to extract housing wealth. In the US, where the financial markets provide a range of MEW products, the use of home equity extractions, by seniors aged 62 years and over, peaked at less than 7 per cent in 2003. The pattern of originations for home equity withdrawal suggest that they are cyclical, with house prices playing a key role in the proportion of individuals who use such financial products.

Across Europe, rates of home equity extraction differ, in part because the array of products varies, but also because of fundamental differences in patterns of home ownership over the life cycle. Haurin and Moulton (2017) found that the proportion of seniors who increased their mortgage over the period 2011–13, while remaining in the same household, varied from less than 1 per cent, in Italy, to around 8 per cent, in Germany. Among Dutch households, Ebner (2013) found that households that engaged in MEW tended to be more positive about house price developments, and he estimated that the number of households that extract housing equity in any given year varies between 6 and 9 per cent. While around 16 per cent of the sample in that study are identified as retirees, the empirical analysis does not suggest that the propensity to withdraw housing equity is systematically related to age.

Some evidence from Australia is provided by Wood and Nygaard's 2010 study, using HILDA data, which focussed on *intention* to extract and consume housing equity during retirement. Their analysis suggests that around one-quarter of middle-aged Australian home-owning households intend to extract housing equity to contribute towards consumption expenditures during retirement. Among older households, those aged 65 and over, the proportion is somewhat lower at 11 per cent. Evidence of *actual* in situ housing equity consumption is set out in Ong, Wood et al. (2015), which identified the incidence of MEW across a sample of Australian households. They found that, in general, the use of financial products such as reverse mortgages is far less common among households aged 65 and over. Rather, housing wealth tends to be released via downsizing and transitioning into rental tenure for older individuals. Jefferson, Austen et al. (2017) highlight some of the barriers, identified by households, to the consumption of housing wealth, either through MEW or downsizing. Their

¹¹ Where downsizing was defined as a reduction in the number of bedrooms relative to the dwelling they had moved from.

qualitative analysis identified barriers related to the complexity of the products available to facilitate downsizing, and the possibility of financial tension among family members if equity extraction occurs.

As noted in Section 1.2, another strand of literature focusses on decisions around home maintenance when considering how older households consume housing wealth. Davidoff (2004) found that American home owners aged over 75 years spent approximately \$270 less per annum on home maintenance relative to younger home owners. In turn, they experienced rates of house price appreciation 3 per cent lower than younger home owners. In comparison, an analysis by Keese (2012) found no evidence that older German households spend less on maintenance compared to younger households, though there was some evidence that they are less likely to undertake renovations.

1.4 Research methods

1.4.1 Conceptual framework

The conceptual framework guiding the empirical analysis in this report is economic in nature. This approach is generalised to incorporate life-cycle considerations and the broader role of policy settings in shaping observed behaviours and outcomes. The strength of the economic approach is that it provides a coherent theoretical framework through which the behaviours of economic agents can be understood. One limitation of the approach is that it provides a relatively stylised way with which to characterise decision-making on the part of agents. Notwithstanding this limitation, the framework provides a means by which to analyse the behaviours and outcomes of economic agents in a quantitative fashion.

The general approach in economics is to argue that agents make the best possible decisions given the constraints that they face. They do so by comparing the costs and benefits of alternative decisions. This approach is usually formalised by assuming that agents maximise utility subject to a budget constraint. 'Utility' can simply be considered a measure of wellbeing or satisfaction, where that wellbeing is derived from consumption of goods, including housing. In this context, research is generally focussed on how behaviours and outcomes change when the constraints or circumstances that agents face are altered. It is important to emphasise that the constraints faced by agents are driven by a range of factors, including an agent's own decisions, government policy settings and wider economic conditions.

The economic approach can be readily generalised to incorporate multi-period decision-making over the course of the life cycle. Life-cycle models originated in the work of Modigliani and Brumberg (1954) and such models explicitly recognise that decisions such as those related to engagement in the labour market, consumption and saving are made by forward-looking agents in a dynamic setting. In this model, decision-makers are assumed to maximise their lifetime welfare subject to a range of institutional and economic constraints. It is how those institutional arrangements, such as the exclusion of owner-occupied housing from the AP means test, impact on household decisions that forms the focus of the analysis in this report.

The life-cycle hypothesis (LCH) characterises the early part of an individual's life as one where they are income rich and asset poor. Initially, individuals engage in education or related activities so as to develop a stock of human capital. Following this, they engage in the labour market. During this time, individuals accumulate wealth by forgoing consumption through saving, before entering retirement in the latter part of the life cycle. Agents are assumed to make decisions that have implications for the level and type of asset holdings at different stages of the life cycle. During retirement, those assets are generally drawn down, as individuals maintain a smooth flow of consumption through dissaving in the absence of employment-related income.

Consumption patterns, according to the LCH, are influenced by two considerations. First, it is generally assumed that individuals prefer consumption to be allocated smoothly across life-cycle periods. That is, in the absence of uncertainty, individuals allocate consumption so as to avoid large fluctuations in consumption over time. Second, individuals generally prefer to consume sooner rather than later. While the optimal pattern of consumption may reflect these considerations, individuals face a range of constraints or obstacles in achieving the desired pattern. For example, credit market constraints that prevent borrowing against future income mean that consumption in the early part of the life cycle may be lower than desired. Similarly, unexpected shocks to income, such as those associated with poor health or the loss of employment, may impact on an individual's ability to smooth consumption over time.

As noted, choices around saving, the allocation of consumption over time and asset accumulation are undertaken in a broader institutional context—including retirement income policy (described in Section 1.2) and the central role played by owner-occupied housing. Traditionally, households entered retirement as outright owners of their homes, but increasingly households are entering retirement with an outstanding mortgage debt secured over their principal place of residence. Notwithstanding the increasing importance of superannuation in Australia, it remains the case that owner-occupied housing represents the largest single asset in a household's portfolio at retirement (see Section 1.1: Table 3).

While the AP and other forms of pension income may nowadays still be received following retirement, the LCH posits that individuals will begin to consume their accumulated wealth, including housing wealth, at the point in the life cycle when they can be characterised as asset rich and income poor (i.e. as they approach retirement). Nonetheless, there is evidence that households do not treat housing wealth in the same way as other forms of wealth. In the context of the life-cycle model, housing has a particularly important role given its dual function as both a consumption and investment good. The purchase of owner-occupied housing generally represents the largest single transaction that households engage in over the life cycle. Moreover, as a durable asset, housing delivers a stream of consumption services over time and acts as a convenient store of wealth.

Conceptually, there are a variety of reasons why housing wealth may not be consumed in the same way as other forms of wealth, or differently to what is predicted according to the LCH. For example, the sociological literature highlights the psychological attachment individuals have to the family home and the desire of individuals to age in place. From an intergenerational perspective, the family home may also take on a special role. Suari-Andreu, Alessie and Angelini (2018) argue that as a bequeathable asset, housing plays an important role in the retirement savings puzzle and in explaining the reluctance of home-owning households to consume housing wealth. In essence, households derive satisfaction or utility from bequeathing housing to their offspring, reducing the likelihood that they will consume housing through selling the physical asset or via in situ financial transactions.

Institutional arrangements may also be important for explaining why households treat housing differently to other assets. As noted in Section 1.2, housing is treated concessionally in the Australian tax and transfer system. Taxes on the transfer of properties, such as stamp duty, may also provide a disincentive for individuals to transition into smaller, more appropriate, dwellings. More broadly, housing assets are in general lumpy,¹² and the high transaction costs associated with their purchase and disposal may discourage individuals from consuming them in a similar fashion to more liquid assets. Financial products that allow households to consume

¹² A 'lumpy' asset is one which must be acquired in a lump (a large, discrete unit) rather than in increments.

housing wealth in situ (such as reverse mortgages) are often perceived as expensive and complex (Productivity Commission 2015; Haurin and Moulton 2017).

Furthermore, consumption or use of housing wealth may differ from that of other assets because housing can potentially play an important insurance role. In effect, owner-occupied housing acts as precautionary savings and is seen as providing insurance against unexpected costs, such as those associated with health, that may arise in the future (Davidoff 2010).

The empirical analysis presented in subsequent chapters will explore a range of housing-related choices, behaviours and outcomes. In doing so, consideration will be given to how some of the factors described above are related to geographic mobility, downsizing and the consumption of housing wealth by older Australians.

1.4.2 Empirical methodology

The empirical approach in this report is quantitative in nature. Using a series of publicly available datasets, we describe and document the housing behaviours and outcomes of older Australians. A series of datasets is used in the analysis, reflecting the fact that each has its own strengths and limitations and can provide insights into different aspects of the behaviours and outcomes of interest. To identify the correlates of the behaviours of interest, a series of statistical or econometric models are estimated and presented. Detailed descriptions of these models are presented in Chapters 3 and 4. These empirical models capture the statistical associations between observable characteristics of individuals and variables of interest, including geographic mobility, downsizing decisions and the consumption of housing wealth.

It is important to stress that the analysis in this report represents the first step in understanding behaviours such as geographic mobility and downsizing by older Australians. The statistical analysis of such behaviours presents important challenges for the researcher. Consider, for example, the relationship between retirement and the propensity for an individual or household to exhibit geographic mobility. Ideally, to identify the *causal effect* of retirement on such an outcome, an experiment would be conducted in which individuals are randomly allocated to different retirement statuses. Following this random allocation, it would be possible to identify the causal impact of retirement status on geographic mobility by comparing the behaviours of individuals who were and were not retired. In general, it is not possible to conduct such an experiment. Rather, the researcher is presented with data about retirement status and geographic mobility for a set of individuals. While statistical techniques can be applied to identify the nature of the relationship between these characteristics and behaviours, one must take care in assigning a *causal* interpretation to the estimated relationship. There are a number of reasons why such caution must be exercised.

First, it is important to recognise that the outcome of interest, namely geographic mobility, is likely to be influenced by a range of factors (such as the health of the individual) and not just retirement status. In fact, it may be that a deterioration in health prompts both retirement *and* geographic mobility. Being able to disentangle these influences is important. Indeed, one of the strengths of the HILDA dataset used in this report is that a range of confounding effects can be incorporated into the statistical analysis. The statistical models reported in Chapters 2 through 4 use a variety of measures of the individual's socio-economic characteristics, along with other measures, to control for such confounding factors. In effect, the estimated statistical relationship between the housing-related measure and mobility is conditional on those other factors included in the empirical specification.

There are further challenges in modelling outcomes such as geographic mobility and downsizing. For one, it is likely that individuals with unobservable, but nonetheless important, characteristics exhibit certain behaviours. For example, individuals who are risk averse may be less likely to downsize, as they prefer to retain higher levels of precautionary saving in the form of housing wealth. If attitudes to risk are unobserved by the researcher, statistical relationships

may attribute a lower propensity to downsize to some other observable characteristic of the individual, such as low income. One benefit of using panel datasets such as HILDA is that such unobserved heterogeneity can be controlled for in a robust manner.

In summary, it is important to emphasise that in considering the analysis presented in this report one must be careful before attributing a causal relationship to the estimated statistical relationships. Rather, the analyses provide a means by which the stylised patterns in the data can be identified, and in turn inform more rigorous and nuanced analysis.

1.4.3 The datasets

The Australian Census Longitudinal Dataset

An original contribution of this study is the use of the Australian Census Longitudinal Dataset (ACLGD) to examine mobility and downsizing behaviours. The ACLGD is constructed by the ABS using information collected in the five-yearly Census of the Australian population. The 2011–16 ACLGD brings together a representative 5 per cent sample from the 2011 Census with corresponding records from the 2016 Census, producing a dataset with around 1.2 million records.¹³

The obvious advantage of the ACLGD is it provides an opportunity to provide insight into behaviours using a large representative sample of the Australian population. Such a consideration is particularly important when examining the behaviours and outcomes of older individuals, where sample sizes might otherwise be relatively small. Further, the data is longitudinal in nature and this provides an advantage over earlier analyses of downsizing behaviour that used information contained in the 2006 and 2011 cross-sectional Census data (Judd, Liu et al. 2014). The longitudinal feature of the data allows outcomes in 2016, such as geographic mobility and tenure, to be examined conditional on the situation and experiences of individuals in 2011.

While providing opportunities to examine patterns of behaviour that cannot be analysed using cross-sectional data, the ACLGD also has a key limitation. In particular, limited personal and financial information is collected from respondents to the Census. For example, wealth and its components are not recorded in the Census data, and thus it is not possible to examine how wealth evolves over the course of the life cycle.

The Household, Income and Labour Dynamics in Australia Survey

The Household, Income and Labour Dynamics in Australia (HILDA) Survey is a general population survey that follows individuals and households over time. The analysis in this report uses data from the HILDA dataset collected since 2001. Each year's survey includes detailed questions on household income, economic wellbeing, measures of labour market activity, and a broad array of socio-demographic characteristics. Housing-related information, such as tenure, the value of residential properties and mortgage debt held, is also collected in every wave. It is the richness of the data available, coupled with the longitudinal nature of the survey, which means that HILDA provides a unique opportunity to evaluate housing behaviours and outcomes over an extended period of time.

¹³ A matching algorithm is used to match observations of individuals across censuses. The algorithm results in an exact match for 72.7% of cases, and a further 3.3% of cases is confirmed via a probabilistic matching method. There is an estimated false link rate of 1.4% of cases. Individuals may not be matched for various reasons, although this is usually due to missing or inconsistent information (often for names, birth dates or addresses) or due to no 2016 Census record (resulting from departure from Australia, death or being missed in the Census) (ABS 2018a).

While each annual wave of HILDA includes an extensive set of questions that are repeated annually, there are also special topics or ‘modules’ that are one-off or repeated over longer intervals. Of particular relevance for this study is the wealth module, which asks respondents a comprehensive series of questions about their holdings of assets and liabilities. The wealth module was included in the survey in 2002 (Wave 2), 2006 (Wave 6), 2010 (Wave 10) and 2014 (Wave 14). Some of the analysis set out in Chapters 2, 3 and 4 draws on the detailed information available in the wealth modules.

The Survey of Income and Housing

The Survey of Income and Housing (SIH) is a household survey, undertaken by the ABS, which collects information on the sources of income, amounts received, housing characteristics, household characteristics and personal characteristics of Australian households. Though not a true panel dataset, the benefit of the SIH is the comprehensive set of information it provides on Australian households over an extended period. The survey was conducted—under the name The Survey of Income and Housing (SIH)—for most years from 1994/95 to 2003/04 (no survey was run in 1998/99 or 2001/02) and thereafter it has been conducted biennially under its current name. The repeated cross-sectional nature of the survey allows pseudo- or synthetic cohorts to be constructed, thereby facilitating analysis of how behaviours and outcomes differ across cohorts.¹⁴

¹⁴ Further information about the SIH can be found in the *Household Expenditure Survey and Survey of Income and Housing: user guide* (ABS 2017b).

2 Geographic mobility, downsizing and housing equity consumption

- Geographic mobility is a relatively rare occurrence among older Australians: annual rates vary from around 3 per cent per annum (for owners aged over 75 years) to around 18 per cent (for renters aged 55–64 years).
 - Among older Australians, geographic mobility generally involves local moves of a short distance (within the state).
 - The majority of older Australians residing in owner-occupied housing in 2001 remained in the same dwelling beyond 2016.
 - Downsizing is relatively rare among older Australians: of those older Australians in owner-occupied housing in 2001, only 10–15 per cent had downsized (in a physical or financial sense) by 2016.
-

In this chapter, we focus on identifying the nature and extent of geographic mobility, downsizing and housing equity consumption among older Australian households. This analysis is conducted using the ACLD and the HILDA datasets. Each dataset provides an opportunity to examine the housing-related behaviours of older Australians from a somewhat different perspective and, in doing so, provides a foundation upon which the analysis in subsequent chapters proceeds.

2.1 Existing literature and evidence

We begin by discussing why, from an economic perspective, individuals or households may exhibit geographic mobility. Following this, we describe the Australian and international evidence on geographic mobility, downsizing and housing equity consumption.

2.1.1 Geographic mobility

From an economic perspective, the process of geographic or residential mobility may be characterised as one in which individuals compare the expected level of utility associated with moving versus staying in their existing location, taking into account the direct and indirect costs of moving. In effect, if there is a net gain in utility from moving from the present location to an alternative location, then geographic or residential mobility may be observed. The economic framework highlights that a range of considerations, including the costs incurred when moving and the uncertainty associated with future outcomes, impact on whether a move is actually observed (Banks, Blundell et al. 2012).

Motivations for geographic mobility, along with the costs and benefits of geographic mobility, are likely to depend on age and demographic characteristics. Hence, rates of geographic mobility will vary across age and demographic groups. For example, employment opportunities are likely to be a far more important consideration for individuals aged less than 55 years (Whelan and Parkinson 2017). Life-cycle considerations and existing housing arrangements are also likely to be important factors contributing to differences in mobility rates. For example, it is well documented that individuals in rental tenures are significantly more likely to exhibit geographic mobility relative to other tenures (Productivity Commission 2014). This reflects, in part, the significantly higher transaction costs associated with mobility for owner-occupiers relative to

those in private rental tenures. As noted in Chapter 1, rates of home ownership are significantly higher among older individuals, resulting in lower overall rates of mobility among this group.

When considering patterns of geographic mobility, it is important to stress that various metrics can be used to capture this behaviour. For example, low rates of geographic mobility on an annual basis can mask substantial geographic mobility over a longer time period. Alternatively, a low rate of geographic mobility over a longer time frame may conceal a pattern whereby a small set of individuals or households move repeatedly.

Evidence documenting geographic mobility of older Australians is presented in Judd, Liu et al. (2014). Using the 2011 Census, rates of geographic mobility over the five-year inter-census period among those aged over 55 years varied between 15.6 per cent (for 65–74 years of age) and 23.2 per cent (for 55–64 years of age). In general, higher rates of mobility were exhibited by those in the 55–64 years age bracket and those aged 85 years and over. This pattern most likely reflects moves coinciding with transitions to retirement and into care facilities later in life, respectively. Overall, consistent with the work by the Productivity Commission (2014), rates of geographic mobility among older Australians over the five-year inter-census period were significantly lower than those exhibited by the general population (39.2%).

Drawing on data from the 2011 Census, the Productivity Commission (2014) noted that around 16 per cent of Australians who were in the labour force and aged between 15 and 64 years moved or changed address annually. This rate of mobility was greater than that exhibited by individuals in European countries, slightly higher than in Canada, but lower than in the US. It is important to note that most geographic mobility involves moves that are short and local in nature. While the focus of the Productivity Commission study was geographic mobility and its role in facilitating efficient functioning of the labour market, the authors noted that individuals aged 50–65 years are less likely to move relative to younger individuals. In general, mobility rates are shown to decline with age—in 2010 only around 8 per cent of households aged 55 years or over reported moving (Productivity Commission 2014).¹⁵

International evidence on mobility rates should be treated cautiously, as it will reflect the unique institutional, social and economic factors at play. Banks, Blundell and colleagues (2012) examined the geographic mobility and downsizing behaviours of older households in the US and Britain. Measuring housing transitions over a five-year period, in a similar fashion to Judd, Liu et al. (2014), they found that among owner-occupiers aged over 50 in the US, the majority (78.2%) did not move over a five-year period. Among the one-fifth who did move, the majority remained owner-occupiers. The highest rates of mobility were exhibited by those aged over 80 years, most likely associated with the move to aged care.

Rates of geographic mobility in Britain were found to be even lower, with only 12.5 per cent of owner-occupiers aged over 50 exhibiting geographic mobility over a five-year period—moreover, mobility rates were relatively flat across age groups. In comparison, renters exhibited substantially greater rates of geographic mobility than owner-occupiers in both the US and Britain. Nonetheless, older renters in Britain are substantially less likely to report geographic mobility over a five-year period (20%) compared to older renters in the US (63%).

For Europe, Angelini and Laferrère (2010) argue that, in most countries, geographic mobility decreases with age but increases significantly after age 80 as individuals move to nursing homes. They also report differences across countries, with significantly higher rates of mobility across all age groups in Sweden and Denmark, for example. The nuanced differences across Europe are not likely to represent a simple north–south divide, but rather reflect the diverse range of social, institutional and economic forces at play across countries.

¹⁵ Similar patterns are identified in an AHURI report by Whelan and Parkinson (2017).

2.1.2 Downsizing

As noted in Chapter 1, downsizing can take a number of forms, including physical or financial. Physical downsizing is generally characterised as a reduction in the number of bedrooms or rooms in a dwelling. Financial downsizing is associated with a decrease in the value of owner-occupied housing via a move to a less-expensive home or to a rental tenure.

There are a limited number of studies that have examined downsizing behaviour either in Australia or internationally, reflecting the paucity of data that documents changes in living arrangements over time. Judd, Liu et al. (2014) focussed on the nature and extent of downsizing by elderly Australians who reported moving after age 50. Using a self-collected survey, and defining downsizing as a reduction in the number of bedrooms, they found that around 43 per cent of moves could be characterised as downsizing. Extrapolating this to the Australian population who moved during the period 2006–11, the analysis suggests that among the cohort of movers aged over 50 years, the proportion who had downsized was around 50 per cent. There were, however, significant differences among age groups, with downsizing highest among those aged 65–74 years (51.1%) and lowest among those in the 75–84 years age bracket (32%). Estimates derived from the Census suggest that over the five-year period 2006–11, around a quarter of a million people, or some 9 per cent of Australians aged over 50 years, downsized.

Some limited international evidence on physical downsizing for the US and England is set out in Banks, Blundell et al. (2010). In both the US and England, they found that older individuals who decide to relocate tend to reduce the number of rooms in the dwelling. In the case of American households, the reduction in the number of rooms was 0.7. While households in England that moved also experienced a reduction in the number of rooms, its magnitude was approximately half that of households in the US. Among American households, the reduction in the number of rooms was found to be driven largely by home owners becoming renters, moving to dwellings with on average 2.3 fewer rooms.

Financial downsizing may take a number of forms, including trading down from a more expensive house to a cheaper one, or changing tenure from owner-occupation to rental. Evidence suggests that changing tenure from ownership to rental remains relatively uncommon, both in Australia and internationally. The Productivity Commission (2014) examined the tenure transitions of younger retirees (aged 55–64 years in 2002) and older retirees (aged 70–79 years in 2002) over the period 2002–13. The vast majority of retirees, including among the older group, remained home owners during this period, suggesting that accumulated housing wealth is not often accessed via a sale and change in tenure.

Using a 10-year time frame, Banks, Blundell et al. (2010) reported transition rates from ownership to non-ownership of 9 per cent for households in the US and 4 per cent for the United Kingdom (UK). In a 2012 study, the same authors reported that fewer than 5 per cent of home-owning households in the US, and 2 per cent in Britain, changed tenure and became renters over a five-year period. While tenure transition rates do tend to increase for older home owners, the rate remained at less than 20 per cent after age 80 in the US and less than 10 per cent after age 80 in the UK (Banks, Blundell et al. 2010). Chiuri and Jappelli (2010) considered transitions from owner-occupation for older households across countries. In general, ownership rates remained high across households aged between 50 and 80 years, and showed only slow rates of decline as individuals age. Moreover, the rates of decline estimated by examining cross-sectional surveys overstate the actual decline, given there are substantial differences in ownership rates across age cohorts in countries such as the UK.

Interestingly, analysis presented in Venti and Wise (2004) suggests that among older American households that moved and remained home owners, on average they increased the amount of housing equity, suggesting an accumulation, rather than decumulation, of housing wealth.

Nonetheless, there was evidence that among equity-rich and income-poor households, movers did tend to reduce the level of home equity.

2.1.3 In situ housing equity consumption

There is only limited evidence on the extent to which older households consume housing equity using financial products such as reverse mortgages. The Productivity Commission (2015) notes that such products remain a relatively small part of the Australian mortgage market, with only around 40,000 reverse mortgages or similar arrangements outstanding as of 2014. Using data from the HILDA dataset, Ong, Wood and colleagues (2015) found that the incidence of MEW varies from 13.2–18.1 per cent for households aged over 45 years during the period 2001–10. The use of MEW was significantly higher among households aged between 45 and 54 years, and generally declined with the age of the household head, suggesting that such products are not used to sustain consumption for older Australians as they enter and pass through retirement. International evidence on the use of MEW products also points to a lack of take-up or use of such products among both American and European households (Haurin and Moulton 2017).

A further strand of literature considers whether older households consume accumulated housing wealth by foregoing maintenance on their owner-occupied dwellings. Keese (2012) analysed the behaviour of elderly non-moving German households and found no evidence that they spend less on maintenance relative to other households. They were, however, less likely to undertake renovations. Qualitative research from Australia (Judd, Liu et al. 2014) suggests that older home owners recognise the challenges of maintaining the quality of existing dwellings, but often find it difficult to do so. In turn, the inability to maintain an existing property, especially gardens, is cited as a key reason for geographic mobility and downsizing.

2.2 Geographic mobility and downsizing: evidence from HILDA

In this section of the report, two features of the HILDA dataset are used to explore the geographic mobility and downsizing decisions of older Australians. The HILDA data has been collected since 2001 and as a consequence provides an opportunity to examine how some housing choices and behaviours evolve over time. The first piece of descriptive analysis focusses on the geographic mobility of older Australians. In particular, we compare older individuals in owner-occupation or rental tenures and consider how often they report exhibiting geographic mobility on an annual basis. This analysis provides an overview, at an aggregate level, of the residential mobility of older Australians. Additional analysis of mobility decisions, using the ACLD, is presented in Section 2.3.

The second piece of analysis in this section exploits the longitudinal nature of the HILDA dataset. Recall that the HILDA dataset follows the same set of individuals over time. In particular, this feature of the HILDA data provides an opportunity to consider housing transitions over the course of the life cycle. We examine the extent to which a set of older owner-occupiers make housing-related adjustments through geographic mobility or downsizing. The methodological approach relies on the use of 'survivor functions'.¹⁶ Survivor functions provide a graphical means of showing the extent to which individuals report moving from one state, such as owner-occupation, to an alternative state, such as rental tenure. Further, such functions allow graphical presentation of behaviours such as physical downsizing, by charting a transition,

¹⁶ A survivor function gives the probability that an object or 'state' of interest will survive or continue beyond a given time.

such as a move from an owner-occupied dwelling (the initial state) to another owner-occupied dwelling with fewer bedrooms (the destination state).¹⁷

The patterns of behaviour captured by the survivor function can be conceptualised by considering an individual who is residing in an owner-occupied dwelling in 2001 (recall that 2001 corresponds to the first wave of HILDA data). This individual can be characterised as being in a 'spell' (in a particular state), which in this case is defined as owner-occupation in a particular dwelling. The survivor function captures the likelihood that the individual will be observed to move out of or exit this initial state. In this way it is possible to shed light on what proportion of individuals make housing-related transitions over a period of time. We are particularly interested in the likelihood that such spells are observed to end through a change in address or geographic mobility across successive waves of HILDA. That geographic mobility may be accompanied by other changes, such as a shift in tenure status (to a rental tenure); moving to a dwelling with fewer bedrooms (physical downsizing); or moving to a dwelling with less housing equity (financial downsizing).

How should the survivor function be interpreted? Consider first a situation in which an individual may transition out of their initial state by exhibiting geographic mobility. In each period or year following 2001, the individual can be considered as being 'at risk' of exiting their current dwelling and transitioning to another dwelling. The survivor function estimates the probability that an individual 'survives' or remains in their existing dwelling past year j . At the 'commencement of time', which in this case corresponds to Wave 1 of HILDA, all individuals survive (as no one has yet changed their address) and so the value of the survivor function is one. As individuals report a change in address or geographic mobility across waves, the survivor function declines toward its lower-bound value of zero. If the lower bound is reached, that corresponds to a situation in which all individuals have moved out of their initial dwelling through the process of geographic mobility.

In the analysis that follows, a series of survivor functions are presented to capture the different types of transition that older individuals may make. First, we focus on geographic mobility and compare the behaviours of those individuals who were initially owner-occupiers with those who reported being in a rental tenure in 2001. This comparison is presented simply to highlight the significantly higher likelihood that individuals in a rental tenure exhibit geographic mobility. Following this, a series of survivor functions are presented for those individuals who were initially in owner-occupation. In particular, we consider: transitions into rental tenures from owner-occupation; and transitions which involve remaining in owner-occupation but downsizing in a physical sense (through a decrease in the number of bedrooms) or a financial sense (through a decrease in the amount of housing equity).

2.2.1 Geographic mobility rates

In Figures 3 and 4 we present the rates of geographic mobility for older Australians, broken down by age group and tenure status, for the period 2002–16.¹⁸ Consider Figure 3, which

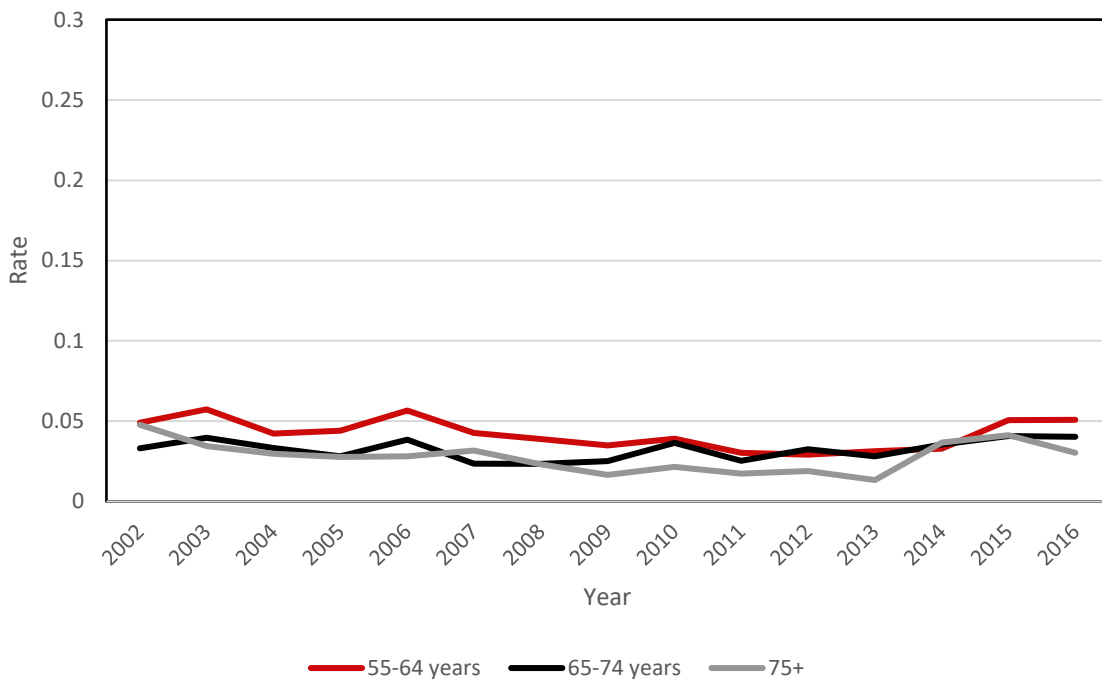
¹⁷ It is important to emphasise that the analysis in this report does not estimate the *determinants* of the length of spells in particular states. The 2001 sample of HILDA respondents that is analysed is a stock sample—that is, a set of individuals who have been in a particular state, such as owner-occupation, for varying durations. Stock samples are generally characterised by length-biased sampling, such that those who have been in a given state for a longer period are more likely to be observed. Modelling the statistical process by which such individuals are observed in the original state, and therefore the duration of spells in particular states, is beyond the scope of this report.

¹⁸ The HILDA dataset is first collected in 2001. Geographic mobility rates are calculated for moves between consecutive waves of HILDA denoted by t and $(t + 1)$. For example, the mobility rate for owner-occupiers in 2002 is the proportion of individuals in owner-occupation in 2001 (t) who report a change of address in 2002 ($t + 1$). That change of address may coincide with a change in tenure status and or downsizing behaviour.

depicts the annual geographic mobility rates for owner-occupiers over consecutive waves of HILDA. In 2002 around 8 per cent of owner-occupiers aged between 55 and 64 years reported residential or geographic mobility over the preceding 12 months. The patterns in Figure 3 highlight the relatively low rates of mobility experienced by owner-occupiers: between 3 and 5 per cent on an annual basis. Moreover, there is some evidence that among older Australians, the rates of geographic mobility are highest among those aged 55–64 years. Such a pattern is most likely tied to geographic mobility around the time of retirement (statistical analysis of this behaviour is reported in Chapter 3).

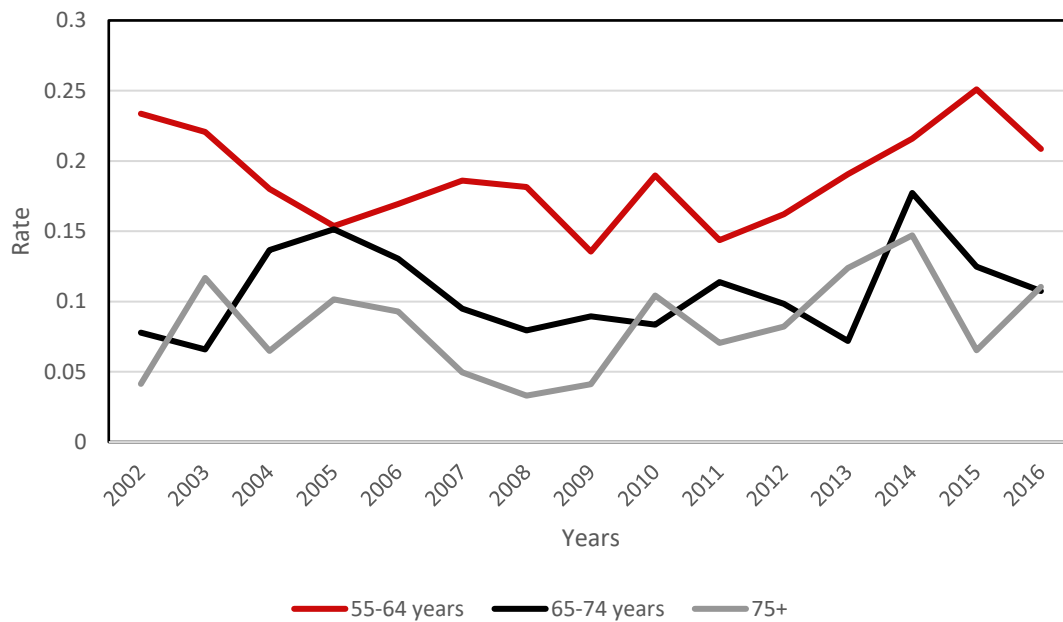
In Figure 4, the geographic mobility rates for renters are presented. The most noteworthy feature of the data here is the substantially higher rates of geographic mobility exhibited by renters relative to owner-occupiers: ranging from around 5 per cent per annum to 25 per cent. Similar to owner-occupiers, substantially higher rates of geographic mobility are exhibited by renters aged 55–64 years (18% on average over the period of analysis) and there is some evidence of an increasing rate of geographic mobility over time amongst this group.

Figure 3: Annual mobility rates, by age (2002–16)—owner-occupiers



Source: Authors' own calculations, using HILDA Waves 1–16.

Figure 4: Annual mobility rates, by age (2002–16)—renters



Source: Authors' own calculations, using HILDA Waves 1–16.

2.2.2 Survivor probabilities

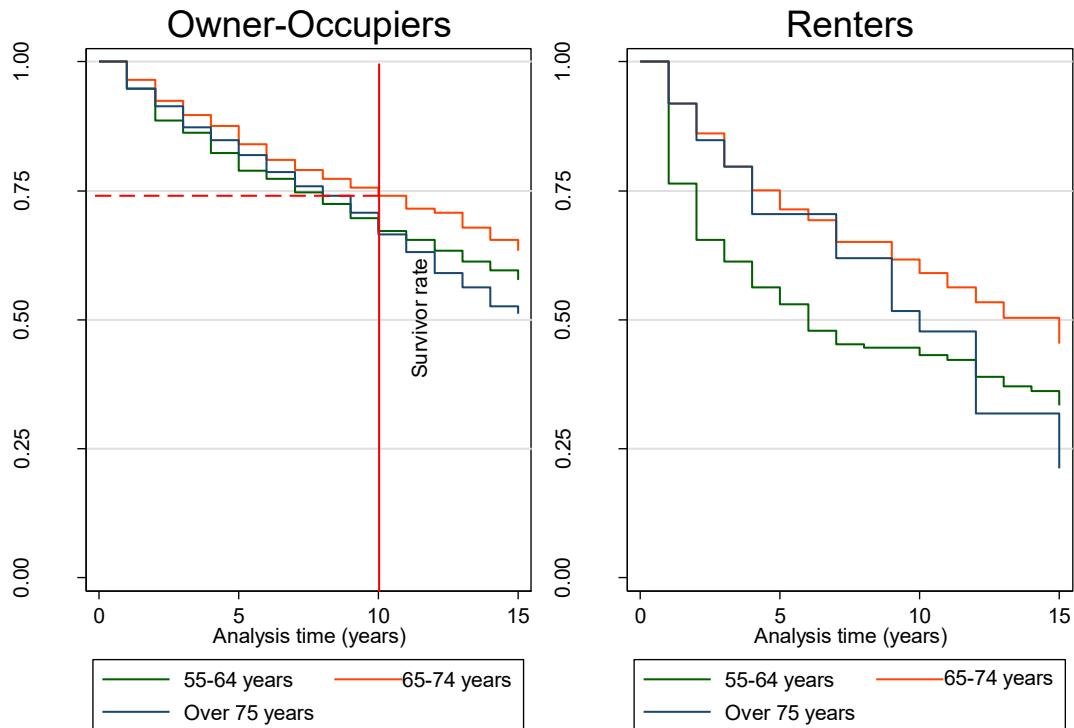
In Figures 5 to 8, a series of survivor functions are presented that demonstrate the tendency of older individuals to remain in the same housing tenure and residence identified in 2001. If individuals do move from their original residence, they must make a transition of some form—the survivor functions presented capture a range of transition types. The first type of transition considered is geographic mobility. Any geographic mobility that results in a change of address is considered to end the spell that was ongoing in 2001.

In Figure 5, we present the survivor functions for geographic mobility by tenure status and age (separately) in 2001. Given this report's interest in downsizing behaviours, the subsequent survivor functions focus on the behaviour of individuals who were owner-occupiers in 2001 (see Figures 6 to 8). For those individuals, we consider if the spell that was current in 2001 ended via one of the following types of transition, which can be characterised as physical and/or financial downsizing:

- a transition from owner-occupation into a rental tenure
- a transition from owner-occupation to another owner-occupied dwelling that had fewer bedrooms (physical downsizing)
- a transition from owner-occupation to another owner-occupied dwelling in which the housing equity was lower (financial downsizing).

It is important to correctly interpret the survivor functions presented. Consider the survivor function for owner-occupiers in Figure 5. The red line at year 10 indicates that among those individuals aged 65–74 years in 2001 and residing in an owner-occupied dwelling, by 2011 approximately 75 per cent had not moved—that is, they had 'survived' and remained in their original dwelling. The survivor function shows a decrease over time, demonstrating that increasing numbers of individuals have exhibited geographic mobility over time.

Figure 5: Survivor function for geographic mobility by age (2002–16)



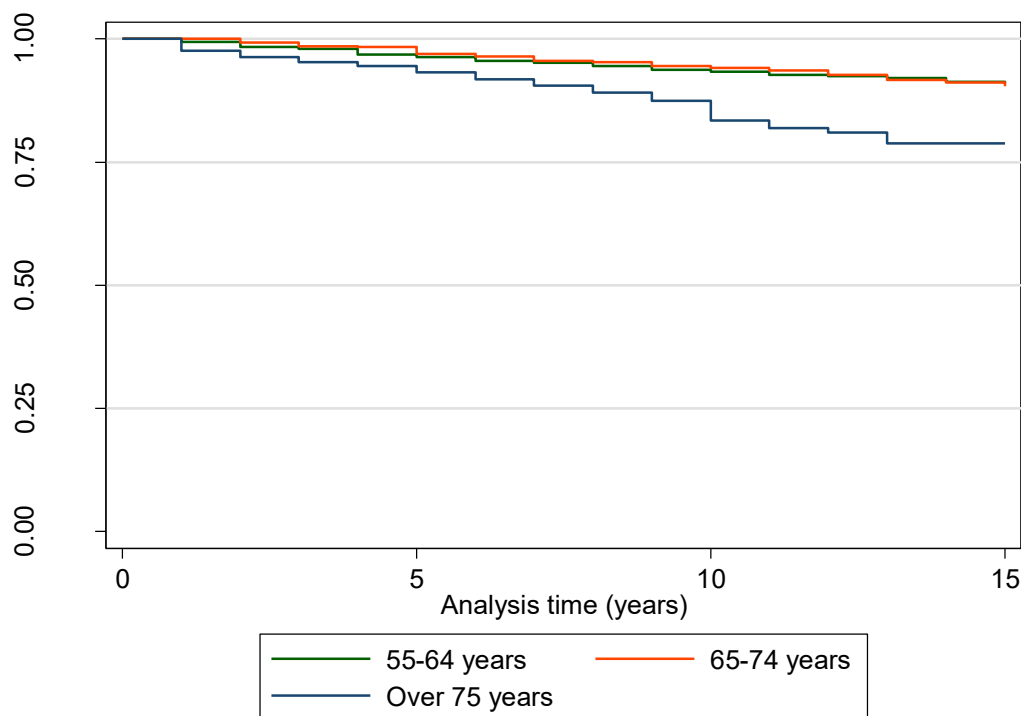
Source: Authors' own calculations, using HILDA Waves 1–16.

What does the analysis of the HILDA data show? First, there is a remarkable amount of inertia among owner-occupiers. Even among individuals aged over 75 years in 2001, more than half remain in their original residence in 2016. Among younger age cohorts, an even higher proportion remain in their original dwelling in 2016. The survivor function for individuals who were initially aged 75 and over lies below those of the other two age groups, perhaps reflecting a move to other accommodation, such as nursing homes, as they age. In comparison, the survivor functions for renters are substantially lower than those for owner-occupiers across all age groups. In fact, less than half of those individuals in rental tenure in 2001 remained in that same dwelling by 2016. Such a pattern is of course consistent with the observation noted elsewhere that individuals in rental tenures tend to exhibit far less housing security and greater mobility.

Figure 6 presents the rate of tenure transition for individuals who were owner-occupiers in 2001. Specifically, the spell that was current in 2001 is considered to have ended if the individual moved into a rental tenure. This transition type allows individuals to release the equity contained in their dwelling for non-housing consumption purposes. Among those aged under 75 years in 2001, very few individuals can be considered to have downsized by moving from an owner-occupied dwelling to rental tenure: by 2016, around 90 per cent of those 'at risk' of entering into a rental tenure had not done so. While the rate was somewhat higher among those aged 75 years and over in 2001, it remains the case that only around 20 per cent had transitioned into a rental tenure by 2016. It is important to stress that there are only a relatively small number

of observations of individuals aged 75 and over in HILDA in 2001 who are still observed in 2016 so it is likely that the estimates are relatively imprecise.¹⁹

Figure 6: Survivor function for tenure transitions, by age (2002–16)



Note: This figure presents the rate of tenure transition for individuals who were owner-occupiers in 2001, and who subsequently moved to rental tenure.

Source: Authors' own calculations, using HILDA Waves 1–16.

In Figures 7 and 8, the physical and financial downsizing behaviours of those individuals who were owner-occupiers in 2001 are presented. In terms of physical downsizing, as measured by a decrease in the number of bedrooms (see Figure 7), the survivor functions indicate that though downsizing does occur, the rate is relatively low for all age groups. Even among those aged over 75 in 2001, who display the highest rate of downsizing, fewer than 15 per cent of individuals in owner-occupied dwellings in 2001 had moved to another owner-occupied dwelling with fewer bedrooms by 2016. Indeed, the extent of physical downsizing among all age groups in owner-occupied dwellings in 2001 remained relatively low over the period ending in 2016.

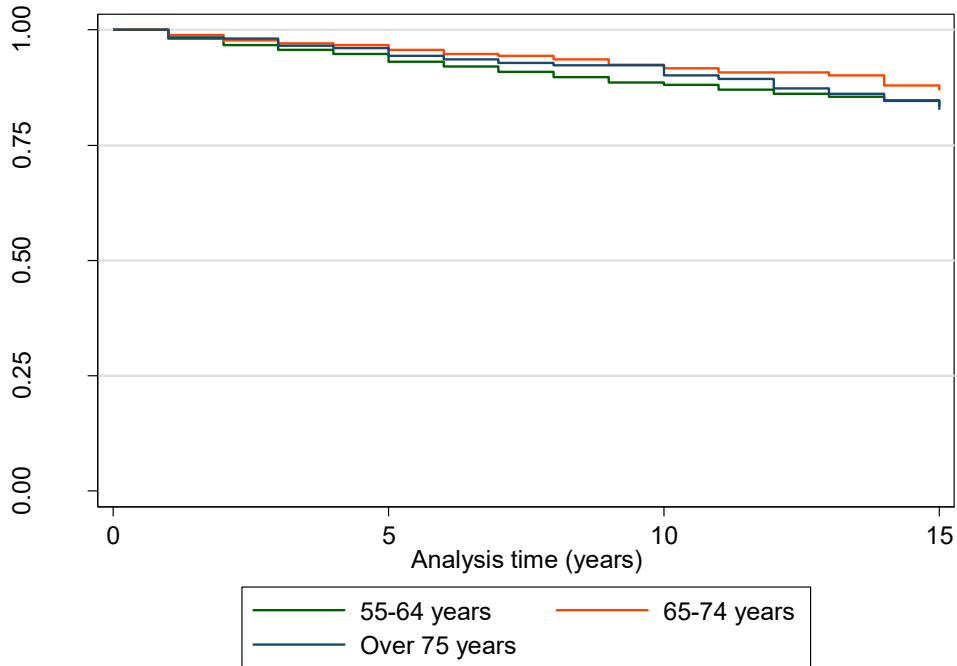
Though there is more evidence of financial downsizing (see Figure 8), it remains the case that among all groups fewer than 20 per cent of individuals had transitioned into another owner-occupied dwelling and reduced their net level of housing equity in the process. Such a pattern is consistent with the behaviour observed elsewhere; namely, that older Australians are generally reluctant to consume their housing wealth or equity over the course of their retirement.

The graphical evidence provided by the HILDA data tends to confirm existing evidence around the relatively low rates of geographic mobility, at least among owner-occupiers. Moreover, there is little evidence that owner-occupiers downsize, even allowing for the considerable period of

¹⁹ An examination of the confidence intervals around the survivor functions indicates that the survivor function for those aged over 75 is significantly different from those for the other two age groups. Nonetheless, only around 60 individuals aged 90 and over who were owner-occupiers in 2001 remain in HILDA in 2016.

time that the HILDA data follows individuals. In the following section, we turn to evidence on geographic mobility and downsizing from the ACLD.

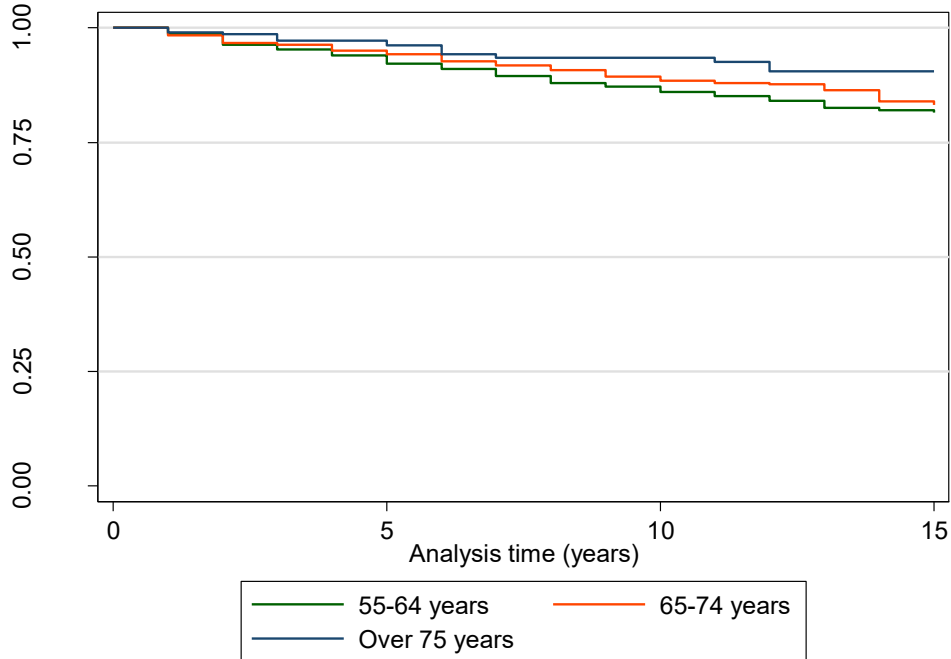
Figure 7: Survivor function for physical downsizing, by age (2002–16)



Note: This figure presents the rate of transition for individuals who were owner-occupiers in 2001, and who subsequently moved to an owner-occupied dwelling with fewer bedrooms.

Source: Authors' own calculations, using HILDA Waves 1–16.

Figure 8: Survivor function for financial downsizing, by age (2002–16)



Note: This figure presents the rate of tenure transition for individuals who were owner-occupiers in 2001, and who subsequently moved to an owner-occupied dwelling of lesser value.

Source: Authors' own calculations, using HILDA Waves 1–16.

2.3 Geographic mobility and changes in tenure: evidence from the ACLD

The ACLD provides an opportunity to consider the extent of geographic mobility of older Australians over the inter-census period 2011–16. Moreover, the large sample size provided by the ACLD allows more precise estimates of the mobility rates across different types of tenures and demographic characteristics. Table 5 presents mobility rates over the five-year inter-census period, broken down by age, tenure status and partner status in 2011. It is important to stress that tenure status here refers to the nature of the dwelling that the individual resides in on Census night. That is, whether it is owner-occupied, a rental tenure or some other form of tenure. Unlike earlier studies, such as Judd, Liu et al. (2014), the geographic mobility reported in Table 5 is based on repeated observations of matched individuals.²⁰

Overall, the patterns identified in the ACLD are consistent with those found in the HILDA data. For example, the mobility rates highlight the inertia exhibited by those individuals who were owner-occupiers in 2011, even among older age groups. For example, among those aged under 75 years and single (partnered) approximately 90 (94) per cent remained owners over the period 2011–16. Even among those aged 75 years or older, ownership rates remained at approximately 80 (90) per cent for singles (partnered) individuals. Similarly, few individuals moved from ownership to rental tenure. The largest transition out of ownership occurred for those aged over 75 years, most likely reflecting a move to aged care accommodation. Like the analysis of HILDA, analysis of the ACLD shows significantly higher rates of geographic mobility among renters. Among the oldest renters (75 years and over), around 55 per cent of individuals remained in the same dwelling in 2016. Again, a clear pattern emerges of an increase in transition rates after age 75 into ‘Other’ tenures, which include nursing homes and aged care facilities.

Finally, we note that among those who were in rental tenure in 2011, between 13 per cent (single individuals aged 75 years and over) and 31 per cent (partnered individuals aged 55–59 years) reside in owner-occupied dwellings in 2016. This most likely reflects a pattern whereby individuals are only in rental accommodation for a temporary period, before moving into their own owner-occupied dwelling or moving in with relatives who own a dwelling. An examination of tenure transitions undertaken by the Productivity Commission using the HILDA data suggests that a sizeable proportion of pre- and post-retirement cohorts initially in rental tenure in 2001 transition into home ownership by 2011 (Productivity Commission 2015: 63). However, exact estimates, which would allow for a direct comparison with the estimates reported in Table 5, are not provided.

²⁰ As noted in Chapter 1, the ACLD is a longitudinal dataset in that the individuals are matched across consecutive censuses using a matching algorithm, rather than exact identification of individuals.

Table 5: Geographic mobility, by age, tenure and partner status (2011–16)

	Age in 2011 (years)				
	55–59	60–64	65–69	70–74	75+
Single owner in 2011					
Remained owner 2016 (%)					
<i>No move</i>	75.49	77.00	78.73	80.99	75.44
<i>Move</i>	15.35	14.70	12.56	9.25	6.49
Owner to renter	7.07	5.66	4.89	4.61	2.65
Owner to other	2.09	2.60	3.82	5.15	15.42
Sample size	44,897				
Partnered owner in 2011					
Remained owner 2016 (%)					
<i>No move</i>	80.65	80.85	82.07	83.07	79.38
<i>Move</i>	13.70	13.52	11.74	10.28	8.37
Owner to renter	3.73	3.24	2.90	2.61	2.23
Owner to other	1.92	2.39	3.29	4.05	10.02
Sample size	136,903				
Single renter in 2011					
Remained renter 2016 (%)					
<i>No move</i>	50.47	54.88	58.57	61.57	55.77
<i>Move</i>	26.45	22.73	20.95	17.53	12.19
Renter to owner	20.11	18.52	15.34	14.59	12.96
Renter to other	2.96	3.87	5.13	6.31	19.09
Sample size	14,875				
Partnered renter in 2011					
Remained renter 2016 (%)					
<i>No move</i>	40.83	42.40	48.94	54.06	53.26
<i>Move</i>	25.87	22.35	21.04	19.09	15.28
Renter to owner	31.12	32.55	26.59	21.12	17.77
Renter to other	2.18	2.70	3.43	5.73	13.69
Sample size	13,516				

Note: 'Other' includes nursing homes and aged care facilities.

Source: Authors' own calculations, using the ACLD 2011–16.

2.4 Policy development implications

The analysis in this chapter identifies the magnitude and nature of geographic mobility and downsizing behaviours among older Australians. The patterns identified confirm what has been published elsewhere; namely, relatively low rates of geographic mobility among older Australians, especially those in owner-occupied dwellings. The novelty here is the analysis of geographic mobility and downsizing behaviours from owner-occupation using the HILDA data. The survivor functions presented clearly highlight the limited extent of downsizing, either physical or financial, engaged in by older Australians. Patterns around the extent of geographic mobility and tenure transitions from owner-occupation were confirmed using the ACLD.

From a policy perspective, the question raised by these results is whether the reported degree of geographic mobility and downsizing behaviours is too much or too little. This is a normative question and beyond the scope of the descriptive analysis in this chapter. Rather, the analysis here prompts further inquiry into the reasons for, barriers to, and consequences of geographic mobility and downsizing behaviours. These questions are considered in the following two chapters. We return our attention to the policy implications of the analysis in Chapter 5.

3 Correlates of geographic mobility and downsizing

- Existing evidence around mobility and downsizing among older individuals suggests that these behaviours are generally associated with key life events, such as a deterioration in health, a transition to retirement or widowhood.
 - Estimates from the ACLD show that individuals who downsize, as measured by a decrease in the number of bedrooms, are more likely to have transitioned from being partnered to being single, or to have left the labour force.
 - Estimates from the HILDA data highlight several important factors associated with housing mobility at older ages in Australia. These include demographic transitions (particularly those associated with partnership status or children leaving home), and labour force transitions (primarily at the age of retirement).
 - The results do not reveal a strong systematic relationship between the parameters of the AP and the geographic mobility and downsizing decisions of older Australians. However, we do find that the AP asset means test thresholds create some disincentives for downsizing behaviour.
-

Evidence on the nature and prevalence of geographic mobility and downsizing behaviours by older Australians is presented in Chapter 2. In this chapter, the focus is on the correlates—commonly referred to as ‘push’ and ‘pull’ factors²¹—associated with geographic mobility and downsizing behaviours. In particular, we consider the associations between the observable characteristics of individuals, changes in those observable characteristics, and the mobility or downsizing behaviour of interest. Our analysis of the HILDA data uses a multivariate statistical framework. As noted in Chapter 1, in the absence of a natural experiment, the relationships uncovered here should be interpreted as associations rather than causal in nature. Importantly, the analysis provides an opportunity to highlight the range of factors that are associated with geographic mobility and downsizing behaviours.

We begin the chapter by examining the existing literature regarding geographic mobility and downsizing. In the context of geographic mobility, the focus will be on older individuals. For younger individuals, existing research highlights the potentially important role played by employment opportunities and labour market shocks as push and pull factors in the decision to move. A key issue in that context is how labour market opportunities feed into the mobility decision. While extensive, that literature remains inconclusive. For example, it is not entirely clear whether individuals move to areas with higher unemployment rates due to relatively cheaper housing, or are induced to move to areas with higher housing costs but greater employment opportunities. For further discussion, see Whelan and Parkinson (2017).

For older individuals, labour market considerations associated with employment opportunities are expected to play a less important role in driving geographic mobility and downsizing—when they do play a role, it is likely to be in the context of transitions to retirement. For older individuals, push factors may include ill health, the loss of a spouse/partner, or financial

²¹ The economic factors that motivate migration. ‘Push factors’ are the factors that compel or encourage a person to leave their current place and move to another. ‘Pull factors’ are the factors that attract a person to a particular place.

considerations. Pull factors may include a desire to be closer to family, or a better lifestyle (Productivity Commission 2015). Moreover, mobility among older individuals is often associated with key life events. These events along with push/pull factors, form the focus of the discussion of the literature, below, and inform the statistical modelling that follows.

3.1 Correlates of geographic mobility and downsizing: literature review

3.1.1 Retirement and labour market status

Among older individuals, existing evidence suggests that mobility and downsizing behaviours are often precipitated by, or at least associated with, retirement and withdrawal from the labour force. Conceptually, there are a number of reasons why this may be the case. Retirement means that locational constraints associated with employment may no longer be binding and a geographic move may coincide with a lifestyle change. From an economic perspective, retirement from the labour force is likely to have significant implications for the financial circumstances of individuals, which may in turn induce changes in housing and non-housing consumption. Access to accumulated wealth in the form of a pension or superannuation savings may provide an opportunity to increase housing consumption. Alternatively, the reduction in income that is associated with withdrawal from the labour force may encourage individuals to unlock accumulated housing wealth.

Ermisch and Jenkins (1999) focussed on the geographic mobility and downsizing behaviours of individuals aged 55 and over in Britain. They argue that geographic or residential mobility may facilitate adjustments that correct for 'housing disequilibrium' or a level of housing consumption which differs from the preferred or optimal level. Downsizing is measured by reference to the number of 'excess rooms' in the dwelling, changes in tenure, and decreases in housing costs (measured as the value of an owner-occupied dwelling or rental costs). While geographic mobility is relatively rare in Britain, the empirical analysis identifies that an individual's own retirement, and the retirement of their spouse, encourages geographic mobility. In general, there is evidence that movers adjust their housing consistent with being in a 'disequilibrium' position, with a majority of movers reducing the number of rooms. Though less pronounced, for a large proportion of owners and renters, geographic mobility is associated with a reduction in housing value or costs. It is noteworthy, nonetheless, that around one-quarter of owner-occupiers who moved transitioned into a more expensive owner-occupied property. Evidence from a cross-country study of Europe also found that retirement is associated with geographic mobility, and for some northern European countries (including Denmark, Finland and Germany), with transitions from ownership to renting (Tatsiramos 2006).

A more recent study, by Banks, Blundell et al. (2010), compared the behaviour of households in the US and the UK. While they found strong evidence that withdrawal from the labour force is associated with geographic mobility in both countries, there was little evidence that retirement coincides with decreases in the level of housing consumption (measured as a decrease in the number of bedrooms). In a separate study, the retirement status of individuals and their spouses was found to be positively associated with mobility in both the US and the UK (Banks, Blundell et al. 2012). Moreover, this was the case for both intra- and inter-regional moves, suggesting that such moves may be motivated by lifestyle factors around the time of retirement. While there is evidence that transitions into retirement are positively associated with geographic mobility for renters, there is little evidence that housing-related costs for renters change following geographic mobility in either the US or the UK.

There is limited evidence available for Australia that directly addresses the question of how a transition to retirement is related to geographic mobility or downsizing. A comparison of movers who did and did not downsize suggests that while labour market status is similar across both

groups, downsizers were more likely to report being fully retired compared with non-downsizing movers (Judd, Liu et al. 2014). Moreover, the Productivity Commission noted that if downsizing does occur, it generally takes place relatively early in retirement, with over 85 per cent of those downsizing doing so prior to turning 70 (Productivity Commission 2015).

3.1.2 Widowhood and relationship status

The existing literature provides mixed evidence on how changes in partner/relationship status or widowhood are related to geographic mobility and downsizing patterns. Intuitively, a change in the household structure would seem likely to lead to adjustment in desired housing consumption, in part because housing needs will change but also because there may be important resource implications. When individuals separate or lose a partner, the economies of scale associated with housing choices may no longer be available. Conversely, the addition of a spouse is likely to increase the overall level of household wealth. How the desired and actual level of housing consumption changes, and in turn whether this prompts geographic mobility or downsizing, is therefore likely to be quite nuanced.

In a study of the US and the UK, Banks, Blundell and colleagues found that becoming widowed is in general associated with a *lower* probability of geographic mobility (2010: 363). In the UK, however, there is some evidence that, among those who do move, widowhood is associated with a higher probability of moving to a smaller property, as measured by the number of bedrooms (p. 366). In contrast, there is evidence that a change in partner status, such as a transition from married to single, is associated with a greater likelihood of geographic mobility for owners in both the US and the UK (Banks, Blundell et al. 2010; 2012). Notably, the evidence around changes in relationship status and the value of housing consumed for owners is mixed. For example, in the US a transition from being partnered to being single is associated with a reduction in the value of housing occupied among those who move. In comparison, a transition from single to partnered status coincides with an increase in the value of housing consumed among owner-occupiers who move. Interestingly, widowhood appears to have no effect on the value of housing consumed by movers in the US, but is associated with an increase in the value of housing in the UK (Banks, Blundell et al. 2010: 371).

More general evidence for Europe suggests that widowhood is associated with geographic mobility, as well as with transitions from ownership to renting in northern European countries including Denmark, Finland and Germany (Tatsiramos 2006). Similarly, a study that examined the behaviour of French widows suggested that observed housing and location adjustments were consistent with moves to smaller dwellings that were more accessible and located close to amenities, especially apartments in the rental sector (Bonnet, Gobillon et al. 2010).

For Australia, Judd, Liu et al. (2014) reported that the relationship status of downsizers and other movers is similar, though single respondents were marginally more likely to have reported downsizing compared with individuals in couple relationships. Such a pattern is consistent with a transition to single status, either through the death of a spouse or the end of a relationship, being associated with the move to a smaller, more manageable dwelling.

3.1.3 Household structure and family considerations

Changes in household structure associated with the departure of dependent children may be important precipitators of moving and downsizing. In a life-cycle context, such events are likely to be associated with significant changes in housing requirements, both in terms of the number of bedrooms required but also in terms of need for local amenities such as schools. It is important to note that such changes are likely to be affected by social, economic and demographic developments that may have seen adult children reside in the parental home for an extended period. In addition, there is some evidence that adult children are increasingly likely to return to the parental home following events such as the breakdown of their own

relationships. This may in turn impact on the housing choices of older Australians (Liu, Easthope et al. 2013).

International studies indicate that departure of children from the dwelling is positively related to geographic mobility decisions of households in the US, but is less so in the UK (Banks, Blundell et al. 2010; 2012). Home-owning households in the US that exhibit geographic mobility report moving to houses of lower value and with fewer bedrooms, which is consistent with the departure of dependent children from the household. No such pattern is identified in the UK (Banks, Blundell et al. 2010).

While information is not available on the departure of children from the household in the Australian study by Judd, Liu et al. (2014), the researchers found that fewer downsizers reported having three or more people in the household (3.1%) compared to other movers (6.4%). This suggests that as children leave the family home, individuals who move tend to reduce their housing consumption, as measured by the number of bedrooms commensurately.

While the departure of children from the family home may enable downsizing, family-related reasons may also be an important pull factor in encouraging geographic mobility. For example, Ermisch and Jenkins (1999) found that around 14 per cent of home owners in the UK, and 9 per cent of renters, reported moving closer to family as one of the main reasons for moving. Similarly, for Australia, there is evidence that being closer to relatives and friends is an important consideration both among movers who downsize and those who do not downsize. Across all age groups older than 50 years, more than one-quarter of movers identify family as a consideration in the moving decision (Judd, Liu et al. 2014).

3.1.4 Health status

It might be expected that significant changes in health mean that existing dwellings are no longer suitable and a move to more appropriate accommodation is required. While this move will often be associated with issues around accessibility, physical dimensions of the dwelling and maintenance requirements might also represent a significant push factor that influences mobility and downsizing. Painter and Lee (2009) highlight another issue that is pertinent in the context of the life-cycle model; namely, that a deterioration in health may necessitate accessing accumulated housing equity to meet unexpected health costs.

Evidence from the UK suggests that while those individuals who are more limited in their daily activities are more likely to exhibit geographic mobility, there is no apparent relationship between changes in health status and geographic mobility (Ermisch and Jenkins 1999). Interestingly, the evidence from the UK suggests that rental tenants are far more likely than owners to identify health as a reason they moved. This may reflect the inability of rental tenants to make adjustments to dwellings as they age and their health deteriorates. In general, evidence from the US and the UK does not indicate that health, or a deterioration in health status, is strongly related to geographic mobility among older owners or renters (Banks, Blundell et al. 2010).

For Australia, Judd, Liu et al. (2014) reported that there are few movers who identify their own health or disability, or that of a partner, as being an important consideration in the decision to move. Nonetheless, in general, health was a more important reason for moving among those who downsized compared with movers who did not downsize. Across age groups, those aged over 85 were more likely to cite health issues as a factor in downsizing. Moreover, disability as a consideration in the moving decision tends to be cited with increasing frequency as individuals' age.

3.1.5 Financial and economic considerations

Of particular interest in this study is the role that financial and economic considerations play in housing-related decisions associated with geographic mobility and downsizing. Recall that

downsizing provides one mechanism by which older individuals can access accumulated housing wealth for non-housing consumption purposes. In general, however, there is little direct evidence of how financial circumstances are associated with the decision to move and or downsize.

Banks, Blundell et al. (2010) analysed the behaviour of older households in the US and the UK. Their statistical analysis of data regarding financial circumstances of households indicates that a higher level of financial assets is associated with a lower probability of geographic mobility for owners in the US under 70 years of age, but a higher probability of mobility for owners over 70 years of age. In comparison, among renters in the US, higher levels of financial assets are associated with higher rates of geographic mobility. There is no evidence that the level of financial assets is important for the mobility decision of owners or renters in the UK.

As the major component in the wealth portfolio, it might be expected that having greater housing wealth would facilitate mobility decisions, offering an opportunity for households to align actual and preferred housing consumption. Indeed, evidence from the US and the UK suggests that owner-occupiers who report a higher house value are more likely to exhibit geographic mobility. In contrast, a higher level of home equity is associated with a lower probability that the household exhibits geographic mobility (Banks, Blundell et al. 2012). Banks, Blundell and colleagues argue that such a pattern may reflect a disequilibrium between actual and desired housing consumption for those in higher-valued properties, inducing or enabling geographic mobility and downsizing. In comparison, for a given value of the dwelling, greater equity corresponds to lower mortgage repayments, making geographic mobility less likely. More recent evidence for the US suggests that a 10 per cent increase in the loan-to-value (LTV) ratio of a dwelling is associated with a 7–9 per cent increase in the probability of downsizing (Bian 2016).

Following the global financial crisis (GFC) there was a concern that households experiencing falling house prices and negative equity might experience 'spatial lock-in' (Whelan and Parkinson 2017). While particularly pertinent to those of working age, who may face a need to relocate for employment purposes, such a situation also potentially poses challenges to older individuals. Banks, Blundell et al. (2012) found statistically significant evidence that negative equity is associated with a lower probability that a household reports geographic mobility, in both the US and the UK.

In Australia, a key concern is the interaction between the tax and transfer system and housing-related decisions such as downsizing. In this context, it is notable that the Productivity Commission found very little evidence that older Australians decide not to sell their homes due to concerns around eligibility for the AP (2015: 83). Nonetheless, using the HILDA data, Sane and Piggott (2011) found that AP recipients are more likely to move than non-AP recipients, though the former are less likely to financially downsize. Such a finding is consistent with a pattern whereby those households that may be affected by the AP means test are less likely to trade down. While statistically significant, the estimated impact is small in terms of its economic or practical significance.

Judd, Liu et al. (2014) found that financial difficulties are generally not identified as reasons for either downsizing or other types of moves, with fewer than 10 per cent of those who moved citing this as a factor in the downsizing decision. In that study, those who had downsized were somewhat more likely to report their main source of income as the full AP (22%) compared to movers who did not downsize (18%). Given that the survey covered individuals aged above 50 years, a significant proportion (20%) of downsizing and non-downsizing movers reported wages or salaries as their main source of income.

Interestingly, there is some evidence that greater house price volatility is associated with a higher likelihood that home-owning households will exhibit geographic mobility. Households generally hold less-risky portfolios as they age, and exposure to housing price risk in a relatively

volatile housing market may thus motivate geographic mobility. On the other hand, a desire to increase consumption by releasing accumulated housing wealth through downsizing may be more challenging in an unsettled housing market (Banks, Blundell et al. 2010).

3.1.6 Lifestyle and amenities

Among older households, geographic mobility may be motivated in part by lifestyle, neighbourhood and amenity considerations. For example, Banks, Blundell et al. (2012) found that climate is a significant explanatory factor for geographic mobility for older households in the US. There is less evidence of this being the case amongst British households. Intuitively, the temperature variation across regions is markedly smaller in Britain relative to the US, leading to less mobility motivated by a desire for a better climate.

The analysis of Australian movers in Judd, Liu et al. (2014) identified 'lifestyle considerations' as being important motivators for the moving and downsizing decision. While not defined explicitly, lifestyle factors included a range of considerations, such as the availability of shops, transport and other services. Anecdotal evidence from qualitative surveys also points to a range of lifestyle considerations, such as climate, local amenities and a slower pace of life, as key factors in the mobility of older movers in Australia (Judd, Liu et al. 2012).

There is some evidence that tax levels are a consideration for older home owners in both the US and the UK. This is unlikely to be as important in Australia, where local taxes tend to be lower and are not used to fund an extensive set of local amenities and activities compared with countries such as the US. Nonetheless, historically the imposition of death duties or inheritance taxes were identified as motivators for older Australians to move to lower-tax states such as Queensland (Grossman 1990).

3.1.7 In situ consumption of housing wealth

The primary focus of the analysis in the remainder of this chapter is on geographic mobility and downsizing decisions among older households. Nonetheless, in situ consumption of housing wealth should be mentioned, as it has become more readily achievable through innovations that allow households to access housing equity via financial products such as reverse mortgages. While no empirical analysis of in situ housing equity consumption is presented in this report, it is nonetheless useful to consider who uses such products in the context of a broader discussion of housing equity or housing wealth consumption.

Ong, Wood and colleagues (2015) used the HILDA data to analyse various mechanisms via which Australian home owners consume accumulated housing equity. Though in situ consumption of housing wealth is described in the study, the exact nature of the financial product used to facilitate the withdrawal of the equity is not identified in the empirical analysis. Among home owners aged over 65, the authors found that households that used MEW were more likely to be married and have higher levels of education. The latter may reflect greater financial literacy and a willingness to use more advanced financial products. Such households were also more likely to be active in the labour force and have a higher level of household income, suggesting that the withdrawal of equity may be replenished subsequently. This suggests that it is unlikely that such households are taking advantage of reverse mortgage products. As expected, such households also tend to have higher-value homes against which the equity is being withdrawn.

International evidence similarly provides limited insight into the characteristics of those who use mortgage equity release products. A study of households aged over 55 in the UK found that those households that used equity release products were more likely to be 'middle-aged' retirees (aged between 65 and 74 years) and tended to have lower levels of financial wealth (French, McKillop et al. 2018). The analysis highlights that economic incentives, especially high transaction costs, likely discourage housing equity withdrawal. Among Dutch households, Ebner

(2013) reported that individuals who are more optimistic around future house price developments are more likely to use products such as reverse mortgages. More generally, Haurin and Moulton (2017) argue that the low take-up of MEW products across Europe reflects a range of considerations, including the loss of the long-term insurance provided by housing equity, the tax treatment of withdrawals, and legal barriers that limit the development of markets for products such as reverse mortgages.

One final means by which households may consume the equity in their home without moving is through reduced levels of maintenance. Davidoff (2004) examined the behaviour of older American households and found that home maintenance expenditures tend to decrease after age 40. Some, but not all, of the difference in the behaviour of older households can be associated with the fact that older home owners tend to have lived in their dwelling for a longer period than younger home owners.. Evidence from Germany, presented by Keese (2012), suggests that death of a spouse may be associated with a greater tendency to neglect home maintenance. Interestingly, reforms to funding arrangements for long-term healthcare in Germany, whereby insurance programs provided funding for both institutional and non-institutional care arrangements, are associated with increases in the renovation expenditures of elderly households. This would suggest that such households are not retaining housing wealth to fund long-term healthcare costs. Rather, the introduction of insurance for long-term healthcare costs is perceived by owner-occupiers to provide greater opportunities to age in place and receive long-term care in their own home. Moreover, the introduction of the insurance program has allowed home owners to commit resources to the upkeep and maintenance of their house which previously may have been used to fund long-term healthcare costs.

Participants in a qualitative study from New Zealand described the financial and emotional stresses attached to home maintenance and the challenges it presents for ageing in place (Coleman, Kearns et al. 2016). Similarly, qualitative research from Australia suggests that older home owners recognise the challenges of maintaining housing quality in existing dwellings. The inability to maintain an existing property, especially gardens, is cited as a key reason for downsizing among movers (Judd, Liu et al. 2014).

3.2 Correlates of geographic mobility and downsizing: evidence from the ACLD

The discussion of the existing literature in Section 3.1 highlights the range of factors that impact on or influence geographic mobility and downsizing decisions. In this section, we present descriptive evidence from the ACLD that provides insight into the geographic mobility and downsizing decisions of older Australians who resided in owner-occupied dwellings in 2011. Across different age groups, we compare the characteristics of those households who did not report geographic mobility (no change in address by 2016, 'Non-movers'); those who reported geographic mobility and downsized by moving to a dwelling with fewer bedrooms ('Downsizers'); and those who reported geographic mobility but cannot be characterised as downsizers ('Other movers'). Descriptive statistics are reported by the age of the individual in 2011, looking at three cohorts: 55–64 years, 65–74 years and 75 years and older.

The statistics reported in Tables 6 and 7 are generally consistent with a priori expectations. For example, consider the individuals who reported being single in 2011. Among those individuals aged 55–64, around one-fifth have moved by 2016, and of those around 40 per cent report downsizing. The proportion downsizing is higher among those aged 65–74 (46%) and those aged over 75 years (68%). Given that the individuals were single in 2011, those who changed status from single to partnered over the period 2011–16 are more likely to be Other movers or Non-movers. Downsizers do, however, report a decrease in the average number of dependent children (-22%) over the inter-census period.

In terms of employment status, the majority of those individuals aged 55–64 years remain in the labour force in 2016, and Downsizers are somewhat more likely to report transitioning to ‘not in the labour force’ (NILF) over the 2011–16 period (39%) compared with Non-movers (22%). As expected, amongst older age groups individuals are far less likely to report being employed in 2016. For example, among those aged 65–74 years, between 15 per cent (Downsizers) and 19 per cent (Other movers) report being employed in 2016.

Of particular interest are measures of household utilisation reported in the Census. Individuals are asked if they have a need for additional bedrooms or have an excess number of bedrooms. In general, Downsizers report having excess bedrooms in 2011. For example, consider singles aged 65–74 years in 2011 (see Table 6). Among those who didn’t move, around 87 per cent report having one or more spare bedrooms in 2011. Corresponding figures for Downsizers and Other movers are 91 per cent and 82 per cent, respectively.²² Perhaps most importantly, these figures reveal that even among those who do not move, a large proportion have an excess number of bedrooms. This accords with evidence set out in Judd, Liu et al. (2014), in which respondents noted that spare bedrooms continued to be used for purposes such as visits by family or friends, or the pursuit of hobbies. One further feature of Table 6 is worth noting. In general (i.e. other than for those individuals aged 75 years and over), there is no strong pattern between the need for assistance with core activities and downsizing behaviour. It is only among the oldest cohort that Downsizers (31%) are far more likely to report such a need compared to Non-movers (18%) and Other movers (16%).

The results for individuals who were partnered in 2011 (see Table 7) generally follow a similar pattern to those reported for singles. Notably, an individual who reported being partnered in 2011 and single in 2016 is much more likely to be a Downsizer rather than a Non-mover or Other mover across all ages. For example, among those individuals aged 55–64 years in 2011, 15 per cent of Downsizers report becoming single over the five-year inter-census period, compared with 4 per cent of Non-movers and 9 per cent of Other movers.

Overall, the patterns presented in Tables 6 and 7 are consistent with the previous literature. In the next section, we present some formal statistical modelling of geographic mobility and downsizing decisions, drawing on the rich set of covariates available in the HILDA data.

²² Calculated by adding the percentage of individuals with one bedroom spare and the percentage with two or more bedrooms spare.

Table 6: Characteristics and behaviours, owners who were single in 2011

	Movers		
	Non-movers	Downsizers	Other movers
Age 55–64			
Female (%)	38.81	36.68	38.55
Change from single to partnered (%)	6.70	10.20	17.45
Change in number of dependents	-0.11	-0.22	-0.14
Employment status (2011) (%)			
<i>Employed</i>	59.27	58.95	62.01
<i>Unemployed</i>	2.78	3.41	2.98
<i>NILF</i>	37.95	37.64	35.01
Transitioned to NILF after 2011 (%)	21.97	38.68	27.87
Household utilisation (2011) (%)			
<i>No extra bedrooms needed</i>	14.46	9.55	19.78
<i>One or more extra b/rooms needed</i>	2.43	2.83	3.40
<i>One bedroom spare</i>	35.80	28.28	38.72
<i>Two or more bedrooms spare</i>	47.32	59.33	38.10
Change in number of b/rooms	-0.01	-1.47	0.51
Assistance core activities (2011) (%)	4.32	5.60	4.53
Same address one year ago (%)	99.31	71.26	73.14
Sample size	15,126	1,745	2,407
Age 65–74			
Female (%)	31.27	31.43	31.06
Change from single to partnered (%)	3.37	7.16	9.43
Change in number of dependents	-0.09	-0.23	-0.07
Employment status (2011) (%)			
<i>Employed</i>	16.29	15.45	18.90
<i>Unemployed</i>	-	-	-
<i>NILF</i>	83.35	84.08	80.68
Transitioned to NILF after 2011 (%)	9.68	12.46	13.27
Household utilisation (2011) (%)			
<i>No extra bedrooms needed</i>	10.98	8.01	16.12
<i>One or more extra b/rooms needed</i>	2.03	1.46	2.70
<i>One bedroom spare</i>	33.79	25.91	37.78
<i>Two or more bedrooms spare</i>	53.20	64.62	43.39
Change in number of b/rooms	-0.01	-1.43	0.43
Assistance core activities (2011) (%)	5.87	7.91	6.68
Same address one year ago (%)	99.46	74.65	70.83
Sample size	11,847	1,298	1,484

	Movers		
	Non-movers	Downsizers	Other movers
Age 75 and over			
Female (%)	22.28	19.34	20.46
Change from single to partnered (%)	1.38	2.26	1.75
Change in number of dependents	-0.11	-0.11	-0.10
Employment status (2011) (%)			
<i>Employed</i>	2.64	1.48	3.42
<i>Unemployed</i>	-	-	-
<i>NILF</i>	97.32	98.47	96.48
Transitioned to NILF after 2011 (%)	1.57	1.32	2.92
Household utilisation (2011) (%)			
<i>No extra bedrooms needed</i>	10.13	8.51	10.32
<i>One or more extra b/rooms needed</i>	1.39	1.10	1.61
<i>One bedroom spare</i>	37.36	35.03	41.86
<i>Two or more bedrooms spare</i>	51.12	55.37	46.21
Change in number of b/rooms	0.01	-1.41	0.37
Assistance core activities (2011) (%)	17.82	31.33	15.81
Same address one year ago (%)	99.43	69.62	72.18
Sample size	10,937	2,342	1,085

Notes: Age of individual is as at 2011. 'Other movers' represents individuals who moved between 2011 and 2016 but did not downsize (i.e. they moved to a dwelling that did not have fewer bedrooms).

Source: Authors' own calculations using ACLD 2011–16.

Table 7: Owners who were partnered in 2011

	Movers		
	Non-movers	Downsizers	Other movers
Age 55–64			
Female (%)	50.49	50.35	49.66
Change from partnered to single (%)	4.00	15.00	9.00
Change in number of dependents (%)	-0.38	-0.44	-0.33
Employment status (2011) (%)			
<i>Employed</i>	64.40	65.83	63.24
<i>Unemployed</i>	1.76	2.11	2.16
<i>NILF</i>	33.83	32.04	34.60
Transitioned to NILF after 2011 (%)	23.39	30.17	28.73
Household utilisation (2011) (%)			
<i>No extra bedrooms needed</i>	7.70	4.13	8.57
<i>One or more extra b/rooms needed</i>	1.47	0.79	2.07
<i>One bedroom spare</i>	21.83	13.80	24.37
<i>Two or more bedrooms spare</i>	68.99	81.27	64.98
Change in number of b/rooms	-0.02	-1.43	0.46
Assistance core activities (2011) (%)	3.79	3.85	3.49
Same address one year ago (%)	1.00	70.18	73.24
Sample size	62,981	5,606	7,900
Age 65–74			
Female (%)	53.36	51.47	52.27
Change from partnered to single (%)	8.00	16.00	11.00
Change in number of dependents (%)	-0.08	-0.16	-0.06
Employment status (2011) (%)			
<i>Employed</i>	20.45	19.63	21.95
<i>Unemployed</i>	-	-	-
<i>NILF</i>	79.27	80.19	77.61
Transitioned to NILF after 2011 (%)	11.00	13.65	14.79
Household utilisation (2011) (%)			
<i>No extra bedrooms needed</i>	3.85	3.07	4.53
<i>One or more extra b/rooms needed</i>	0.91	0.70	1.09
<i>One bedroom spare</i>	18.90	9.50	22.70
<i>Two or more bedrooms spare</i>	76.33	86.73	71.67
Change in number of b/rooms	-	-1.38	0.40
Assistance core activities (2011) (%)	5.88	8.57	4.64
Same address one year ago (%)	1.00	71.63	76.47
Sample size	38,976	3,573	4,408

	Movers		
	Non-movers	Downsizers	Other movers
Age 75 and over			
Female (%)	58.41	52.73	55.28
Change from partnered to single (%)	18.00	32.00	22.00
Change in number of dependents (%)	-0.02	-	0.03
Employment status (2011) (%)			
<i>Employed</i>	5.26	3.41	4.83
<i>Unemployed</i>	-	-	-
<i>NILF</i>	94.66	96.58	95.16
Transitioned to NILF after 2011 (%)	3.00	2.98	3.16
Household utilisation (2011) (%)			
<i>No extra bedrooms needed</i>	3.59	1.95	4.47
<i>One or more extra b/rooms needed</i>	0.73	0.44	1.07
<i>One bedroom spare</i>	23.41	19.70	29.47
<i>Two or more bedrooms spare</i>	72.27	77.90	64.99
Change in number of b/rooms	-	-1.34	33.53
Assistance core activities (2011) (%)	11.38	20.162	11.13
Same address one year ago (%)	1.00	69.23	76.56
Sample size	15,297	2,564	1,637

Notes: Age of individual is as at 2011. 'Other movers' represents individuals who moved between 2011 and 2016 but did not downsize (i.e. they moved to a dwelling that did not have fewer bedrooms).

Source: Authors' own calculations using ACLD 2011–16.

3.3 Geographic mobility and downsizing: evidence from HILDA

In this section, we explore the correlates of residential or geographic mobility and downsizing for older Australians using the HILDA dataset. Our chosen methodology uses a series of statistical models that capture the associations between the outcome of interest, such as geographic mobility, and observable socio-economic and demographic characteristics of individuals. The specifications are informed by the key determinants of mobility and downsizing behaviours discussed in Section 3.1. We exploit the longitudinal nature of the HILDA data, the relatively extensive time frame captured by the survey's data, and the rich set of socio-economic and demographic information available.

3.3.1 Summary statistics

We begin by presenting summary statistics that describe the characteristics of Australians aged over 55 who do and do not exhibit geographic mobility in the HILDA dataset (see Table 8).²³ Recall that the HILDA dataset has followed the same set of individuals since 2001. Initially, our analysis simply pools observations across the first 17 waves of HILDA (2001–17) and effectively

²³ Note that where dollar amounts are used or reported in the analysis from HILDA, all figures are in real or constant dollar terms, with a base year of 2015.

treats each wave as an independent cross section. Subsequently, we exploit the panel nature of the HILDA data by reporting results from a series of regression equations that relate mobility decisions or downsizing behaviours with the socio-demographic characteristics of individuals.

Table 8 reveals that Movers and Non-movers are similar in terms of their observable characteristics. For example, both groups have a similar mean age (approximately 68 years) and are equally likely to be partnered. Yet, in terms of housing tenure, Movers are significantly more likely to be renters and far less likely to be outright owners; a pattern that corresponds with that reported in Section 2.2 (Figure 4). Around 16 per cent of Movers and 13 per cent of Non-movers report having a mortgage. Movers tend to have slightly smaller houses (3.0 bedrooms compared to 3.2 bedrooms for Non-movers), and to reside in areas that have lower mean house prices. In any given year, Movers represent around 8 per cent of all individuals; though, as discussed in Chapter 2, rates of mobility are substantially higher among renters compared with owner-occupiers. It is notable that among Movers, most move into a house that is the same size or smaller, as measured by the number of bedrooms.

A key advantage of the HILDA dataset is that it contains detailed information on an individual's satisfaction across a range of dimensions, including life, financial and neighbourhood satisfaction. Such measures are generally reported on a scale of 0 (totally dissatisfied) to 10 (totally satisfied). Other available outcome measures include self-reported measures of physical and mental health.²⁴ In general, the summary statistics reported in Table 8 suggest that Non-movers and Movers are similar across a wide variety of health and life satisfaction dimensions. Additional analysis of those measures of satisfaction is reported in Chapter 4.

The same satisfaction measures are reported by age (55–64 years; 65–74 years and 75 years and older) in Appendix 1, Table A1. It is noteworthy that only around 4–6 per cent of individuals older than 65 report moving in the previous year. The majority of those moves are into houses of the same size or smaller, with relatively few moves into houses with lower value. This suggests that individuals who do move may tend to downsize physically rather than financially, and may trade quality for quantity in terms of housing. That is, they do not tend to consume their housing equity.

²⁴ These health measures are derived from the 36-item Short Form Health Survey (SF-36), an internationally tested and widely used tool for measuring health (Hemingway, Nicholson et al. 1997). In each wave, HILDA respondents are asked 22 questions on their physical health and 14 questions on their mental health in the last four weeks. These questions are then grouped into scales and standardised to range from 0–100, with higher scores indicating better health.

Table 8: Correlates of geographic mobility for individuals aged 55 and over

	All individuals	Movers	Non-movers
Age (years)	67.95	67.73	68.12
Partnered (%)	67	64	69
Years of schooling	11.40	11.50	11.31
In labour force (%)	45	43	47
Work hours (weekly)	11.53	11.55	11.51
Household income (\$0,000s)	83.15	85.76	81.04
No. of children	0.28	0.24	0.30
Housing information (%)			
<i>Outright owner</i>	68	58	75
<i>Mortgagor</i>	14	16	13
<i>Renter</i>	9	16	4
<i>No. of bedrooms</i>	3.11	3.00	3.20
<i>LGA* house price (\$000s)</i>	483.76	460.27	502.51
Moving experience (%)			
<i>Moved within 12 months</i>	8	18	-
<i>Across state</i>	2	4	-
<i>Across LGA</i>	4	9	-
<i>To smaller house</i>	4	9	-
<i>To lower equity house</i>	38	38	-
Outcome variables			
<i>Physical health (0–100)</i>	65.27	65.49	65.09
<i>Mental health (0–100)</i>	73.46	73.44	73.48
<i>Health improved (%)</i>	10	11	9
<i>Health deteriorated (%)</i>	20	20	20
Satisfaction (0–10)			
<i>Life</i>	8.13	8.11	8.14
<i>Health</i>	6.92	6.95	6.90
<i>Financial</i>	6.98	6.89	7.05
<i>Neighbourhood</i>	8.15	8.13	8.17
<i>Local social environ.</i>	7.11	7.04	7.16
<i>House</i>	8.45	8.37	8.51
No. of observations	77,069	34,473	42,596

Notes: *Local government area. 'Movers' indicates individuals who have ever moved, across the study period.

Source: Authors' own calculations, using HILDA Waves 1–17.

3.3.2 Self-reported reasons for moving

In each wave, the HILDA survey asks respondents who changed their address to identify the main reasons for moving. We group the 21 reasons that can be nominated into seven categories, as follows.

- **Housing reasons**—To get a place of my own/our own; to get a larger/better place; or to get a smaller/less-expensive place.
- **Neighbourhood reasons**—To live in a better neighbourhood; to be closer to amenities/services/transport; or seeking change of lifestyle.
- **Involuntary reasons**—Evicted; or property no longer available.
- **Family reasons**—To be closer to friends and/or family; to follow a spouse or parent/family; personal/family reasons; relationship breakdown; or to get married/move in with partner.
- **Health reasons**
- **Work reasons**—To be nearer place of work; to start a new job with a new employer; to look for work; work transfer; or to relocate own business.
- **Other reasons**—Including temporary relocation and travelling/returning from overseas.

In Table 9, we present the reasons for moving amongst Movers (including both owners and renters) by age, for individuals 55 years and over. Consistent with the analysis reported in Judd, Liu et al. (2014), respondents commonly nominated housing or family as their 'main reason' for moving. Overall, 16 per cent of respondents stated that their main reason for moving was to be closer to their friends and family. Approximately 20 per cent of the sample indicated that they moved to get a smaller or less-expensive place. Among other reasons, seeking a lifestyle change and health reasons are also selected frequently.

There are clear age-related differences in the responses reported in Table 9. For those aged 55–64 years, the main reason for moving relates to housing needs. While 10 per cent of individuals state that they moved to get a place of their own, approximately equal numbers report moving to downsize (15%) or to upgrade to a larger or better place (13%). Upgrading is far less prevalent among older age groups. It is noteworthy that lifestyle and neighbourhood reasons are most commonly reported for those aged 55–75 years and coincide with the ages where individuals make the transition into retirement. This may reflect a pattern of behaviour whereby individuals try to align desired and actual housing consumption at or around retirement. There are two further age-related patterns apparent in Table 9, both of which have been identified in the existing literature. In particular, while health reasons become more important for older individuals, work- or employment-related reasons are less frequently mentioned.

Overall, these summary results suggest that the reasons older individuals choose to move are complex and multi-faceted, reflecting both current and anticipated future needs.

Table 9: Reasons for moving, by age

	55–64 years	65–74 years	75 years and over
Main reasons for moving			
Housing reasons	37	39	32
To get a place of my own/our own	10	7	5
To get a larger/better place	13	9	7
To get a smaller/less-expensive place	15	23	21
Neighbourhood reasons	23	28	18
To live in a better neighbourhood	6	7	4
To be closer to amenities/services/ transport	3	5	5
Seeking change of lifestyle	16	17	9
Involuntary reasons	12	9	7
Evicted	1		1
Property no longer available	11	8	6
Family reasons	26	26	26
To be closer to friends and/or family	13	19	20
To follow a spouse or parent/family	2	2	2
Personal/family reasons	2	1	2
Marital/relationship breakdown	5	2	1
To get married/move in with partner	5	2	1
Health reasons	5	10	35
Work reasons	9	3	1
To be nearer place of work	4	1	-
To start a new job with a new employer	3	1	-
To look for work	1	-	-
Work transfer	2	1	-
To relocate own business	1	-	-
Other reasons	11	10	8
Temporary relocation	4	3	2
Travelling/returned from overseas	2	1	-
Other	5	6	5
Number of observations	2,929	1,430	914

The exact question asked is “What were the main reasons for you moving in the last 12 months?”. The respondents can choose more than one reason. Hence total percentages add to more than 100.

Source: Authors’ own calculations, using HILDA Waves 1–17.

3.3.3 Models of geographic mobility and downsizing behaviours: one-year transitions

The statistical or multivariate models presented in this section capture the associations between the behaviour of interest (such as geographic mobility) and observable characteristics of individuals. The regression models are simply a means by which patterns or associations in the data can be identified in a quantitative sense, while taking into account potentially confounding factors. The specification adopted in this report uses a simple linear probability model to estimate the relationships of interest.

In general, the estimated relationships take the following form:

$$\text{Mobility measure}_{i(t,t-1)} = X_{i,t-1}'\gamma + \Delta Z_{i(t,t-1)}\beta + \theta_t + \mu_i + \varepsilon_{ict} \quad (1)$$

where the dependent variable, $\text{Mobility measure}_{i(t,t-1)}$ is an indicator variable indicating whether individual i exhibited some kind of geographic mobility in the past year—between last year ($t-1$) and this year (t). Two broad types of outcome or mobility measure are considered. First, we examine geographic mobility, or the probability of changing residence, across successive waves or years. Second, we consider geographic mobility coupled with downsizing, in the form of physical downsizing (measured as a decrease in the number of bedrooms) or financial downsizing (a decrease in the net equity). For models of geographic mobility, results are presented for different types of geographical move, and separately for owners and renters. When examining downsizing, we focus on the behaviour of owner-occupiers. The various ways that the dependent variable is measured are described more fully below.

The explanatory variables incorporated into the model can be categorised into four groups and are informed by the discussion set out in Section 3.1. The variables include individual measures of age, education, income, assets, and AP eligibility in the baseline period ($t-1$). These measures, and their relationship to the behaviour of interest, are contained in the term $X_{i,t-1}'$ in equation (1).

The term $\Delta Z_{i(t,t-1)}$ includes variables capturing ‘transitions’ or changes over time. These transitions include: labour market transitions, such a move out of the labour force; indicators of demographic transitions, such as changes in family structure; and indicators of changes in health status. As discussed in Section 3.1, each of these factors has been identified as an important determinant of geographic mobility and/or downsizing behaviour among older individuals. The specification also incorporates year fixed effects, θ_t , to control for time trends, and a series of fixed effects, μ_i , to control for unobserved heterogeneity across individuals. We also cluster the standard errors at the individual level.

Geographic mobility

In the models of geographic mobility, variables in the specification include self-reported values of baseline house value, the level of home equity for owner-occupiers, and the average amount of inflation-adjusted household financial assets. Recall that the HILDA data contains detailed information on assets, collected every four years, commencing in Wave 2 (2002). While financial assets cannot be incorporated as a time-varying variable in the specifications, we average inflation-adjusted financial assets over the panel waves of the data and use that as a proxy for the financial liquidity of the individual. The models also contain measures of median house prices at the local government area (LGA) level at the baseline year, and the average reported rent in the LGA, to control for variation in housing market conditions that might influence mobility or downsizing decisions.

As noted above, the role of household and demographic factors in the mobility or downsizing behaviour is captured using variables such as age and indicators of life events experienced by the individuals. In particular, the empirical specifications include: a quadratic in age; the change

in number of people living in the household; partnership status transitions; and changes in the number of children in the household.

The statistical models also incorporate information on four types of transitions associated with labour market behaviour. We classify individuals who are out of the labour force as ‘retirees’ and those in the labour force as ‘working’. Hence, unemployed or self-employed people are classified as working. Those who are working across successive waves of HILDA (work–work) represent the reference group. Other possible categories include: transitioning from work to retirement (work–retirement); transitioning from retirement to work (retirement–work); and remaining in retirement across the two periods (retirement–retirement). For partnered individuals we also include measures of their partner’s labour market transitions.

Using self-reported measures of health status, two variables that measure changes in health across waves are incorporated into the empirical models. We include a variable indicating whether general health status improved, and a measure indicating whether general health status worsened.²⁵ The reference group or omitted category comprises those individuals whose health remained the same across successive waves of HILDA.

From an economic perspective, a key consideration is the influence of the tax and transfer system on geographic mobility and downsizing decisions. To this end, the empirical models include indicator variables that capture whether an individual is eligible for the AP. Recall that the AP means test incorporates both an income and an assets test. In the models reported below, only the income threshold and age eligibility indicators are included due to limitations associated with the availability of information on asset holdings, which are not available in every wave of HILDA. Our measure of age eligibility for the AP takes the value of one if the person is above the AP eligibility age. For males in our sample, this corresponds to 65 years. For females, the age of eligibility increased from 60 to 65 years over the period 1995 to 2014. In addition, we include two measures of income eligibility. The first is an indicator variable that equals one when the individual has income equal to or less than 90 per cent of the income threshold, and zero otherwise. Such individuals face a lower risk of becoming ineligible for the AP due to greater financial assets following the sale of an owner-occupied house. A second indicator variable identifies when the individual is within plus or minus 10 per cent of the AP income threshold. Such individuals may be at risk of losing eligibility for the AP if they generate additional income in the future. A priori, we might expect that such individuals are less likely to exhibit geographic mobility or downsize.²⁶ Those individuals that have an income that is more than 10 per cent of the income threshold represent the reference group.

In Table 10 we report the results of equation (1) for home owners. The dependent variable is a measure of geographic mobility and is defined in three ways: any geographic mobility; inter-state mobility; and mobility across LGA boundaries. In the first set of specifications (‘Any mobility’)(columns 1 and 2) the dependent variable $Mobility\ measure_{i(t,t-1)}$ takes a value of one if the individual reports a change in address over successive waves of HILDA, and zero otherwise. In the second set of specifications, the dependent variable takes the value of one if the individual reports moving from one state to another over successive waves of HILDA, and zero otherwise (columns 3 and 4). In the final set, the dependent variable takes the value of one if the individual reports moving across an LGA boundary over successive waves of HILDA, and

²⁵ ‘Health status improved’ is equal to one when the individual reports their health is ‘much better now than a year ago’ or ‘somewhat better now than a year ago’, and zero otherwise. ‘Health status worsened’ is equal to one when the individual reports their health is ‘somewhat worse now than one year ago’ or ‘much worse now than one year ago’, and zero otherwise.

²⁶ At the end of Section 3.3, we utilise the information available in the HILDA wealth modules to examine four-year transitions among older Australians. These models include similar variables that capture eligibility for the AP and the parameters of the assets test.

zero otherwise (specifications 5 and 6). Thus, in columns 5 and 6, a local move—within an LGA—is not treated as a geographic move.

For each model, we run two specifications. The first or base model (columns 1, 3 and 5) is a parsimonious specification. In columns 2, 4 and 6 the parsimonious specification is augmented with interaction terms, between the age eligibility requirement for the AP and a series of financial asset and health measures. The augmented specification is designed to examine the differential impact of asset holdings and health transitions between individuals who are eligible for the AP based on their age and those who are ineligible.

We begin by considering the family transition variables associated with partnering and changes in the presence of dependent children in the home. The results indicate that relative to those in the reference group, who remained partnered across waves, individuals in other groups are more likely to exhibit geographic mobility. For example, the estimates suggest that those who separate or divorce (transition from partnered to single) are 5.7 percentage points more likely to move than those who have no change in their partnership status (columns 1 and 2). These patterns are similar across models that examine moves across LGA boundaries (columns 5 and 6), but the size of the effect is generally weaker for the more geographically distant moves associated with inter-state mobility (columns 3 and 4). The departure of children from the household is associated with a 4-percentage point higher probability of mobility, and in particular a higher probability for moving to a new LGA.

Transitions into or out of the labour force are generally positively associated with a greater likelihood of geographic mobility. This is especially the case for transitions from work to retirement, which are associated with a 1.4 percentage point increase in the probability of mobility (columns 1 and 2). There is also evidence that among those who are partnered, a partner's transition from work to retirement is associated with geographic mobility.

In terms of health, the statistical analysis suggests that health improvements relative to the previous year are associated with geographic mobility (coefficient 0.014 in column 1). This result, however, highlights an important consideration around the interpretation of the regression analysis reported in Table 10; namely, that this relationship may reflect endogeneity. Another way to think about this problem is as follows: it is possible that it is not only healthy individuals who exhibit geographic mobility, but also that moving itself may make individuals healthier. The estimated relationships reported in Table 10 cannot distinguish between these two possibilities. Nonetheless, the statistical insignificance of the interaction terms between eligibility for the AP and changes in health status indicates that the relationship between health status and mobility does not differ across individuals eligible and ineligible for the AP.

Several measures of economic resources are incorporated into the statistical models, including household income, level of education, house value and home equity, and average financial wealth holdings. Relative to those with high school education only, individuals with higher education attainments are more likely to exhibit geographic mobility across waves. Further, income is significant and positively associated with moving. This pattern is consistent with one in which individuals with greater financial resources are more likely to exhibit geographic mobility. Moreover, there is evidence that levels of financial assets are positively correlated with geographic mobility, though the relationship is weaker for those eligible for the AP, as evidenced by the statistical significance of the estimated coefficient for the interaction terms between AP eligibility and level of financial assets.

It is notable that geographic mobility declines as house value and home equity increase. This is in contrast to the result reported in Banks, Blundell et al. (2012), in which owner-occupiers who report a higher house value are more likely to exhibit geographic mobility. One interpretation of the home value effect estimated here is that individuals expect high future returns from their houses and do not exhibit geographic mobility because of investment or bequest motives.

As discussed in Chapter 1, the exclusion of owner-occupied housing from the AP assets test provides a disincentive for individuals to move, especially to less-expensive dwellings. The indicator for AP eligibility shows that individuals are more likely to move when they are over the AP eligibility age, though the effect is only marginally significant in a statistical sense (p-value of 0.09). In general, we do not observe a systematic association between financial wealth or the AP rules and geographic mobility.

Table 10: Probability of geographic mobility across HILDA waves—owners

	Any mobility		Inter-state mobility		Cross-LGA mobility	
	(1)	(2)	(3)	(4)	(5)	(6)
Education: Diploma	0.005** (0.0022)	0.005** (0.002)	0.003*** (0.001)	0.003*** (0.001)	0.005*** (0.002)	0.005*** (0.002)
Education: uni. or more	0.011*** (0.003)	0.011*** (0.003)	0.004*** (0.001)	0.004*** (0.001)	0.010*** (0.002)	0.011*** (0.002)
Year at the baseline	0.001** (0.000)	0.001** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Age	-0.010*** (0.002)	-0.010*** (0.002)	0.000 (0.001)	0.000 (0.001)	-0.002 (0.002)	-0.002 (0.002)
Age squared	0.062*** (0.016)	0.063*** (0.016)	-0.003 (0.005)	-0.003 (0.005)	0.013 (0.010)	0.013 (0.010)
Eligible for AP	0.008* (0.004)	-0.032 (0.025)	-0.000 (0.001)	-0.008 (0.008)	0.003 (0.003)	-0.021 (0.017)
Ln (household income)	0.006*** (0.002)	0.006*** (0.002)	0.001 (0.001)	0.001 (0.001)	0.003** (0.001)	0.003** (0.001)
Negative income	0.044*** (0.016)	0.043*** (0.016)	0.001 (0.005)	0.002 (0.005)	0.008 (0.010)	0.008 (0.011)
Family transitions						
<i>Partnered–not partnered</i>	0.057*** (0.010)	0.057*** (0.010)	0.011*** (0.003)	0.011*** (0.003)	0.042*** (0.007)	0.041*** (0.007)
<i>Not partnered–partnered</i>	0.193*** (0.016)	0.193*** (0.016)	0.007 (0.005)	0.007 (0.005)	0.083*** (0.010)	0.083*** (0.010)
<i>Not partnered–not partnered</i>	0.005* (0.003)	0.005* (0.003)	0.000 (0.001)	0.000 (0.001)	0.005** (0.002)	0.005** (0.002)
<i>Kids–no kids</i>	0.040*** (0.006)	0.040*** (0.006)	0.001 (0.002)	0.001 (0.002)	0.023*** (0.004)	0.022*** (0.004)
<i>No kids–no kids or no kids–kids</i>	0.030*** (0.003)	0.030*** (0.003)	0.003*** (0.000)	0.003*** (0.001)	0.018*** (0.002)	0.018*** (0.002)
<i>Change in h/hold size</i>	0.044*** (0.004)	0.044*** (0.004)	0.003** (0.001)	0.003** (0.001)	0.016*** (0.003)	0.016*** (0.003)
Labour market transitions						
<i>Work–retired</i>	0.014*** (0.005)	0.014*** (0.005)	0.002 (0.002)	0.002 (0.002)	0.011*** (0.003)	0.011*** (0.003)
<i>Retired–work</i>	0.017* (0.001)	0.017* (0.010)	0.006** (0.003)	0.006** (0.003)	0.003 (0.007)	0.003 (0.007)

	Any mobility		Inter-state mobility		Cross-LGA mobility	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Retired–retired</i>	-0.000 (0.003)	-0.001 (0.003)	0.000 (0.001)	0.000 (0.001)	0.002 (0.002)	0.002 (0.002)
<i>Partner: work–retired</i>	0.024*** (0.006)	0.024*** (0.006)	0.005*** (0.002)	0.005*** (0.002)	0.010** (0.004)	0.010** (0.004)
<i>Partner: retired–work</i>	0.009 (0.009)	0.009 (0.009)	0.002 (0.003)	0.002 (0.003)	-0.008 (0.006)	-0.008 (0.006)
<i>Partner: retired–retired</i>	0.001 (0.003)	0.001 (0.003)	0.001 (0.001)	0.001 (0.001)	0.001 (0.002)	0.001 (0.002)
Ln (house value)	-0.010*** (0.002)	-0.010*** (0.002)	-0.002*** (0.001)	-0.002*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)
Ln (house equity)	-0.009*** (0.002)	-0.009*** (0.002)	-0.001 (0.001)	-0.001 (0.001)	-0.005*** (0.001)	-0.004*** (0.001)
Negative home equity	-0.100*** (0.025)	-0.100*** (0.025)	-0.013* (0.008)	-0.012 (0.008)	-0.061*** (0.016)	-0.060*** (0.016)
Average financial assets (\$0,000s)	0.000** (0.000)	0.001** (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000* (0.000)
Health improved	0.014*** (0.004)	0.011** (0.005)	0.004*** (0.001)	0.003* (0.002)	0.007*** (0.002)	0.006* (0.004)
Health worsened	0.004 (0.003)	0.008* (0.005)	0.001 (0.001)	0.002 (0.001)	0.003* (0.002)	0.005 (0.003)
Log (median house prices at baseline)	0.003*** (0.001)	0.001 (0.002)	0.001** (0.000)	0.000 (0.001)	0.002*** (0.001)	0.000 (0.001)
AP income test						
<i>(+/- 10% income cut-off)</i>	-0.001 (0.004)	-0.001 (0.004)	0.001 (0.001)	0.001 (0.001)	-0.002 (0.003)	-0.002 (0.003)
<i>Under 90% of income cut-off</i>	-0.001 (0.004)	-0.001 (0.004)	0.000 (0.001)	0.000 (0.001)	0.001 (0.002)	0.001 (0.002)
AP eligible x mean fin. asset	-	-0.001* (0.000)	-	0.000 (0.000)	-	0.000 (0.000)
AP eligible x log (house price)	-	0.003* (0.002)	-	0.001 (0.001)	-	0.002 (0.001)
AP eligible x health improved	-	0.005 (0.007)	-	0.001 (0.002)	-	0.002 (0.001)
AP eligible x health worsened	-	-0.006 (0.005)	-	-0.001 (0.002)	-	-0.003 (0.004)
No. of observations	50,710	50,710	50,710	50,710	50,710	50,710

Coefficients and standard errors (in parentheses) are reported. * *p*-value is less than 0.10; ** *p*-value is less than 0.05; *** *p*-value is less than 0.01. The dependent variable takes a value of 1 if the individual reports a change in address/state/LGA over successive waves of HILDA, and 0 otherwise.

Source: Authors' own calculations, using HILDA Waves 1–17.

In Appendix 1, Table A2, we present the results from an analogous multivariate analysis for renters. In general, the findings from that statistical analysis are similar to those for home owners reported in Table 10. For example, family and labour market transitions are associated with higher rates of geographic mobility. In particular, partnering is associated with within-state moves, particularly across LGA boundaries. As is the case for owners, a renter's own retirement and a partner's retirement are each associated with a higher probability of moving. A change in health status for better or worse is associated with higher cross-LGA mobility. Average financial assets and median rental prices are negatively related to mobility. For renters, local house prices in the baseline year are, surprisingly, negatively associated with moving probabilities. However, these effects are somewhat mitigated for older individuals who are eligible for the AP. Consistent with our findings for owners, we do not observe a systematic relationship between AP eligibility rules and geographic mobility for renters.

Physical and financial downsizing

Here, we focus on physical and financial downsizing behaviours by home owners using empirical specification (1). The dependent variable or outcome variable, *Mobility measure* $_{i(t,t-1)}$, is an indicator variable indicating whether an owner, individual i , downsized physically or financially in the past year—between last year ($t-1$) and this year (t). In the case of physical downsizing, the dependent variable is equal to one if the individual reports moving to a dwelling with fewer bedrooms across successive waves of HILDA, and zero otherwise. In the case of financial downsizing, the dependent variable is equal to one if the individual reports moving to a dwelling with less net equity across successive waves of HILDA, and zero otherwise.

Results from the analysis of downsizing behaviour are reported in Table 11. Initially we focus on the estimates reported in column 1, which consider physical downsizing. The results indicate that family transitions are important correlates of physical downsizing. Changes in partnership status, as well as changes in the presence of children in the household, are significant correlates of downsizing. Intuitively, these family transitions likely reflect significant changes in housing needs, as the number of members in the household changes as children leave the parental home. Interestingly, individuals who remain in retirement are more likely to report downsizing relative to individuals who remain in the workforce. Conversely, there is no evidence that a partner's retirement is associated with downsizing. In terms of health transitions, only an improvement in health is positively associated with physical downsizing.

The measures of wealth indicate that there is no association between the value of financial assets and downsizing. Similar to the analysis of geographic mobility, above, there is evidence that local house prices are negatively associated with downsizing, but this relationship is somewhat weaker for individuals who have reached AP eligibility age. In terms of AP eligibility rules, there is little evidence that the income test is associated with downsizing behaviour, though having attained the AP eligibility age is associated with a lower probability of physical and financial downsizing. In particular, compared to individuals who are below the AP threshold, individuals who reach the threshold are 3 per cent less likely to physically downsize. This finding is consistent with the incentives embedded in the AP assets test. Individuals who wish to receive the AP, or part thereof, will be less likely to liquidate their housing wealth since this may affect their eligibility for the AP.

Column 2 of Table 11 presents results from a model where financial downsizing is the dependent variable. Such moves might result from individuals moving to more affordable neighbourhoods and/or physically downsizing. Our focus here is on the behaviours of home owners in general, though we also examine the differential patterns exhibited by outright and mortgaged owners in Appendix 1, Table A3.

Similar to the patterns observed for physical downsizing, there is little evidence that financial downsizing is associated with work transitions. There is some evidence that a partner's transition from work to retirement is associated with a decrease in home equity for outright home owners, which in turn may lead to a relocation associated with financial downsizing (see Appendix 1, Table A3). Any demographic transition is highly correlated with financial downsizing. As expected, the strongest association is with family dissolution. Another important factor is health and, in particular, a deterioration in health increases the likelihood of financial downsizing. This indicates that needs and lifestyle choices are the main drivers of physical downsizing. Although we do not observe that financial circumstances have a strong effect on physical downsizing, it is important to note that family transitions and deterioration in health have direct consequences on finances. Hence these results should be carefully interpreted.

There is no evidence that financial downsizing is related to the income tests that apply for the AP, though the analysis indicates that individuals over the AP eligibility age are less likely to downsize. This is especially true for outright owners (see Appendix 1, Table A3). These results suggest that the AP rules discourage, or at least do not encourage, individuals from downsizing or liquidating their housing wealth in order to maintain access to the AP.

Table 11: Correlates of physical or financial downsizing across HILDA waves—owners

	Physical downsizing	Financial downsizing
Education: Diploma	0.004*** (0.001)	0.005*** (0.002)
Education: University or more	0.003** (0.001)	0.003 (0.002)
Year at the baseline	0.001*** (0.000)	-0.000** (0.000)
Age	-0.002 (0.001)	-0.000 (0.002)
Age squared	0.009 (0.008)	0.001 (0.010)
Eligible for AP	-0.029** (0.012)	-0.043*** (0.016)
Ln (household income)	0.002** (0.001)	0.004*** (0.001)
Negative income	0.005 (0.008)	0.013 (0.010)
Family transitions		
<i>Partnered–not partnered</i>	0.012** (0.005)	0.018*** (0.006)
<i>Not partnered–partnered</i>	0.047*** (0.008)	0.109*** (0.010)
<i>Not partnered–not partnered</i>	0.002 (0.001)	-0.004* (0.002)
<i>Kids–no kids</i>	0.012*** (0.003)	0.015*** (0.004)
<i>No kids–no kids or no kids–kids</i>	0.005*** (0.001)	0.0010*** (0.002)

	Physical downsizing	Financial downsizing
<i>Change in household size</i>	0.006*** (0.002)	0.015*** (0.003)
Work transitions		
<i>Work–retired</i>	0.004* (0.003)	0.005 (0.003)
<i>Retired–work</i>	0.008 (0.005)	0.002 (0.006)
<i>Retired–retired</i>	0.003** (0.001)	-0.000 (0.002)
<i>Partner: work–retired</i>	0.003 (0.003)	0.005 (0.004)
<i>Partner: retired–work</i>	-0.002 (0.004)	0.002 (0.006)
<i>Partner: Retired–retired</i>	0.002 (0.001)	-0.002 (0.002)
Average financial assets (\$0,000s)	0.000 (0.000)	0.000* (0.000)
Health improved	0.004* (0.003)	0.005 (0.003)
Health worsened	0.002 (0.002)	0.005* (0.003)
Log (median house prices at baseline)	-0.002*** (0.001)	-0.001 (0.001)
AP income test		
<i>(+/- 10% income cut-off)</i>	0.000 (0.002)	0.003 (0.003)
<i>Under 90% of income cut-off</i>	0.002 (0.002)	0.003 (0.002)
AP eligible x mean fin. asset	-0.000 (0.000)	-0.000 (0.000)
AP eligible x log (house price)	0.002** (0.001)	0.004*** (0.001)
AP eligible x health improved	0.001 (0.003)	0.005 (0.005)
AP eligible x health worsened	-0.001 (0.003)	-0.005 (0.003)
No. of observations	50,710	50,710

Notes: Coefficients and standard errors (in parentheses) are reported. * p-value is less than 0.10; ** p-value is less than 0.05; *** p-value is less than 0.01. Physical downsizing denotes a reduction in the number of bedrooms. Financial downsizing denotes a decrease in home equity.

In the case of physical (financial) downsizing, the dependent variable is equal to one if the individual reports moving to a dwelling with fewer bedrooms (with less net equity) across successive waves of HILDA, and zero otherwise.

Source: Authors' own calculations, using HILDA Waves 1–17.

Summary

In summary, we find several important factors are associated with housing mobility at older ages in Australia. These include demographic transitions (particularly those associated with partnership status or children leaving home), and labour force transitions (primarily at retirement). Our results do not reveal a strong systematic relationship between the parameters of the AP and the geographic mobility or downsizing decisions of older Australians.

3.3.4 Models of geographic mobility and downsizing behaviours: four-year transitions

The wealth modules in the HILDA dataset contain detailed information on households' asset holdings and their financial situation. The availability of this information in Waves 2, 6, 10 and 14 provides an opportunity to explore, in a more systematic manner, whether geographic mobility and downsizing behaviours are related to the AP assets test. While this provides a novel opportunity to consider how the assets test parameters of an important income support program are related to geographic mobility and downsizing decisions, to use the data it is necessary to consider mobility and downsizing behaviours over a four-year window.

For this analysis we focus on home owners only. Using the HILDA wealth modules that are repeated every four years, we define geographic mobility and downsizing behaviours by reference to what occurs over these four-year intervals. The aim of the statistical analysis is to identify if there are any patterns in the data that are consistent with the incentives associated with the AP assets means test. For example, we might expect that individuals who are below or close to the asset threshold will exhibit patterns of geographic mobility and downsizing in such a way as to ensure that holdings of non-exempt assets remain below the relevant threshold, thereby ensuring eligibility for the AP is retained.

To gauge the impact of AP rules, we include the income and age measures discussed in Section 3.3.3. In addition, we include measures of AP eligibility that are related to the level of assets held by the individual. To do this, we first identify whether the individual holds assets below 90 per cent of the AP asset threshold. Put another way, we identify if the value of financial and other non-exempt assets is less than 90 per cent of that allowed by the means test. It is important to note that different thresholds are applied for singles and couples. Individuals with low levels of non-exempt assets are at a lower risk of being deemed ineligible for the AP if they were to liquidate housing wealth through downsizing. A second variable captures whether individuals are within 10 per cent of the AP asset threshold. These individuals may be at risk of losing AP eligibility were their housing wealth released through a sale of an owner-occupied dwelling. A priori, we expect such individuals may be more aware of the financial consequences of moving and this may impact on patterns of geographic mobility and downsizing. Also included in the empirical specifications are indicators of eligibility associated with the income test for the AP.

It is important to note that in the empirical specifications, the coefficients on these AP means test variables represent the effect relative to the omitted groups. In the age eligibility case, the omitted group consists of those individuals who are below AP eligibility age. For the income and asset eligibility conditions, the omitted group consists of individuals who are above the thresholds—that is, those who have either high income or high financial asset holdings. With a separate variable, we also control for the overall financial wealth holdings of individuals.

In Table 12 we report a selected set of results from the models of geographic mobility for home owners. As in Section 3.3.3, the specifications reported in Table 12 capture different measures of geographic mobility: any type of move ('Any mobility'); a move across state boundaries ('Cross-state mobility'); and a move across LGA boundaries ('Cross-LGA mobility'). For home owners, a change in partnership status is an important correlate associated with the moving decision. For example, partnership status change is associated with a 5 percentage point

increase in the probability of moving across LGA boundaries (column 3) relative to those individuals who did not change their partnership status. Further, there is evidence that the departure of children from the parental home is associated with an increase of 3 percentage points in the probability of cross-LGA moves.

Financial and economic considerations also appear to be important correlates with geographic mobility decisions. For example, baseline local area house prices are negatively associated with mobility decisions, although the effect size is very small; a 1 percentage point increase in median house prices decreases the likelihood of moving by 0.0001 per cent. For home owners, it is possible that this variable may proxy a wealth effect, so that an increase in house prices leaves home owners feeling wealthier and less likely to move due to future expectations in house prices. Alternatively, higher house prices can reflect the benefits derived from living in better areas. Thus, in addition to financial motives, local area house prices might also proxy for the quality of local amenities in the area.

The measures that capture AP eligibility rules suggest that neither age nor the AP income or asset thresholds are associated with geographic mobility (Table 12: column 1). In columns 2 and 3 we examine inter-state geographic mobility and mobility across LGA boundaries. In general, the pattern of results is similar to that reported in column 1. The analysis indicates that being under 90 per cent of the assets test threshold is associated positively with inter-state mobility. We also observe that larger net equity is associated with lower inter-state and inter-LGA mobility. Having assets lower than the AP threshold is also associated with higher inter-state mobility.

Table 12: Correlates of geographic mobility: four-year transitions—owners

	Any mobility	Cross-state mobility	Cross-LGA mobility
Changed marital status	0.154*** (0.030)	0.020 (0.013)	0.057** (0.025)
Kids—no kids	0.028 (0.018)	0.001 (0.007)	0.028* (0.015)
No kids—kids	0.029 (0.024)	0.005 (0.009)	0.028 (0.020)
Work—retired	0.010 (0.012)	0.001 (0.005)	0.014 (0.010)
Retired—work	0.046 (0.029)	0.015 (0.013)	0.036 (0.024)
Health improved	0.006 (0.011)	0.001 (0.004)	0.003 (0.009)
Health worsen	0.010 (0.010)	0.005 (0.004)	0.006 (0.008)
Log (household income at baseline)	-0.004 (0.010)	0.002 (0.003)	0.005 (0.007)
Log (house value)	0.000 (0.009)	-0.000 (0.004)	-0.001 (0.007)
Log (net housing equity)	-0.005 (0.003)	-0.003* (0.002)	-0.008** (0.003)
Log (financial asset)	-0.007*** (0.002)	-0.001 (0.001)	-0.001 (0.002)
Log (median house price)	-0.009* (0.005)	-0.000 (0.001)	0.002 (0.003)
Age eligibility for AP	-0.019 (0.017)	0.009 (0.007)	0.002 (0.014)
AP Assets test			
(+/- 10% asset cut-off)	-0.060 (0.068)	-0.003 (0.003)	0.0063 (0.057)
Under 90% of asset cut-off	-0.009 (0.056)	0.014*** (0.005)	0.008 (0.041)
AP income test			
(+/- 10% income cut-off)	-0.033 (0.016)	0.011 (0.007)	0.004 (0.013)
Under 90% of income cut-off	-0.010 (0.016)	0.005 (0.006)	0.022* (0.012)
No. of observations	7,730	7,730	7,730

Notes: * p-value is less than 0.10; ** p-value is less than 0.05; *** p-value is less than 0.01

Source: Authors' own calculations, using HILDA Waves 2, 4, 10 and 14.

Sustaining our focus on owner-occupiers, we consider geographic mobility that is accompanied by physical downsizing, financial downsizing, or financial upsizing. Table 13 presents a series of specifications where the dependent variable captures physical downsizing (column 1) or financial downsizing (column 2). The dependent variables in these specifications are defined analogously to the analysis of one-year transitions presented in Table 11, but derived using four-year transitions.

The results suggest that physical downsizing is closely related to partnership status changes and the departure of children from the household. Improvements in health and higher house value (of the pre-move home) are positively correlated with downsizing. In contrast, financial asset value is negatively associated with downsizing. Importantly, there is some evidence that the AP asset cut-off thresholds are related to the physical downsizing decisions of home owners. In particular, having financial assets lower than the means-test threshold is positively associated with downsizing. That is, individuals not at risk of losing AP eligibility as a result of the assets test are more likely to downsize relative to individuals who are above the threshold.

In column 2, we focus on financial downsizing (moving and decreasing the equity). The results suggest that households which experience demographic and work transitions are more likely to report financial downsizing. We also observe that the value of the owner-occupied home is positively associated with financial downsizing, while equity holdings are negatively associated with financial downsizing. One interpretation of the home value effect is that as the value of housing increases, individuals are consuming a relatively large amount of housing services relative to their income, encouraging downsizing behaviour. In effect, there may be a mismatch between current and optimal consumption of housing services (Banks, Blundell et al. 2012).

Table 13: Correlates of downsizing: four-year transitions—owners

	Physical downsize	Financial downsize
Changed marital status	0.071*** (0.024)	0.065*** (0.018)
Kids—no kids	0.039*** (0.014)	0.020* (0.012)
No kids—kids	-0.015 (0.014)	-0.000 (0.012)
Work—retired	0.002 (0.008)	-0.001 (0.006)
Retired—work	0.027 (0.021)	0.001 (0.015)
Partner: work—retired	0.009 (0.009)	-0.007 (0.007)
Partner: retired—work	0.005 (0.019)	-0.031** (0.012)
Health improved	0.016** (0.008)	-0.006 (0.005)
Health worsened	0.002 (0.007)	0.004 (0.005)
Log (household income at baseline)	0.002 (0.006)	0.009** (0.004)

	Physical downsize	Financial downsize
Negative income	0.024 (0.055)	0.034 (0.033)
Log (house value)	0.017*** (0.005)	0.015*** (0.004)
Log (net housing equity)	0.002 (0.002)	-0.011*** (0.003)
Negative equity	0.114 (0.071)	0.060 (0.093)
Log (financial asset)	-0.004*** (0.001)	-0.008*** (0.001)
Log (median house price)	-0.006* (0.004)	-0.001 (0.001)
Age pension		
<i>Age eligibility for AP</i>	-0.013 (0.012)	-0.014 (0.009)
<i>(+/- 10% asset cut-off)</i>	0.051 (0.034)	0.009 (0.009)
<i>Under 90% of asset cut-off</i>	0.069*** (0.010)	0.031*** (0.009)
<i>(+/- 10% income cut-off)</i>	0.002 (0.012)	-0.026* (0.016)
<i>Under 90% of income cut-off</i>	0.006 (0.011)	-0.014* (0.007)
No. of observations	7,730	7,730

Notes: Physical downsize denotes a decrease in the number of bedrooms. Financial downsize denotes a decrease in the equity. * p-value is less than 0.10; ** p-value is less than 0.05; *** p-value is less than 0.01

Source: Authors' own calculations, using HILDA Waves 2, 4, 10 and 14.

Conditional on the value of the house, an increase in home equity is equivalent to a reduction in the outstanding mortgage and flow of mortgage payments, which makes it less likely that people move in order to reduce those payments. Financial assets among home owners do appear to be related to downsizing moves; more financial assets are associated with a lower likelihood that these types of moves occur. One interpretation is that home owners with little financial liquidity relocate in order to achieve greater financial liquidity.

In terms of the AP, there is no evidence that age eligibility is related to financial downsizing behaviour. However, individuals who are below the asset threshold are more likely to downsize relative to individuals who are above the threshold (column 2). This is consistent with the expectation that these individuals are not constrained by assets-test rules and hence the additional liquidity that flows from financial downsizing is less likely to make them ineligible for the AP. We also observe that there is a strong income test effect: people with income below or within 10 per cent of the threshold are less likely to downsize. This might simply reflect a direct income effect, as it indicates that individuals with less income are less likely to move compared to individuals with high income.

3.4 Policy development implications

The analysis of the ACLD and HILDA data in this chapter highlights the central role played by life events in the geographic mobility and downsizing decisions of older Australians. Transitions from the workforce to retirement; changes in household size instigated by the departure of children or partnering; widowhood; and health shocks are clearly related to housing-related decisions of older Australians. A key point to note is that, with the exception of transitions out of the labour force, policy decisions generally have very little direct impact on such events.

Where policy, at least economic policy, can have an impact is around the costs and benefits associated with downsizing and geographic mobility decisions. Of particular interest in this chapter has been the role of the tax and transfer system on those behaviours, especially the impact of the AP means test. The evidence suggests that such policies do have some impact on the behaviour of owner-occupiers. Having a level of financial assets that is near the threshold that determines eligibility for the full AP is associated with a lower likelihood of downsizing. This is a key policy parameter that governments can influence and, in turn, through which they can potentially shape the downsizing decisions of older Australians. The asset thresholds and other parameters of the AP have been subject to significant discussion and analysis over time. How those policy settings might be shaped to achieve objectives around efficiency and equity is discussed in Chapter 5.

4 Barriers to, and consequences of, geographic mobility and downsizing

- Existing evidence identifies housing affordability and availability, as well as the incentives embodied in tax and transfer programs, as key barriers to mobility and downsizing among older individuals.
 - Analysis of statistics from the SIH identifies health and the costs of mobility as the main barriers to moving for older Australians.
 - Estimates from the HILDA dataset show that both geographic mobility and downsizing among older Australians are associated with an increase in financial and life satisfaction, but a decrease in housing and neighbourhood satisfaction. Negative impacts of moving appear to moderate over time, potentially reflecting individuals' adaptation to their new living arrangements.
-

In Chapter 3 we discussed and identified some of the key correlates associated with downsizing for older Australians. In this chapter, we focus on two related issues; namely, the barriers to, and consequences of, mobility. As discussed in Chapter 1, there is clear evidence that economic factors, including parameters of tax and transfer programs, influence housing-related choices over the life cycle. Those settings have the potential to create financial and economic impediments to geographic mobility and downsizing decisions. The analysis in this chapter considers such barriers, as well as the implications and consequences of geographic mobility and downsizing. An important feature of the HILDA data is that it contains detailed information on an individual's satisfaction with various aspects of their life. Analysis of that data provides an opportunity to consider how housing adjustments later in life impact on overall life satisfaction, financial satisfaction and satisfaction with one's neighbourhood.

4.1 Existing literature and evidence

4.1.1 Barriers to downsizing

In a 2014 study of older Australians who exhibit geographic mobility, Judd, Liu et al. argued that the two key barriers to downsizing are the availability and affordability of suitable downsizing options. Similar themes were identified by Adair, Williams and Menyen (2014), who reported the results of a survey, conducted by National Seniors Australia in 2013, of over 1,300 older Australians. Respondents were asked to identify reasons for not considering downsizing in the future. Key factors were the effort associated with moving and the challenge of finding a smaller dwelling at an appropriate price. Interestingly, when asked to identify the main reason that discourages them from downsizing, only 6 per cent of respondents identified the imposts associated with stamp duty, while slightly more identified other costs, such as fees charged by real estate agents and removalists. Economic theory suggests that taxes on the transfer of real property, such as stamp duty, are generally considered to discourage geographic mobility and downsizing. Analysis by Davidoff and Leigh (2013) suggests that stamp duties can have a substantial effect on property transactions, with a 10 per cent increase in stamp duty lowering turnover by 3 per cent annually. Although that study does not focus on the activities of older Australians specifically, the findings reflect the concerns expressed by the Productivity Commission (2014) and the Henry Tax Review (Henry, Harmer et al. 2010) on the deleterious effects of taxes such as stamp duty on geographic mobility.

As argued in Chapter 1, the AP eligibility rules in Australia likely create a financial disincentive or barrier for older households to downsize. This argument is presented in a range of reviews conducted by the Productivity Commission and the Henry Tax Review. Intuitively, the release of housing equity facilitated by downsizing could potentially affect eligibility for the AP and the value of the AP received. However, support for this argument is not unanimous. Discussion in Judd, Liu et al. (2014) points to analysis undertaken by the former Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA), which found that— notwithstanding the effect of the AP assets test and a loss in pension income—older individuals would experience a net benefit from the effect of higher income and retention of in-kind benefits, such as subsidised healthcare costs.

The discussion in National Seniors (Adair, Williams et al. 2014) sheds some additional light on this question. Among respondents who were considering moving to a smaller dwelling, around 16 per cent identified the AP assets test as the main factor discouraging them from downsizing. Even among those who were *not* considering downsizing to a smaller dwelling, approximately 10 per cent still identified the AP assets test as the main discouraging factor. Concern around the AP assets test was particularly pronounced for those aged 65–74 years. Participants in policy forums conducted as part of the analysis reported in Judd, Liu et al. (2014) also noted the potential role of the AP assets test as a financial barrier to downsizing.

An understanding of how the AP assets test might affect behaviour is afforded by the analysis presented in Cho and Sane (2013). In their study, a general equilibrium life-cycle model is developed to assess the economy-wide impact of changing the owner-occupier exemption in the AP assets test. The analysis evaluates the effects of alternative reforms to the means-testing regime. In general, making the means test less generous for owner-occupiers resulted in a reduction in the proportion of the population eligible for the full or part pension and a reduction in the proportion of assets held in the form of owner-occupied housing. This reduction is strongest for older cohorts well into retirement, and for individuals that are at risk of retirement. Such a result is what might be expected for a policy that removes a large tax concession afforded to owner-occupied housing, effectively reducing its post-tax return. Empirical evidence in Sane and Piggott (2011) would appear to support the proposition that the AP means test has a meaningful, albeit relatively small, impact on the geographic mobility and downsizing decisions of older Australians.

4.1.2 Consequences of downsizing

The consequences of geographic mobility and downsizing have been analysed in a limited number of Australian and international studies. Judd, Liu et al. (2014) reported that the vast majority of movers, including those who downsized, expressed satisfaction with their new home. Dissatisfaction associated with the moving decision was largely related to the new dwelling and neighbourhood issues. Interestingly, among downsizers, a sizable proportion (in excess of 20%) expressed dissatisfaction with the size of the new dwelling. Many respondents in the qualitative survey reported in Judd, Liu et al. (2014) identified the positive psychological implications of moving. Respondents expressed mixed feelings about the financial implications of geographic mobility and downsizing: for some, there was a concern that the move to dwellings such as those in retirement villages had resulted in some financial disadvantage, while others identified that the move had made additional equity available for consumption purposes.

Quantitative analysis on the impacts of downsizing is limited, though a small number of international studies have considered this question. Calvo, Haverstick and colleagues (2009) considered how a move affects the psychological wellbeing of individuals. Importantly, they found that downsizers and movers both experience improvements in psychological wellbeing following a move. This is important in the context of a situation in which those who undertake unanticipated moves, as a consequence of a life event such as the death of a spouse, are usually adversely affected by that event in itself. Finally, Choi (1996) found some evidence that

geographic mobility contributes to a deterioration in health, despite the additional emotional and instrumental support that movers experience by relocating closer to friends and families. A key weakness of the analysis, however, is the limited ability to identify a causal relationship between moving and changes in health status.

4.2 Barriers to geographic mobility and downsizing: evidence from the SIH

The 2007/08 and 2013/14 SIH surveys provide insights into the barriers to geographic mobility and downsizing that older Australians face. The surveys elicit the barriers to moving only for those individuals who state they would like to move but are unlikely to do so in the next 12 months (and thus are presumably inhibited from moving in some way). Table 14 reveals that, among older Australians, this group (denominated as 'Unlikely to move') is relatively small, representing 8 per cent of renters and 6 per cent of owners. In contrast, older Australians are more likely to *not* want to move as they age, reflecting the oft-cited ideal of ageing in place. The statistics in Table 14 also show the expected pattern of mobility intentions across age and tenure status. More specifically, the desire to move and the probability of moving decreases with age and, in line with actual rates of mobility, those individuals who rent have higher rates of likely mobility.

Table 14: Mobility intentions in the next 12 months, by age and tenure

Age (years)	Renters			Owners		
	Percentage who...			Percentage who...		
	do not want to move	are likely to move	are unlikely to move	do not want to move	are likely to move	are unlikely to move
	2007/08					
55–64	75	16	8	88	7	6
65+	85	8	7	92	4	4
	2013/14					
55–64	68	21	11	85	7	8
65+	84	9	7	90	5	4

Notes: Figures show the percentage of renters or owners by mobility intentions. Due to rounding the sum of those who do not want to move, are likely to move and are unlikely to move within a given age range, year and tenure status may not sum to 100 percent.

Source: Authors' own calculations, using the SIH 2007 and 2013.

In Table 15 we present the unique SIH data on the reported 'main barrier' to moving for those individuals who would like to move but are unlikely to do so.²⁷ We observe that cost of moving is the most frequently cited main barrier to mobility, among both owners and renters. More

²⁷ Given the low rates of mobility and desired mobility among Australians 75 years and over, the sample is of limited size for this group. Thus, the tables here present the data split into just two age groups: 55–64 years and 65 years and older. A more detailed breakdown is available in Appendix 1: Tables A4 and A5.

specifically, being unable to afford to buy a new dwelling is most often chosen as the main barrier; however, respondents also often report being unable to afford the costs associated with moving, such as stamp duty or removalists (see Appendix: Table A5). The second-most significant barrier is health (poor health, disability or frailty). Around 15 per cent of owners and fewer than 10 per cent of renters cite the effort associated with moving as the main barrier to mobility.

Over the time period (2007–14), the data show relatively stable shares of home owners 65 years and older citing either cost or health as the main barrier to mobility. In contrast, for Australians aged 55–64 years (renters in particular), we see that the cost of moving became somewhat less likely to be the main barrier to mobility between the two survey years, while health-related factors became more likely to be the main impediment. This pattern is also evident for renters 65 years and older. One possible explanation for this is the post-GFC slowdown that followed the rapid housing price increases observed in the early 2000s: as the increases in the price of housing moderated, concerns surrounding dwelling costs and the costs of moving likewise diminished.

Table 15: Barriers to geographic mobility, by age and tenure

	Renters			Owners		
	Cost	Effort	Health	Cost	Effort	Health
Age (Years)	2007/08					
55–64	82	-	18	55	14	31
65+	63	4	33	48	16	36
	2013/14					
55–64	49	8	43	46	11	43
65+	50	12	38	51	18	31

Notes: Figures show the percentage of renters or owners citing each of cost, effort or health as the main barrier to geographic mobility. Due to rounding the sum of those citing each barrier within a given age range, year and tenure status may not sum to 100 percent.

Source: Authors' own calculations, using the SIH 2007 and 2013.

4.3 Consequences of geographic mobility and downsizing: evidence from HILDA

An important feature of the HILDA survey is that it asks respondents to report their satisfaction with various dimensions of their life. Measures of health and subjective satisfaction have been collected in each wave. In addition, the wealth modules in Waves 2, 6, 10 and 14 elicit detailed information on household asset and debt portfolios. A benefit of the longitudinal nature of the HILDA data is the ability to consider how mobility across waves is associated with these outcomes. In this section, we exploit these variables to examine the impact of geographic mobility and downsizing on a range of outcomes:

- the wealth portfolios of individuals, including information on net assets and the allocation of wealth across different asset types
- the overall mental and physical health of individuals
- satisfaction with life, finances, housing and neighbourhood characteristics.

4.3.1 Impacts of geographic mobility on wealth portfolios

Initially we explore the relationship between geographic mobility and household wealth portfolios. We focus on the data from the four HILDA wealth modules and assess the consequences of moving by comparing the typical wealth portfolio allocations for home owners who exhibit geographic mobility over the four-year period between any two wealth modules with the wealth portfolio of home owners who do not move.

The results of the analysis are reported in Table 16. The average asset holdings for non-movers and movers are shown in the upper and lower panels, respectively. Movers and non-movers report similar levels of total assets and, as expected, the size of an individual's total asset portfolio falls as they age. In contrast, the portfolio allocation of movers tends to be more heavily weighted towards financial assets and lifestyle assets, which includes equity in other properties and vehicles, and away from housing equity, relative to the allocations of non-movers. These differences are even more apparent for the older age groups.

Care must be taken when interpreting statistics such as those presented in Table 16. Ideally, a robust analysis of these differences should account for the endogeneity of the mobility decision. By way of example, the concern regarding endogeneity here is that on the one hand, financial downsizing should lead to an increase in liquid assets; but on the other, a need for more liquid assets, precipitated by a health issue for example, may actually be the cause of housing mobility. Likewise, a more thorough analysis should incorporate the rules of the tax and transfer programs, as these can simultaneously impact both the asset allocation and moving decisions of individuals.

Table 16: Average asset allocations, by current age and mobility—owners

	55 years and over	55–64 years	65–74 years	75 years and over
Individuals who did not move				
Total assets (\$)	1,345,142	1,576,100	1,449,616	971,041
Net financial assets (\$)	229,913	210,937	261,402	206,883
Business assets (\$)	53,046	80,995	54,341	23,001
Lifestyle assets (\$)	185,158	248,040	200,421	100,991
Pension assets (\$)	276,772	408,971	319,661	85,328
Home equity (\$)	600,253	627,157	613,791	554,838
No. of observations	6,528	1,971	2,611	1,946
Individuals who moved				
Total assets (\$)	1,334,580	1,547,341	1,401,670	906,093
Net financial assets (\$)	264,273	212,038	291,692	296,978
Business assets (\$)	68,071	88,753	74,193	27,077
Lifestyle assets (\$)	250,713	317,265	246,252	158,714
Pension assets (\$)	317,320	478,075	304,863	97,873
Home equity (\$)	434,203	451,211	484,671	325,451
No. of observations	1,202	433	479	290

Source: Authors' own calculations, using HILDA Waves 2, 6, 10 and 14. Age corresponds to the age of individual when the wave was conducted.

4.3.2 Impacts of mobility on health and life satisfaction

Empirical methodology

To identify how self-reported health status and measures of satisfaction are correlated with geographic mobility and downsizing behaviours, we estimate a series of statistical or regression models. The base specification, which examines the impact of housing mobility, is given by:

$$Outcome_{it} = \beta_1 Moved_{it} + X_{it}'\gamma + \theta_t + \varepsilon_{it} \quad (2a)$$

where $Moved_{it}$ is an indicator variable indicating whether individual i moved in year t . The empirical specification X_{it}' represents a set of variables included to control for a range of factors, including house prices and a series of time-varying demographic variables such as age, income, education, partnership status, and number of children. The specification also incorporates year fixed effects, θ_t , to control for common time trends, including, for example, macroeconomic conditions. We also condition on housing tenure status in the baseline period and on the state of residence. These variables control for average differences in outcomes across states and allow a like-for-like comparison of the behaviour of individuals.

We estimate specification (2a) using ordinary least squares (OLS), utilising data from HILDA Waves 1 to 17, treating it as a pooled cross-section. The results, presented in Table 17 and discussed in detail below, reveal the correlations between geographic mobility and each outcome variable of interest, conditional on the control variables included.

Note that specification (2a) does not exploit the additional information embedded in the longitudinal nature of the HILDA data. Indeed, it is likely that part of any correlation revealed when estimating specification (2a) using OLS will be driven by variations in local economic conditions and time-invariant individual-specific factors.²⁸ Thus, we extend the specification to (2b), below, including measures of local economic conditions (LEC_{it}) and individual fixed effects, μ_i :

$$Outcome_{it} = \beta_1 Moved_{it} + X_{it}'\gamma + \theta_t + \mu_i + LEC_{it}\alpha + \varepsilon_{it} \quad (2b)$$

More specifically, we control for local house prices at the LGA level to capture local socio-economic conditions, including amenities available in the new neighbourhood, and include major statistical area unemployment rates to control for local labour market conditions. The inclusion of individual fixed effects serves to control for time-invariant individual-specific characteristics. One example of this kind of characteristic is how risk preferences, which could be expected to be relatively stable within an individual over time, may affect mobility decisions but also might affect health outcomes. Furthermore, the inclusion of individual fixed effects allows us to focus on individual variation, and hence abstracts from problems associated with the inter-person comparability of these self-reported health and satisfaction measures.

It is important to stress that the estimated relationships from either specification (2a) or (2b) are reduced form in nature. Hence, we cannot rule out reverse causality. For example, it is possible that changes in health status or financial satisfaction precipitate or cause housing mobility, rather than housing mobility causing a change in health or satisfaction. With this caveat in mind, the estimated relationships can be interpreted as a series of conditional means.

We estimate both specifications (2a) and (2b) separately for home owners and renters, and separately for seven different outcomes. These outcomes can be categorised into two broad groups, as follows.

²⁸ For example, individual's discount rate, individual specific preferences for work (leisure) and saving.

- **Physical health and mental health**—measured on a 0–100 scale, where a higher number corresponds to better health. (These variables are described above, in Section 3.1.1.)
- **Life, health, financial, housing and neighbourhood satisfaction**—measured on a 0–10 scale, where 0 corresponds to 'totally dissatisfied' and 10 is 'totally satisfied'.²⁹

Results from the estimation of specifications (2a) and (2b) are presented in Tables 17 and 18, respectively. In each case we estimate the model separately for owners and renters. The results for owners are shown in the upper panel of each table and those for renters in the lower panel. For each outcome, we use four estimation samples: all individuals 55 years and older (column 1), those aged 55–64 years (column 2), those aged 65–74 years (column 3), and those 75 years and older (column 4). Each data cell corresponds to a separate regression and we report the estimated coefficient on the indicator variable for whether or not the individual exhibited geographic mobility.

Consequences for health and satisfaction

We first discuss the correlations between geographic mobility and the outcome variables of interest that result from the pooled cross-section estimation (specification 2a). These are presented in Table 17.

Here we observe that geographic mobility appears to be associated with negative effects on health and satisfaction measures of home owners. For example, for all owners 55 years and older, we see that geographic mobility is associated with both physical and mental health scores that are lower by around 1.35 percentage points. This represents a 2 per cent change given the average score (see Section 3.3.1: Table 8). In general, these effects are stronger for those aged 75 years or older. Mental health, housing and local community satisfaction are also negatively associated with moving. Among renters, we only observe a systematic negative effect of moving on satisfaction with the local community.

Table 17: Pooled OLS estimates for the impact of geographic mobility on key outcomes of interest, by age and tenure

	55 years and older	55–64 years	65–74 years	75 years and older
Owners				
Physical health	-1.358*** (0.506)	-1.168* (0.645)	-1.331 (0.900)	-2.063 (1.303)
Mental health	-1.356*** (0.445)	-0.741 (0.559)	-1.166 (0.782)	-3.598*** (1.179)
Life satisfaction	-0.065** (0.031)	-0.014 (0.042)	-0.045 (0.053)	-0.224*** (0.076)
Health satisfaction	-0.102** (0.041)	-0.097 (0.057)	-0.044 (0.069)	-0.211** (0.010)
Financial satisfaction	-0.059 (0.042)	-0.047 (0.056)	-0.147* (0.079)	0.041 (0.084)

²⁹ The exact question asked in the personal interview for each annual wave is: 'All things considered, how satisfied are you with your life (or health, finances, neighbourhood in which you live, feeling part of your local community, the home in which you live)?'

	55 years and older	55–64 years	65–74 years	75 years and older
Housing satisfaction	-0.257*** (0.036)	-0.210*** (0.051)	-0.146** (0.062)	-0.536*** (0.083)
Neighbourhood satisfaction	-0.054* (0.033)	-0.013 (0.0438)	-0.056 (0.061)	-0.170** (0.079)
Local comm. satisfaction	-0.350*** (0.047)	-0.345*** (0.062)	-0.352*** (0.084)	-0.340*** (0.109)
Renters				
Physical health	-0.138 (0.946)	-1.319 (1.130)	3.275* (1.732)	-1.655 (1.906)
Mental health	-0.402 (0.833)	-1.194 (1.000)	2.007 (1.489)	-1.691 (1.894)
Life satisfaction	0.0334 (0.055)	0.011 (0.070)	0.122 (0.112)	-0.015 (0.106)
Health satisfaction	-0.022 (0.077)	-0.131 (0.096)	0.183 (0.149)	0.0310 (0.149)
Financial satisfaction	-0.029 (0.074)	-0.179* (0.096)	0.370*** (0.142)	-0.050 (0.132)
Housing satisfaction	-0.049 (0.062)	0.026 (0.082)	-0.096 (0.129)	-0.233** (0.107)
Neighbourhood satisfaction	-0.051 (0.062)	-0.049 (0.0784)	-0.068 (0.135)	-0.028 (0.114)
Local comm. satisfaction	-0.278*** (0.076)	-0.320*** (0.010)	-0.280* (0.146)	-0.047 (0.163)

Notes: * *p*-value is less than 0.1; ** *p*-value is less than 0.05; *** *p*-value is less than 0.01. Specification (2a) is estimated using pooled OLS. Each cell corresponds to a separate regression. Each regression includes age, age squared, and dummy variables for schooling, partnership status, labour force status, total number of children and log (household income). In addition, each regression includes year and state fixed effects. Note that only the estimated coefficient on the indicator variable 'Moved' is reported. Standard errors are clustered at the individual level.

Source: Authors' own calculations, using HILDA Waves 1–17.

These results, especially those for the satisfaction measures, potentially appear counterintuitive. Unless a large share of geographic mobility is in some sense undesired, it seems unlikely that the mobility would generate a negative impact on an individual's satisfaction with the dwelling, the neighbourhood or the local community. This leads us to the results from our second specification (2b), presented in Table 18. Recall that for these estimates we control for time-constant individual-specific unobservable characteristics and we estimate the effect of mobility on outcomes exploiting within-individual (intra-person), rather than across-individual (inter-person), variation. The results for this model are more likely to be reflective of the actual, and are thus preferred.

The results, presented in Table 18, show that geographic mobility is no longer associated with a negative effect on health outcomes, either physical or mental. Moreover, mobility now has a positive relationship with life and financial satisfaction for both owners and renters. For example, we find that mobility is associated with an increase in financial satisfaction for owners of around 0.16 points (out of 10 point scale) for all age groups. This is equivalent to a 2.3 per cent increase given an average financial satisfaction score of 6.9. Among owners, those aged 75 years and older tend to be less satisfied with their housing following a move, while those aged 55–64 years appear to be less satisfied with their local community as the result of a move.

A comparison of these fixed-effects results with the pooled cross-section results reported in Table 17 highlights the importance of selection. The contrasting findings indicate that individuals who have poor health and lower levels of satisfaction may be more likely to choose or ‘select’ to exhibit mobility. Put another way, health and financial circumstances are themselves determinants of mobility decisions. As a result, the negative correlations between moving and outcome variables found in Table 17 are partly due to the greater likelihood that an individual with poor health or lower levels of satisfaction with their financial situation will exhibit geographic mobility, relative to someone in better health or with higher levels of financial satisfaction.

Table 18: Fixed effects estimates for the impact of geographic mobility on key outcomes of interest, by age and tenure

	55 years and older	55–64 years	65–74 years	75 years and older
Owners				
Physical health	-0.475 (0.301)	-0.571 (0.383)	-0.850 (0.565)	1.181 (0.774)
Mental health	-0.052 (0.300)	0.034 (0.397)	-0.262 (0.519)	1.000 (—)
Life satisfaction	0.053** (0.024)	0.088*** (0.033)	0.068 (0.043)	0.023 (0.066)
Health satisfaction	-0.0464 (0.028)	-0.063 (0.039)	-0.029 (0.051)	-0.101 (0.077)
Financial satisfaction	0.164*** (0.035)	0.154*** (0.046)	0.186*** (0.064)	0.152* (0.092)
Housing satisfaction	-0.088*** (0.034)	-0.055 (0.049)	0.047 (0.057)	-0.188** (0.078)
Neighbourhood satisfaction	0.029 (0.029)	0.051 (0.037)	0.054 (0.057)	0.053 (0.088)
Local comm. satisfaction	-0.204*** (0.040)	-0.200*** (0.052)	-0.104 (0.077)	-0.035 (0.105)
Renters				
Physical health	-0.119 (0.556)	-0.371 (0.711)	-0.139 (0.992)	-1.578 (1.373)
Mental health	0.780 (0.570)	0.968 (0.759)	0.783 (1.075)	-1.024 (1.229)

	55 years and older	55–64 years	65–74 years	75 years and older
Life satisfaction	0.134*** (0.048)	0.118* (0.061)	0.088 (0.102)	0.208** (0.104)
Health satisfaction	0.026 (0.052)	0.0565 (0.072)	-0.030 (0.108)	0.082 (0.133)
Financial satisfaction	0.191*** (0.062)	0.146* (0.086)	0.333*** (0.113)	-0.003 (0.151)
Housing satisfaction	0.171*** (0.063)	0.374*** (0.092)	0.045 (0.119)	-0.048 (0.133)
Neighbourhood satisfaction	0.0516 (0.059)	0.140* (0.082)	0.021 (0.116)	0.080 (0.146)
Local comm. satisfaction	-0.107 (0.071)	0.0432 (0.093)	-0.305** (0.142)	0.0416 (0.182)

Notes: * p-value is less than 0.1 ** p-value is less than 0.05; *** p-value is less than 0.01. Specification (2b) is estimated using a fixed effect regression. Each cell corresponds to a separate regression. Each regression includes age, age squared, and dummy variables for schooling, partnership status, labour force status, total number of children and log (household income). In addition, each regression includes year and state fixed effects, as well as individual fixed effects. Note that only the estimated coefficient on the indicator variable 'Moved' is reported. Standard errors are clustered at the individual level.

Source: Authors' own calculations, using HILDA Waves 1–17.

The evolution of satisfaction before and after geographic mobility

The longitudinal nature of the HILDA data provides a unique opportunity to consider how satisfaction evolves pre and post move for those who exhibit geographic mobility. The results of this analysis are presented graphically in Appendix Figure 1. The horizontal axis in each sub-panel measures time, with zero representing the year in which the individual moved. Positive numbers represent years after moving and negative numbers represent years prior to the move. As a point of comparison, average satisfaction measures for individuals in our sample who never moved are indicated by the dashed red line.

Other than for physical health (panel B), we observe that all outcome variables occur, at a minimum, at or around the time that geographic mobility occurs. However, following a move, satisfaction levels tend to increase over time. This pattern may reflect an initial shock whereby individuals are negatively impacted by the experience of moving, which is mitigated over time. Such a pattern would be consistent with partial hedonic adaptation—that is, a gradual natural reversion in satisfaction or happiness levels to an individual's usual state (see, for example, Powdthavee and Stutzer 2014). The housing, neighbourhood and local community satisfaction variables clearly show this trend, suggesting that any immediate negative impact of moving on housing satisfaction does not imply a permanent decline in wellbeing.

4.3.3 Impacts of downsizing on health and life satisfaction

Finally, we consider the consequences of financial and physical downsizing for home owners. Here we employ a fixed effects specification, analogous to our preferred specification (2b), above. However, rather than looking at the estimated effect of 'any geographic mobility', we now examine the estimated coefficient on an indicator variable indicating whether individual *i* downsized in year *t*. We separately estimate the effects of physical and financial downsizing.

The results are reported in Table 19. The upper panel presents the results for the impact of physical downsizing and the lower panel shows the results for financial downsizing. Similar to our findings for ‘any geographic mobility’ (Table 18), we find no effect of downsizing on the physical health of older Australians and no consistent effect on mental health. Physical downsizing is associated with an improvement in financial satisfaction of a similar size to that found for ‘any geographic mobility’, above. Perhaps unsurprisingly, downsizing physically is associated with a decline in housing satisfaction. We also find a decrease in satisfaction with local community. Financial downsizing shows no relationship to the outcome measures for individuals aged 55–64 years. Those aged 65–74 years enjoy greater financial satisfaction after a move. For those aged 75 years and older, we find that financial downsizing is associated with a decrease in life, housing, local and neighbourhood satisfaction.

Table 19: Fixed effects estimates for the impact of downsizing on key outcomes of interest, by age—owners

	55 years and older	55–64 years	65–74 years	75 years and older
Physical downsizing (decrease in no. of bedrooms)				
Physical health	0.0470 (0.440)	-0.710 (0.589)	-0.055 (0.811)	1.671 (1.105)
Mental health	-0.082 (0.429)	-0.332 (0.584)	-0.950 (0.765)	2.513** (1.179)
Life satisfaction	-0.005 (0.034)	-0.042 (0.049)	-0.000 (0.063)	0.0913 (0.090)
Health satisfaction	-0.040 (0.040)	-0.115** (0.053)	0.096 (0.076)	-0.064 (0.114)
Financial satisfaction	0.162*** (0.051)	0.141** (0.070)	0.225** (0.096)	0.116 (0.132)
Housing satisfaction	-0.314*** (0.057)	-0.305*** (0.087)	-0.272*** (0.103)	-0.218* (0.112)
Neighbourhood satisfaction	0.033 (0.043)	0.030 (0.058)	0.087 (0.080)	0.073 (0.126)
Local comm. satisfaction	-0.238*** (0.061)	-0.324*** (0.082)	-0.095 (0.123)	-0.092 (0.151)
Financial downsizing (decrease in net equity)				
Physical health	1.230 (1.520)	1.578 (2.016)	4.639 (3.349)	1.395 (3.778)
Mental health	1.448 (1.432)	2.037 (2.258)	2.982 (3.616)	0.788 (2.452)
Life satisfaction	0.182 (0.127)	0.167 (0.193)	0.278 (0.246)	-0.747* (0.395)
Health satisfaction	0.203 (0.143)	0.130 (0.194)	0.319 (0.355)	-0.443 (0.398)
Financial satisfaction	0.056 (0.150)	-0.111 (0.181)	0.865*** (0.285)	0.463 (0.552)

	55 years and older	55–64 years	65–74 years	75 years and older
Housing satisfaction	0.0130 (0.126)	0.200 (0.238)	0.0554 (0.278)	-1.231*** (0.361)
Neighbourhood satisfaction	-0.007 (0.138)	-0.111 (0.279)	-0.280 (0.247)	-1.313*** (0.389)
Local comm. satisfaction	0.0550 (0.192)	0.354 (0.350)	-0.393 (0.436)	-1.403** (0.553)

Notes: * p-value is less than 0.1; ** p-value is less than 0.05; *** p-value is less than 0.01. Specification (2b) is estimated using a fixed effect regression. Each cell corresponds to a separate regression. Each regression includes age, age squared, and dummy variables for schooling, partnership status, labour force status, total number of children and log (household income). In addition, each regression includes year and state fixed effects, as well as individual fixed effects. Note that only the estimated coefficient on the indicator variable 'Downsizing' (either physical or financial) is reported. Standard errors are clustered at the individual level.

Source: Authors' own calculations, using HILDA Waves 1–17.

Summary

To summarise the results of our analysis of the effects of geographic mobility and downsizing on older Australians, we find no effect on health outcomes once we control for the time-invariant individual specific unobservable characteristics of individuals. Our analysis also indicates that mobility is associated with an increase in financial and life satisfaction but a decrease in housing and neighbourhood satisfaction. Our descriptive analysis suggests that any negative impact associated with moving appear to moderate over time, potentially reflecting individuals' adaptation to their new living arrangements.

4.4 Policy development implications

The discussion and associated analysis in this chapter focus on the barriers to, and consequences of, geographic mobility and downsizing behaviours. Some, albeit limited, policy lessons can be drawn from the analysis of barriers to mobility. Perhaps most importantly, among owners and renters who would like to move but are unlikely to do so, the cost of moving is cited as a key impediment. One cost identified as potentially important is stamp duty, which (as noted in Chapters 1 and 2), potentially provides a disincentive for owner-occupiers to transition between dwellings. It also forms part of the barrier of affordability for renters looking to purchase their own home. Reports that have previously examined the Australian tax system, such as the Henry Tax Review, have noted the potentially adverse implications of imposts such as stamp duty. Empirical evidence, discussed in Chapter 2, highlights the impact that such taxes have on property transactions. From a policy perspective, such imposts, and reforms thereof, may provide an important means by which to influence the mobility and downsizing decisions of older Australians. In addition, our findings regarding the decline in satisfaction measures at the time of a move suggest a role for government in providing funding for programs to assist older individuals to adapt more quickly or easily to their new neighbourhood and community.

5 Policy development options

The analysis in this report has examined the geographic mobility, downsizing and housing equity consumption decisions of older Australians. In general, the focus has been on the decisions and behaviours of owner-occupiers.

Why pay particular attention to the housing choices and behaviours of older owner-occupiers?

A focus on owner-occupiers is warranted, in part, because owner-occupation remains the dominant form of tenure among Australians aged over 50 years, despite social and economic developments that have seen the traditional housing careers of Australians change somewhat in recent decades. Moreover, demographic trends mean that older people will occupy an increasingly large share of the Australian population. This ageing of the population poses important fiscal challenges to governments that are likely to become more pronounced over time. Traditionally, home ownership of older Australians has been supported by a range of concessions that, from a tax perspective, treat owner-occupation and the family home generously relative to other asset classes. While Australians, like individuals in many other countries, have typically entered retirement with high levels of housing wealth, they do not tend to consume this wealth as they age. Moreover, from an economic perspective, such behaviour is supported and encouraged by parameters of the tax and transfer system, especially the AP. It is this economics and policy context that has motivated and will be informed by the analysis in this report.

The housing choices that home owner households make are likely to be critical to their own welfare, as well as have important consequences for government finances, and have implications for the efficient functioning of the economy more generally. It is well understood, for example, that home ownership plays a critical role in sustaining living standards for older Australians as they age. The retention of wealth in the form of owner-occupied housing has direct implications for government expenditures and may impede an optimal matching of the housing stock with the needs of Australians of different ages. Understanding the housing choices of older Australians will provide a robust evidence base upon which policy can be designed to support and facilitate the choices of all Australians.

5.1 Evidence on the housing choices of older Australians?

This project examines the housing-related decisions and behaviours of older Australians. Rather than providing a detailed comparative review of policy options across different jurisdictions, or testing different policy settings or scenarios, the analysis in this project has sought to provide insights into the extent of, correlates of, barriers to, and consequences of geographic mobility and downsizing behaviours. The quantitative analysis was preceded by a review of the national and international literature. This discussion shaped the statistical analysis that was conducted and provided a conceptual framework that informed the analysis.

What patterns are evident in the owner-occupation and equity withdrawal behaviours of older Australians since the 1990s? To what extent do such patterns reflect cohort influences? What are the implications for the future?

We find that older Australians generally maintain owner-occupation as they age and show a limited tendency to consume housing wealth through downsizing or transitioning from owner-occupation to rental tenure. When such transitions do occur, they tend to be associated with life events that are not induced by or associated with policy settings; for example, health shocks that require a move into aged care.

Looking across the experiences of different generations, we see that, to date, younger birth cohorts are about as likely to be home owners as their older counterparts at retirement. However, these younger cohorts are less likely to own their home outright and have less equity in their home. These patterns no doubt reflect a response to a mix of social, demographic and economic changes, such as increases in the age of retirement, increases in educational attainment, increases in the age of first home purchase, and a tendency for adult children to receive parental support and remain in the parental home for longer. In addition, the maturation of the superannuation system and an increasingly sophisticated array of financial products available to individuals shapes the asset allocation decisions over the life cycle.

The observed declines in home equity and outright home ownership rates have implications for the resources available for consumption for older Australians at typical retirement ages and beyond. While a maturing superannuation system and increases in the typical retirement age should bolster available resources for consumption, the owner-occupied home remains a significant component in older Australians' asset portfolios. Entering retirement with an outstanding mortgage has the potential to create a significant drain on income streams that could otherwise be used for non-housing consumption. Moreover, the current AP system and its eligibility rules are arguably designed around a model in which consumption and welfare in retirement are maintained at an adequate level by virtue of the housing services provided by owner-occupied housing. If this model comes under stress due to a decline in home equity across generations, and older Australians remain relatively unwilling to downsize to release the equity they have accumulated, then over time we may expect greater demands on the AP system and other government programs. This potentially creates even more acute policy challenges and emphasises the need to understand housing-related decisions and how they are impacted by the financial and economic parameters embedded in the tax and transfer system—not only in the AP system, but also from broader policy settings such as superannuation vesting ages and stamp duty. Further discussion on these policy issues is set out below.

What is the nature of downsizing that occurs among older Australians who move, in terms of changes in housing size and value?

Evidence on the extent and nature of downsizing is informed by an analysis of HILDA data and the ACLD. In general, both datasets show that downsizing decisions among owner-occupiers are relatively rare. Among individuals aged 55 years and over who report being in owner-occupation in 2001, around 80 per cent remain in the same dwelling as of 2015. That is, the evidence of physical and financial downsizing among respondents in HILDA is relatively limited, even allowing for the relatively long time period over which individuals have been followed. Using HILDA, we observe that approximately 40 per cent of those home owners who do move are financially downsizing. Conditional on downsizing, equity holdings on average decrease by approximately 20 per cent. Similar patterns are evident from an examination of the ACLD, in which downsizing is measured as a decrease in the number of bedrooms. Of those in owner-occupied dwellings who report moving over the period 2011–16, around 45 (52) per cent of partnered (single) older Australians downsize. Recall, however, that the proportion of individuals who report moving over this period is less than 20 per cent, indicating that fewer than 10 per cent of owner-occupiers actually downsize. Among those who downsized in a physical sense between 2011 and 2016, the reduction in the number of bedrooms is on average 1.5.

It is important to note that the theoretical framework and empirical analysis in this report does not identify whether there is 'too much' or 'too little' downsizing. Rather, the economic approach argues that housing-related decisions, including downsizing, are driven by individual preferences, within the social, economic and institutional context in which such decisions are made. There is evidence, for example, of a reticence for older households to downsize, notwithstanding the availability of 'excess bedrooms'. Such a pattern may, however, simply reflect the use of those rooms for other purposes as individuals age, including for hobbies and

to accommodate children or grandchildren. It may also reflect a strong desire for individuals to age in place. Nonetheless, governments can, through specific policy settings, shape the environment in which decisions around geographic mobility and downsizing are made.

The magnitude and extent of downsizing behaviours is important from a policy perspective. A large proportion of Australians continue to enter retirement with a household wealth portfolio dominated by owner-occupied housing. While this has traditionally been an important contributor to welfare over retirement, providing a stream of consumption of housing services, it also represents a significant source of savings that could be used to support other forms of consumption through retirement. As such, household wealth represents a potentially important resource for governments and individuals in light of the fiscal challenges presented by an ageing population. In particular, it provides an untapped opportunity to sustain living standards over retirement, without adding to the fiscal burden faced by governments. This housing wealth may be unlocked through a variety of mechanisms that could be facilitated and encouraged by appropriate policy settings, especially in the context of the tax and transfer system. An important insight from the analysis in this report, however, is that such policy changes are only likely to have an impact at the margins, inducing behaviour changes only among those individuals directly affected by any policy change. Moreover, from an equity perspective, one may feasibly argue that large unanticipated changes that do not allow adequate planning or adoption are unfair. Developing political support for such changes will take time and the need for a broad consensus that to date has not been apparent.

What are the characteristics and circumstances of older Australians who exhibit geographic mobility and downsizing?

The analysis in Chapter 3 identifies the key correlates and implications of geographic mobility and downsizing behaviours among older Australians. Analysis of geographic mobility using the HILDA data is consistent with and highlights the key findings identified elsewhere. Namely, Australians who experience significant life events, such as the departure of children from the family home, widowhood or health deterioration, are more likely to report geographic mobility and downsizing. The analysis also shows that work transitions associated with retirement are highly correlated with geographic mobility.

What happens to the financial and general wellbeing of older home owners who downsize or move? How are the asset portfolios of these households affected?

The analysis presented in Chapter 4 indicates that moving has no effect on health outcomes once the time-invariant individual specific unobservable characteristics of individuals are accounted for. The analysis indicates that mobility is associated with an increase in financial and life satisfaction, but a decrease in housing and neighbourhood satisfaction. The descriptive analysis finds that any negative impacts of moving appear to moderate over time, potentially reflecting individuals' adaptation to their new living arrangements. We also find evidence that individuals who have poor health and lower levels of life satisfaction may be more likely to choose or 'select' to exhibit mobility.

How do the parameters of the tax and transfer system influence decision-making around geographic mobility and downsizing among older Australians? Are there any other key factors associated with geographic mobility and intentions to move for older Australians?

Our results from analysis of HILDA do not suggest a strong systematic relationship between the parameters of the AP (i.e. age or income eligibility rules) and the moving or downsizing decisions of older Australians. However, we do observe that having a level of financial assets that is near the threshold set for the assets test (which determines eligibility for the full AP) is associated with a lower likelihood of downsizing. This is a key policy parameter that governments can influence and, in turn, through which they can potentially shape the

downsizing decisions of older Australians. On the other hand, it is important to note that our analysis suggests that health impediments and the costs of moving are the main barriers to mobility cited by older Australians.

5.2 Implications for policy

The policy lessons to be drawn from the analysis in this report reflect the economic approach that we have used to examine the housing-related decisions of older Australians. Our approach focusses on the life-cycle model of behaviour, which recognises that, when making saving and consumption decisions in the present, individuals take into account the implications for future outcomes. Moreover, the policy lessons are shaped by an economic environment that presents specific challenges for governments to sustain and enhance existing programs that contribute to the welfare of older Australians as they enter retirement. Those challenges require that concerns around efficiency and equity for all Australians be appropriately balanced.

From an efficiency perspective, the economic approach highlights the need to remove impediments to housing adjustments over the life cycle. That is, policy settings should support and facilitate individuals making choices that best meet their needs as those needs evolve over time. Efficiency is also promoted by creating a policy regime that treats activities and choices neutrally. In this context, three areas of government policy should be discussed:

- stamp duty
- the implicit and explicit benefits to owner-occupiers embedded in the tax system
- the concessional treatment of owner-occupied housing in the AP eligibility rules.

The replacement of stamp duty with a broad-based land tax would be a useful step towards a more efficient and neutral policy regime. Notwithstanding that relatively few individuals specifically identified stamp duty imposes as a barrier to mobility, there is a broad consensus that the reliance of all state and territory governments (with the exception of the ACT) on stamp duties imposes additional costs on owner-occupiers seeking to move. The theoretical literature points to the use of a broad-based land tax as a far more efficient means by which to raise revenue, while enhancing the geographic mobility of owners. The analysis in this report identifies that, even among older Australians, owner-occupiers have relatively lower rates of geographic mobility compared with those in private rental tenure, suggesting that the transaction costs associated with stamp duty are likely a factor.

Current fiscal settings should be reformed to be 'tenure neutral' rather than providing a range of implicit and explicit benefits to owner-occupiers. That is, in the absence of some overriding external benefit, taxation policy should in general not favour one form of tenure over another. While there are arguments that owner-occupation provides a broad range of benefits to the individual and economy more generally, the question remains: Is the level of support provided through the taxation system for this form of tenure appropriate or excessive? Such questions have been considered in other contexts (e.g. Henry, Harmer et al. 2009) and will not be addressed directly here.

In the context of the AP assets test, owner-occupied housing is treated in a relatively concessional manner. In turn, this provides incentives for individuals to accumulate and retain higher levels of wealth in the form of owner-occupied housing than would be the case under a more neutral policy setting. One of the implications of this is that older Australians exhibit a reticence to consume housing wealth as they age. As was highlighted in the discussion in Chapter 1, this translates into low rates of geographic mobility and downsizing among older Australians. While it should be noted that older Australians are not unique in this respect, when compared internationally, such decisions are supported and encouraged by policy settings in

Australia. In the face of an ageing population, these policy settings are likely become less sustainable over time.

While there is a broad consensus about the types of change to policy that are required, making changes is nonetheless challenging. In part, this is no doubt due to the entrenched attachment to owner-occupied housing in the Australian psyche. Furthermore, developing a political consensus around any changes in the treatment of housing is likely to be challenging. Nonetheless, recent changes to the AP assets test suggest that reforms can be made to limit the generous treatment of owner-occupied housing and reduce the incentive to accumulate and retain high levels of housing wealth. Such changes must acknowledge that existing wealth portfolios of older Australians have been shaped by a set of rules and policy settings that they have experienced over their working lives. Reforms that change the 'rules of the game' after individuals have retired have an impact on retrospective choices which may be considered as unfair.

It is important to stress that economic theory does not suggest a 'correct' level of geographic mobility or downsizing. Rather, levels will reflect the preferences and constraints that individuals face. However, those constraints, and the costs and benefits associated with these behaviours, will be driven by policy settings. To the extent that policy settings can make downsizing and geographic mobility as seamless as possible, they should be set in such a way. There is evidently a need for an integrated approach across different levels of government, for example in the tax (stamp duty) and transfer (AP) systems.

The findings in this report should be seen as a step towards developing an evidence base that can inform policy development by increasing our understanding the housing decisions of older Australians. The analysis has focussed on identifying stylised patterns of behaviour and understanding the correlates and consequences of those behaviours. As noted in Chapter 1, the analysis of housing choices presents some important challenges for the empirical researcher. The data that is available is, other than in rare circumstances, non-experimental in nature. This requires that care be taken when making causal inferences based on the statistical relationships that have been presented in this report. The analysis here has identified a series of stylised patterns in the data and in doing so has highlighted some future areas for research. For example, understanding, in a quantitative sense, how transaction costs for owner-occupiers limit geographic mobility would help inform debate around tax policy and the desirability of transaction taxes such as stamp duty, and the generous treatment of owner-occupied housing in the AP assets test.

5.3 Conclusions

Within the next 30 years, one-quarter of Australia's population is expected to be older than 65 years of age. The consequences of this rapid demographic change on individual and national wellbeing is not clear. In this report, we explore the housing decisions of older Australians. For owner-occupiers aged 55 years and older, the home remains the biggest asset in the household portfolio. We document a number of patterns, including:

- a gradual decline in the level of home equity held at retirement across subsequent age cohorts
- geographic mobility and downsizing are limited, and tend to be associated with demographic transitions
- our current tax and transfer programs, to some extent discourage moving or downsizing.

These findings should be carefully considered when formulating public policies aimed at promoting healthy ageing, labour market success and economic welfare.

The discussion and analysis in this report has highlighted the challenging nature of understanding the motivations for, and the consequences of, housing decisions of older Australians. During the part of the life cycle approaching retirement, the decisions of individuals are influenced by a host of household, labour market and health events. Moreover, decisions are shaped by the broader socio-economic environment in which fundamental decisions around housing are made, including the parameters of the tax and transfer system. Disentangling how each of these factors impacts on the behaviours of individuals is challenging from an empirical perspective. Primarily, the analysis in this report should be viewed as adding to the existing, relatively limited, evidence base that exists around understanding these important decisions.

It is not possible, based on the findings of this analysis, to recommend specific policy changes. There are two reasons for this. First, there are relatively limited opportunities to assess exogenous policy changes that could provide insight into how mobility and downsizing is impacted by policy settings. Hence, recommendations around specific policy settings is somewhat speculative. Moreover, the issue of downsizing, and the extent to which policy settings should encourage downsizing, encompasses some normative questions around equity that must be part of a broader political debate. The ageing of the population presents challenges for governments, which must balance the competing considerations of younger and older Australians. Moreover, in terms of equity, it is important to consider the extent to which individuals who have made life-cycle decisions around employment, saving, consumption and retirement under one set of policy and institutional settings should be presented with a new set of rules around the treatment of housing. The analysis in this report underlines that such policy settings need to be well thought-out and announced in such a way that they take account of the long-term planning horizon associated with such decisions.

The HILDA dataset provides a useful starting point for ongoing analysis of the issues considered in this report. As demonstrated in this report, the longitudinal nature of the HILDA data provides the opportunity to control for unobserved heterogeneity and allows for the analysis of housing transitions over time. Given the detailed information available in the dataset, there is also the potential to adopt strategies used in a number of other studies to facilitate a more structural analysis of the relationships examined in this report, or to adopt statistical techniques that provide better insight into the underlying causal relationships of interest.

With the passage of time, recent policy reforms with respect to stamp duty in the ACT and Victoria will allow further assessment of the impact of these reductions in the cost of moving on mobility and downsizing. In essence, with the right data, these reforms provide researchers with a potential natural experiment with which to measure the causal impact of stamp duty of mobility. Likewise, tax reforms implemented in 2018 that treat the proceeds of downsizing from a long-held owner-occupied home and deposited into superannuation concessionally could be exploited to assess the interactions between mobility and asset portfolio decisions.

The use of the ACLD provides unique opportunities to consider patterns of geographic mobility and physical downsizing. Future analysis is likely to be enhanced through two developments. First, the availability of the ACLD covering the period 2006 to 16, and the coupling of information in the ACLD with administrative databases from the Australian Tax Office or Department of Social Security. Such developments will provide additional information on the socio-economic characteristics of individuals and their interaction with the tax and transfer system. In turn, it will present opportunities to gain a greater understanding of the underlying behaviours of interest and how they are shaped by policy settings.

A key policy issue remains the treatment of owner-occupied housing in the AP means test. A number of commentators have noted the potentially distortionary nature of the exemption of this asset from the means test, along with the large benefits that accrue to relatively wealthy households as a result. Numerous proposals have been flagged that would eliminate, or at least diminish, the generous treatment of housing in the tax and transfer system (Productivity

Commission 2015: 125). Such changes have the potential to increase mobility amongst older Australians, as well as reducing inequality. Moreover, such changes would be consistent with the targeted nature of the transfer system. Any changes to the tax and transfer systems, however, would need to be carefully designed and most likely part of a broader set of policies that maintains the integrity of the retirement incomes system. Further, there is a strong argument for the replacement of stamp duty on the transfer of property with a broad-based land tax, as a means of encouraging greater mobility among all home owners.

A final note about the analysis presented in this report. As the discussion has made clear, geographic mobility and downsizing decisions are complex, shaped by a variety of considerations over the life cycle. This report has ignored, due to gaps in the available data, several clearly important aspects of the transitions that occur over the life cycle. For example, in light of increasing longevity, one factor that is likely to become more important over time is income security for those aged over 85 years. Given the significant role that housing has played in maintaining living standards during retirement, one might argue that more attention needs to be paid to how Australians can best draw down their housing assets and secure adequate income to see them comfortably through advanced age. The first step towards undertaking such analysis is to have proper data that can examine this advanced-age cohort. In addition, our analysis could not focus on elderly people with disabilities or in need for special assistance. It is important that government should aim that all people—including older people, people with disabilities and those on low incomes—have access to affordable and well-designed housing.

References

- Adair, T., Williams, R. and Menyen, T. (2014) *Downsizing decisions of senior Australians: what are the motivating and discouraging factors?*, National Seniors Productive Ageing Centre.
- Ameriks, J. and Zeldes, S.P. (2004) *How do household portfolio shares vary with age?*, Working Paper, Columbia University.
- Angelini, V. and Laferrère, A. (2010) *Residential mobility of the European elderly*, CESifo Working Paper No. 3280, CESifo Group Munich.
- Arthur, D. (2015) 'The Pension Loans Scheme: an old program attracts new interest', *Flagpost*, Parliamentary Library, Parliament of Australia, 24 February, https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/FlagPost/2015/February/The_Pension_Loans_Scheme.
- Atalay, K. and Barrett, G.F. (2016) *Pension incentives and the retirement decisions of couples*, IZA Discussion Paper No. 10013, Institute for the Study of Labor, Bonn.
- Attanasio, O.P. and Brugiavini, A. (2003) 'Social security and households' saving' *The Quarterly Journal of Economics*, vol. 118, no. 3: 1075–1119.
- Australian Bureau of Statistics (ABS) (2017a) *Retirement and retirement intentions, Australia, July 2016 to June 2017*, cat. no. 6238.0, ABS, Canberra.
- Australian Bureau of Statistics (ABS) (2017b) *Household Expenditure Survey and Survey of Income and Housing, user guide, Australia, 2015–16*, cat. no. 6503.0, ABS, Canberra, accessed 14 May 2019, <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/6503.0~2015-16~Main%20Features~Introduction~1>.
- Australian Bureau of Statistics (ABS) (2018a) *Information paper: Australian Census Longitudinal Dataset: methodology and quality assessment, 2011–2015*, cat. no. 2080.5, ABS, Canberra.
- Australian Bureau of Statistics (ABS) (2018b) *Microdata: Australian Census Longitudinal Dataset*, ACLD, cat. no. 2080, ABS, Canberra, accessed 15 May 2019, <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/2080.0Main+Features1ACLD?OpenDocument>.
- Australian Council of Social Services (ACOSS) (2015a) *Submission to the Inquiry into the Social Services legislation Amendment (fair and Sustainable Pensions) Bill 2015*, ACOSS, accessed 18 June 2019, <https://www.acoss.org.au/wp-content/uploads/2015/07/Submission-to-Fair-and-Sustainable-Pensions-Bill-FINAL.pdf>.
- Australian Council of Social Services (ACOSS) (2015b) *Policy snapshot: reform of the Age Pension*, ACOSS, accessed 24 May 2019, http://www.acoss.org.au/images/uploads/Briefing_Pension_Payments_formatted.pdf.
- Australian Government (2015) *Re:think*, Tax Discussion Paper, March, Commonwealth of Australia.
- Australian Taxation Office (ATO) (2018) *Contributing the proceeds of downsizing to super*, ATO, Canberra, accessed 24 May 2019, <https://iorder.com.au/publication/searchpublications.aspx?txt=75064>.

- Banks, J., Blundell, R., Oldfield, Z. and Smith, J.P. (2010) 'Housing price volatility and downsizing in later life', in David A. Wise (ed.), *Research Findings in the Economics of Aging*, University of Chicago Press: 337–379.
- Banks, J., Blundell, R., Oldfield, Z. and Smith, J.P. (2012) 'Housing mobility and downsizing at older ages in Britain and the USA', *Economica*, vol. 79, no. 313: 1–26.
- Bian, X. (2016) 'Leverage and elderly home owners' decisions to downsize', *Housing Studies*, vol. 31, no. 1: 20–41.
- Blundell, R., Crawford, R., French E. and Tetlow, G. (2016) 'Comparing retirement wealth trajectories on both sides of the pond', *Fiscal Studies*, vol. 37, no. 1: 105–130.
- Bonnet, C., Gobillon, L. and Laferrère, A. (2010) 'The effect of widowhood on housing and location choices', *Journal of Housing Economics*, vol. 19, no. 2: 94–108.
- Bradbury, B. (2010) 'Asset rich, but income poor: Australian housing wealth and retirement in an international context', Social Policy Research Paper No. 41, Department of Families, Housing, Community Services and Indigenous Affairs, Canberra.
- Burke, T., Stone, W. and Ralston, L. (2014) *Generational change in home purchase opportunity*, AHURI Final Report No. 232, Australian Housing and Urban Research Institute, Melbourne, <https://www.ahuri.edu.au/research/final-reports/232>.
- Calvo, E., Haverstick, K. and Zhivan, N.A. (2009) *Determinants and consequences of moving decisions for older Americans*, Center for Retirement Research Working Paper No. 16: 1–38.
- Carroll, C.D. (1997) 'Buffer-stock saving and the life-cycle/permanent income hypothesis', *Quarterly Journal of Economics*, vol. 112, no. 1: 1–55.
- Chen, K. (2010) 'A life-cycle analysis of social security with housing', *Review of Economic Dynamics*, vol. 13, no. 3: 597–615.
- Chiuri, M.C. and Jappelli, T. (2010) 'Do the elderly reduce housing equity? An international comparison', *Journal of Population Economics*, vol. 23, no. 2: 643–663.
- Cho, S.W.S. and Sane, R. (2013) 'Means-tested age pensions and home ownership: is there a link?', *Macroeconomic Dynamics*, vol. 17, no. 6: 1281–1310.
- Cho, S.W.S. and Sane, R. (2014) *Means-tested age pensions and savings*, Australian School of Business Research Paper 2014–03, University of New South Wales.
- Choi, N.G. (1996) 'Older persons who move: reasons and health consequences', *Journal of Applied Gerontology*, vol. 15, no. 3: 325–344.
- Chomik, R., Graham, S., Yan, S., Bateman, H. and Piggott, J. (2018) *Retirement income in Australia: Part II – Public support*, CEPAR Research Brief, November, Centre of Excellence in Population Ageing Research, University of New South Wales, <http://cepar.edu.au/resources-videos/research-briefs/retirement-income-australia-part-2>.
- Chomik, R. and Piggott, J. (2012) 'Pensions, ageing and retirement in Australia: long-term projections and policies', *Australian Economic Review*, vol. 45, no. 3: 350–361.
- Chomik, R. and Piggott, J. (2014) 'Means testing pensions: the case of Australia', Michigan Retirement Research Centre Policy Brief, Michigan Retirement Research Centre, University of Michigan.

- Chomik, R. and Piggott, J. (2016) 'Australian superannuation: the current state of play', *Australian Economic Review*, vol. 49, no. 4: 483–493.
- Cobb-Clark, D. (2008) 'Leaving home: what economics has to say about the living arrangements of young Australians', *Australian Economic Review*, vol. 41, no. 2: 160–176.
- Cocco, J.F. (2005) 'Portfolio choice in the presence of housing', *Review of Financial Studies*, vol. 18, no. 2: 535–567.
- Coile, C. and Milligan, K. (2009) 'How household portfolios evolve after retirement: the effect of aging and health shocks', *Review of Income and Wealth*, vol. 55, no. 2: 226–248.
- Coleman, T., Kearns, R.A. and Wiles, J. (2016) 'Older adults' experiences of home maintenance issues and opportunities to maintain ageing in place', *Housing Studies*, vol. 31, no. 8: 964–983.
- Commonwealth of Australia (2017) *Budget measures*, Budget Paper No. 2: 2016–17, Commonwealth of Australia, Canberra.
- Commonwealth of Australia (2018) *Preparing financially for a longer and more secure life: fact sheet 3*, Commonwealth of Australia, Canberra, <https://www.budget.gov.au/2018-19/content/factsheets/3-financially-prepared.html#expansion>.
- Costa, D.L. (1999) 'A house of her own: old age assistance and the living arrangements of older nonmarried women', *Journal of Public Economics*, vol. 72, no. 1: 39–59.
- Creedy, J. and Taylor, P.S. (1993) 'Population ageing and social expenditure in Australia', *Australian Economic Review*, vol. 26, no. 3: 56–68.
- Davidoff, I. and Leigh, A. (2013) 'How do stamp duties affect the housing market?', *Economic Record*, vol. 89, no. 286: 396–410.
- Davidoff, T. (2004) *Maintenance and the home equity of the elderly*, Fisher Center Working Papers, UC Berkley.
- Davidoff, T. (2010) 'Home equity commitment and long-term care insurance demand', *Journal of Public Economics*, vol. 94, No. 1–2: 44–49.
- Deaton, A. (1991) 'Saving and liquidity constraints', *Econometrica*, vol. 59, no. 5: 1221–1248.
- Department of Human Services (DHS) (2019) *Assets*, DHS, Canberra, <https://www.humanservices.gov.au/individuals/topics/assets/30621#assetstestlimits>.
- Department of Social Services (DSS) (2016) *Assets changes in selected groups of Age Pension recipients*, DSS, Canberra, http://www.aph.gov.au/~media/Committees/clac_ctte/estimates/sup_1617/DSS/Answers/422_Attachment.PDF.
- Department of the Treasury (2010) *Australia to 2050 – future challenges: the 2010 Intergenerational Report*, Department of the Treasury, Canberra.
- Department of the Treasury (2015) *Intergenerational Report: Australia in 2055*, Department of the Treasury, Canberra.
- Doling, J. and Ronald, R. (2010) 'Home ownership and asset-based welfare', *Journal of Housing and the Built Environment*, vol. 25, no. 2: 165–173.
- DSS—see Department of Social Services

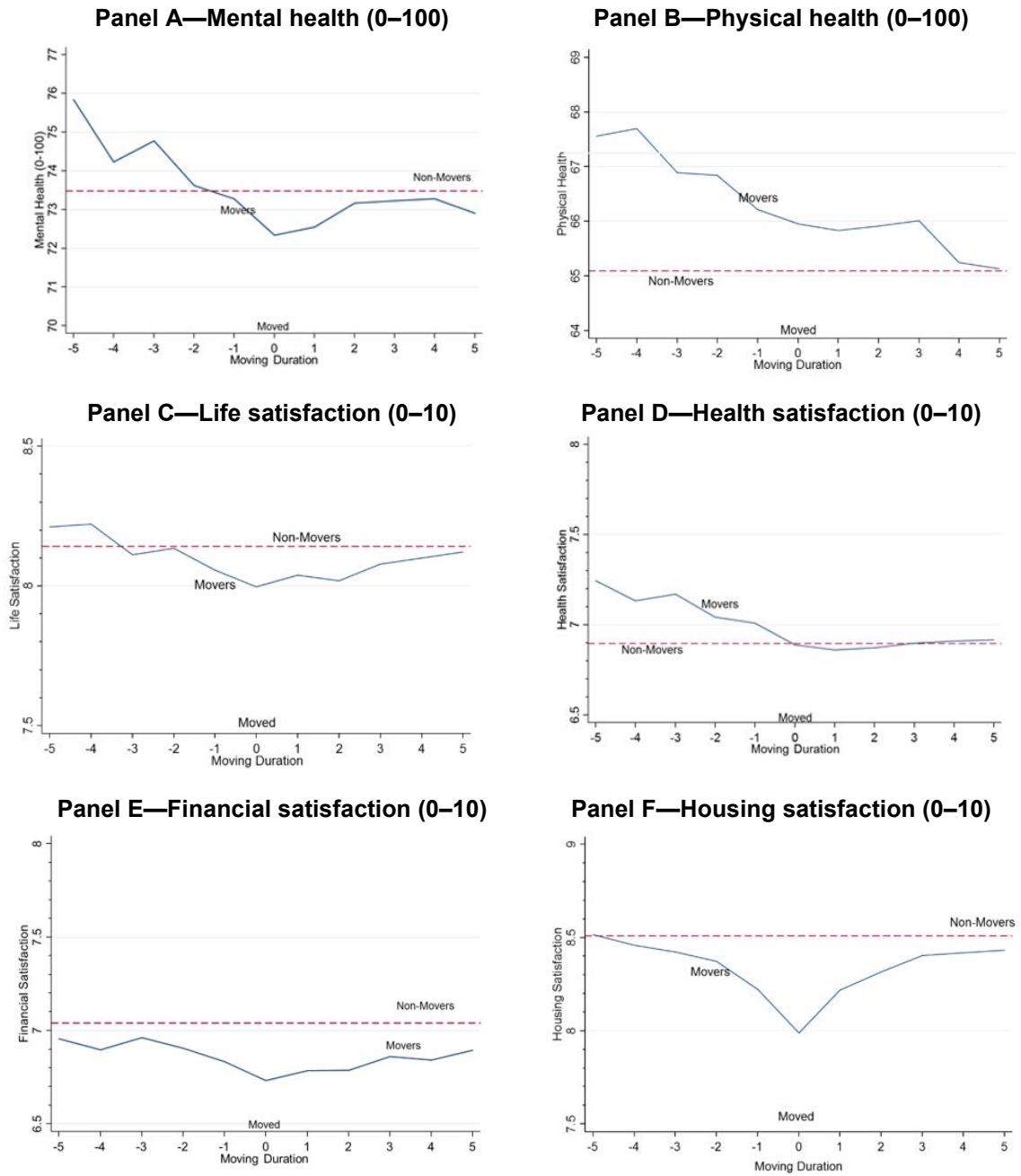
- Ebner, A. (2013) 'A micro view on home equity withdrawal and its determinants: evidence from Dutch households', *Journal of Housing Economics*, vol. 22, no. 4: 321–337.
- Engelhardt, G.V. (2008) 'Social security and elderly home ownership', *Journal of Urban Economics*, vol. 63, no. 1: 280–305.
- Ermisch, J.F. and Jenkins, S.P. (1999) 'Retirement and housing adjustment in later life: evidence from the British Household Panel Survey', *Labour Economics*, vol. 6, no. 2: 311–333.
- Finlay, R. (2012) 'The distribution of household wealth in Australia: evidence from the 2010 HILDA survey', *RBA Bulletin*, June Quarter: 19–27.
- Flavin, M. and Yamashita, T. (2002) 'Owner-occupied housing and the composition of the household portfolio', *The American Economic Review*, vol. 92, no. 1: 345–362.
- Flood, J. and Baker, E. (2010) *Housing implications of economic, social, and spatial change*, AHURI Final Report No.150, Australian Housing and Urban Research Institute, Melbourne, <https://www.ahuri.edu.au/research/final-reports/150>.
- French, D., McKillop, D. and Sharma, T. *Housing equity withdrawal in later life: is a home more than asset-based welfare?*, PGDA Working Paper No. 154, Harvard University.
- Friedman, M. (1957) *A Theory of the Consumption Function: A Study by the National Bureau of Economic Research*, Princeton University Press, Princeton.
- Grossman, P.J. (1990) 'Fiscal competition among states in Australia: the demise of death duties', *Publius: The Journal of Federalism*, vol. 20, no. 4: 145–159.
- Haurin, D. and Moulton, S. (2017) 'International perspectives on home ownership and home equity extraction by senior households', *Journal of European Real Estate Research*, vol. 10, no. 3: 245–276.
- Headey, B., Marks, G. and Wooden, M. (2005) 'The structure and distribution of household wealth in Australia', *Australian Economic Review*, vol. 38, no. 2: 159–175.
- Hemingway, H., Nicholson, A., Stafford, M., Roberts, R., Marmot, M. (1997) 'The impact of socioeconomic status on health functioning as assessed by the SF-36 questionnaire: the Whitehall II study', *American Journal of Public Health*, vol. 87, no. 9: 1484–1490.
- Henry, K., Harmer, J., Piggott, J., Ridout, H. and Smith, G. (2009) *Australia's future tax system*, Department of the Treasury, Canberra, <http://www.taxreview.treasury.gov.au>.
- Hubbard, R.G., Skinner, J. and Zeldes, S.P. (1995) 'Precautionary saving and social insurance', *Journal of Political Economy*, vol. 103, no. 2: 360–399.
- Hulley, H., McKibbin, R., Pedersen, A. and Thorp, S. (2013) 'Means-tested public pensions, portfolio choice and decumulation in retirement', *Economic Record*, vol. 89, no. 284: 31–51.
- Jefferson, T., Austen, S., Ong, R., Haffner, M. and Wood, G. (2017) 'Housing equity withdrawal: perceptions of obstacles among older Australian home owners and associated service providers', *Journal of Social Policy*, vol. 46, no. 3: 623–642.
- Judd, B., Liu, E., Easthope, H., Davy, L. and Bridge, C. (2014) *Downsizing amongst older Australians*, AHURI Final Report No. 214, Australian Housing and Urban Research Institute, Melbourne, <https://www.ahuri.edu.au/research/final-reports/214>.

- Keese, M. (2012) 'Downsize, undermaintain, or leave it as it is: housing choices of elder Germans', *CESifo Economic Studies*, vol. 58, no. 3: 570–598.
- Kryger, T. (2009) *Home ownership in Australia: data and trends*, Parliamentary Library Research Paper, Parliament of Australia, 11 February.
- Kudrna, G. and Woodland, A. (2012) 'An intertemporal general equilibrium analysis of the Australian age pension means test', *Journal of Macroeconomics*, vol. 33, no. 1: 61–79.
- Kutty, N.K. (1998) 'The scope for poverty alleviation among elderly home-owners in the United States through reverse mortgages', *Urban Studies*, vol. 35, no. 1: 113–129.
- Liu, E., Easthope, H., Burnley, I. and Judd, B.H. (2013) 'Multigenerational households in Australian cities: evidence from Sydney and Brisbane at the turn of the twenty-first century', *7th Australasian Housing Researchers' Conference*, 6–8 February, Fremantle.
- Marks, G.N., Headey, B. and Wooden, M. (2005) Household wealth in Australia: its components, distribution and correlates', *Journal of Sociology*, vol. 41, no. 1: 47–68.
- McLaren, J. (2013) 'The Australian Capital Territory has adopted measures to abolish stamp duty and impose a land tax on all real property: will this approach be adopted by other states in Australia?', *Journal of the Australasian Tax Teachers Association*, vol. 8, no. 1: 101–116.
- Milligan, K. (2005) 'Life-cycle asset accumulation and allocation in Canada', *Canadian Journal of Economics*, vol. 38, no. 3: 1057–1106.
- Modigliani, F. and Brumberg, R.H. (1954) 'Utility analysis and the consumption function: an interpretation of cross-section data', in K. Kurihara (ed.), *Post Keynesian Economics*, Rutgers University Press, New Brunswick: 388–436.
- Morrison, S. (2017) *Budget Speech 2017*, Commonwealth of Australia, Canberra.
- Ong, R. (2008) 'Unlocking housing equity through reverse mortgages: the case of elderly home owners in Australia', *European Journal of Housing Policy*, vol. 8, no. 1: 61–79.
- Ong, R., Jefferson, T., Wood, G., Haffner, M. and Austen, S. (2013) *Housing equity withdrawal: uses, risks, and barriers to alternative mechanisms in later life*, AHURI Final Report No. 217, Australian Housing and Urban Research Institute, Melbourne, <https://www.ahuri.edu.au/research/final-reports/217>.
- Ong, R., Wood, G.A., Austen, S., Jefferson, T. and Haffner, M.E. (2015) 'Housing equity withdrawal in Australia: prevalence, patterns and motivations in mid-to-late life', *Housing Studies*, vol. 30, no. 7: 1158–1181.
- Painter, G. and Lee, K.O. (2009) 'Housing tenure transitions of older households: Life cycle, demographic, and familial factors', *Regional Science and Urban Economics*, vol. 39, no. 6: 749–760.
- Powdthavee, N. and Stutzer, A. (2014) *Economic approaches to understanding changes in happiness*, IZA Discussion Paper No. 8131, Institute for the Study of Labor, Bonn.
- Productivity Commission (2014) *Geographic labour mobility*, Research Report, Productivity Commission, Canberra.
- Productivity Commission (2015) *Housing decisions of older Australians*, Research Paper, Productivity Commission, Canberra.

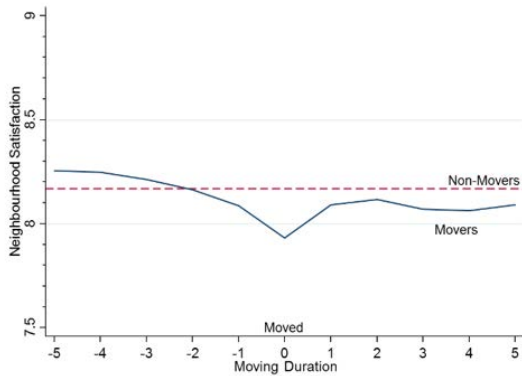
- Sane, R. and Piggott, J. (2011) 'The impact on residential choice of the family home exemption in resource-tested transfer programs', ARC Centre of Excellence in Population Ageing Research, Working Paper 2011/12, University of New South Wales.
- Spicer, A., Stavrunova, O. and Thorp, S. (2016) 'How portfolios evolve after retirement: evidence from Australia', *Economic Record*, vol. 92, no. 297: 241–267.
- Stapledon, N. (2016) 'The inexorable rise in house prices in Australia since 1970: unique or not?', *Australian Economic Review*, vol. 49, no. 3: 317–327.
- Suari-Andreu, E., Alessie, R. and Angelini, V. (2018) 'The retirement-savings puzzle reviewed: the role of housing and bequests', *Journal of Economic Surveys*, vol. 33, no. 1: 195:225, doi: 10.1111/joes.12257.
- Tatsiramos, K. (2006) *Residential mobility and housing adjustment of older households in Europe*, IZA Discussion Paper No. 2435, Institute for the Study of Labor, Bonn.
- The Treasury—see Department of the Treasury
- Venti, S.F. and Wise, D.A. (1989) 'Aging, moving, and housing wealth', in D.A. Wise (ed.), *The Economics of Aging*, University of Chicago Press, Chicago: 9–48.
- Venti, S.F. and Wise, D.A. (1990) 'But they don't want to reduce housing equity', in D.A. Wise (ed.), *Issues in the Economics of Aging*, University of Chicago Press, Chicago: 13–32.
- Venti, S.F. and Wise, D.A. (2004) 'Aging and housing equity: another look', in D.A. Wise (ed.), *Perspectives on the Economics of Aging*, University of Chicago Press, Chicago: 127–180.
- Whelan, S., Atalay, K., Dynan, L. (2018) *Asset portfolio retirement decisions: the role of the tax and transfer system*, AHURI Final Report No. 298, Australian Housing and Urban Research Institute, Melbourne, <https://www.ahuri.edu.au/research/final-reports/298>.
- Whelan, S. and Parkinson, S. (2017) *Housing tenure, mobility and labour market behaviour*, AHURI Final Report No. 280, Australian Housing and Urban Research Institute, Melbourne, <https://www.ahuri.edu.au/research/final-reports/280>, doi: 10.18408/ahuri-7307101.
- Whiteford, P. (2010) 'The Australian tax-transfer system: architecture and outcomes', *Economic Record*, vol. 86, no. 275: 528–544.
- Wood, G. and Nygaard, C.A. (2010) 'Housing equity withdrawal and retirement: evidence from the Household, Income and Labour Dynamics in Australia Survey (HILDA)', in B.A. Searle and S.J. Smith (eds), *The Blackwell Companion to the Economics of Housing: The Housing Wealth of Nations*, Wiley-Blackwell: 257–278.
- Yates, J. and Bradbury, B. (2010) 'Home ownership as a (crumbling) fourth pillar of social insurance in Australia', *Journal of Housing and the Built Environment*, vol. 25, no. 2: 193–211.
- Yeend, P. (2013) *Housing help for age pensioners*, Parliamentary Library Research Paper, Parliament of Australia.

Appendix 1: Additional statistics

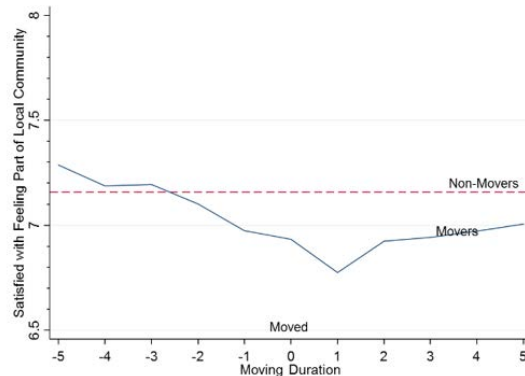
Figure A1: Satisfaction outcomes, pre and post move



Panel G—Neighbourhood satis. (0–10)



Panel H—Local community satis. (0–10)



Notes: See main text page 83 for details.

Source: Authors' own calculations, using HILDA Waves 1–17.

Table A1: Summary statistics for individuals aged 55 and over, by age

	Aged 55–64 years			Aged 65–74 years			Aged 75 years and over		
	All	Ever moved	Non-movers	All	Ever moved	Non-movers	All	Ever moved	Non-movers
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Age (years)	59.69	59.92	59.51	69.59	69.49	69.68	81.39	81.35	81.43
Partnered (rate)	0.74	0.7	0.77	0.7	0.68	0.72	0.5	0.46	0.52
Years of schooling	11.94	12.02	11.88	11.29	11.42	11.18	10.5	10.53	10.48
In labour force (rate)	0.72	0.7	0.73	0.28	0.26	0.31	0.18	0.13	0.21
Work hours (weekly)	21.91	21.43	22.31	4.91	5.25	4.61	0.74	0.64	0.81
Household income (\$0,000s)	111.74	111.9	111.61	70.35	75.42	65.82	46.15	47.07	45.52
No. of children	0.44	0.36	0.5	0.17	0.17	0.17	0.12	0.12	0.13
Housing information (rate)									
Outright owner	0.57	0.48	0.64	0.76	0.67	0.84	0.76	0.66	0.83
Mortgagor	0.25	0.25	0.25	0.08	0.11	0.05	0.02	0.04	0.02
Renter	0.11	0.19	0.05	0.08	0.13	0.03	0.08	0.15	0.04
No. of bedrooms	3.3	3.2	3.39	3.12	3.03	3.19	2.73	2.53	2.87
LGA mean house price (\$000s)	488.99	465.54	508.48	481.23	461.54	498.59	477.07	446.25	496.81

	Aged 55–64 years			Aged 65–74 years			Aged 75 years and over		
	All	Ever moved	Non-movers	All	Ever moved	Non-movers	All	Ever moved	Non-movers
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Moving experience (rate)									
Moved within 12 months	0.10	0.21	-	0.07	0.14	-	0.06	0.14	-
Across state	0.02	0.05	-	0.01	0.03	-	0.01	0.03	-
Across LGA	0.05	0.11	-	0.03	0.07	-	0.03	0.06	-
To smaller house	0.05	0.11	-	0.03	0.07	-	0.03	0.07	-
To lower equity house	0.36	0.36	-	0.4	0.4	-	0.41	0.41	-
Outcome variables (rate)									
Physical health (0–100)	70.43	69.67	71.05	65.35	65.87	64.88	54.07	54.86	53.52
Mental health (0–100)	74.88	74.12	75.51	74.84	75.22	74.5	68.38	68.74	68.13
Health improved	0.11	0.12	0.1	0.1	0.11	0.08	0.07	0.08	0.06
Health worsened	0.17	0.18	0.16	0.2	0.2	0.21	0.27	0.27	0.27
Satisfaction (0–10)									
Life	7.93	7.91	7.94	8.27	8.27	8.27	8.32	8.29	8.34
Health	6.92	6.9	6.94	7.01	7.06	6.96	6.79	6.86	6.74
Financial	6.65	6.55	6.73	7.07	6.98	7.14	7.49	7.46	7.51
Neighbourhood	8.02	7.99	8.05	8.22	8.24	8.2	8.32	8.27	8.35
Local social environment	6.94	6.84	7.03	7.25	7.2	7.28	7.23	7.22	7.24
House	8.21	8.13	8.28	8.54	8.53	8.56	8.77	8.66	8.84
No. of observations	34,460	15,535	18,925	24,441	11,520	12,921	18,168	7,418	10,750

Source: Authors' own calculations, using HILDA Waves 1–17.

Table A2: Probability of geographic mobility across HILDA waves—renters

	Any mobility	Cross-state mobility	Cross-LGA mobility
	(1)	(2)	(3)
Education: Diploma	0.00633 (0.00794)	-0.00120 (0.00250)	0.00295 (0.00544)
Education: university or more	-0.00135	0.0000448	0.0223***

	Any mobility	Cross-state mobility	Cross-LGA mobility
	(1)	(2)	(3)
	(0.0105)	(0.00331)	(0.00722)
Year at the baseline	0.000964 (0.000747)	0.000236 (0.000235)	0.00233*** (0.000511)
Age	-0.0127* (0.00701)	-0.00759*** (0.00220)	-0.0119** (0.00480)
Age squared	0.0707 (0.0460)	0.0479*** (0.0144)	0.0676** (0.0315)
Eligible for AP	-0.0751* (0.0438)	0.00633 (0.0138)	-0.0397 (0.0300)
Ln (household income)	0.0136* (0.00725)	0.00490** (0.00228)	0.00662 (0.00497)
Negative income	0.0189 (0.0442)	0.00657 (0.0139)	-0.000897 (0.0303)
Family transitions			
Partnered–not partnered	0.00951 (0.0281)	-0.00789 (0.00882)	-0.00893 (0.0192)
Not partnered–partnered	0.203*** (0.0385)	0.0172 (0.0121)	0.0714*** (0.0264)
Not partnered–not partnered	0.0338*** (0.00954)	0.000402 (0.00300)	0.0191*** (0.00654)
Kids–no kids	0.100*** (0.0208)	0.0174*** (0.00652)	0.0568*** (0.0142)
No kids–no kids or no kids–kids	0.0679*** (0.0104)	0.0123*** (0.00325)	0.0431*** (0.00710)
Change in household size	0.196*** (0.0133)	0.0110*** (0.00418)	0.100*** (0.00911)
Work transitions			
Work–retired	0.0430** (0.0182)	-0.000592 (0.00572)	0.0297** (0.0125)
Retired–work	0.0126 (0.0364)	-0.000849 (0.0114)	-0.0184 (0.0249)
Retired–retired	-0.0122	0.00256	-0.000447

	Any mobility	Cross-state mobility	Cross-LGA mobility
	(1)	(2)	(3)
	(0.00858)	(0.00269)	(0.00588)
Partner: work–retired	0.0670*** (0.0255)	-0.00454 (0.00800)	0.0509*** (0.0174)
Partner: retired–work	0.0579* (0.0322)	-0.00636 (0.0101)	0.00287 (0.0221)
Partner: retired–retired	-0.00186 (0.0112)	-0.00654* (0.00351)	-0.00118 (0.00766)
Average financial assets (\$10,000)	-0.002 (0.00106)	-0.000337 (0.000333)	-0.000983 (0.000727)
Health improved	0.0405** (0.0161)	0.00543 (0.00505)	0.0250** (0.0110)
Health worsened	0.0319** (0.0124)	0.00469 (0.00388)	0.0308*** (0.00847)
Log (median house prices at baseline)	-0.0103*** (0.00285)	-0.000217 (0.000896)	-0.00500** (0.00195)
AP income test			
(+/- 10% income cut-off)	0.00972 (0.0148)	-0.000799 (0.00465)	0.0118 (0.0101)
Under 90% of income cut-off	-0.0114 (0.0128)	-0.00373 (0.00404)	-0.0132 (0.00880)
AP eligible x average fin. asset	0.00111 (0.00123)	0.0000689 (0.000388)	0.000216 (0.000845)
AP eligible x log (house price)	0.00626* (0.00331)	0.000403 (0.00104)	0.00496** (0.00227)
AP eligible x health improved	-0.0149 (0.0220)	-0.00325 (0.00690)	-0.00511 (0.0150)
AP eligible x health worsened	-0.0261* (0.0155)	-0.00445 (0.00486)	-0.0315*** (0.0106)

Notes: * p-value is less than 0.1 ** p-value is less than 0.05; *** p-value is less than 0.01. The dependent variable takes a value of 1 if the individual reports a change in address/state/LGA over successive waves of HILDA, and 0 otherwise.

Source: Authors' own calculations, using HILDA Waves 1–17.

Table A3: Probability of financial downsizing across HILDA waves—owners

	Financial downsize (decrease in net value of home)		
	Owner	Outright owner	Mortgage owner
	(1)	(2)	(3)
Education: Diploma	0.00463*** (0.00150)	0.00384*** (0.00125)	0.000840 (0.000577)
Education: university or more	0.00272 (0.00184)	0.00149 (0.00153)	0.000666 (0.000708)
Year at the baseline	-0.000332** (0.000149)	-0.000427*** (0.000124)	0.00000494 (0.0000576)
Age	-0.000342 (0.00151)	0.000587 (0.00126)	-0.00119** (0.000581)
Age squared	0.000578 (0.0100)	-0.00385 (0.00833)	0.00726* (0.00385)
Eligible for AP	-0.0429*** (0.0159)	-0.0373*** (0.0132)	-0.00705 (0.00611)
Ln (household income)	0.00360*** (0.00136)	0.00248** (0.00114)	0.000338 (0.000525)
Negative income	0.0131 (0.0101)	0.00796 (0.00844)	-0.00185 (0.00390)
Family transitions			
Partnered—not partnered	0.0175*** (0.00633)	0.0170*** (0.00528)	-0.000458 (0.00244)
Not partnered—partnered	0.109*** (0.0100)	0.0577*** (0.00836)	0.0359*** (0.00387)
Not partnered—not partnered	-0.00368* (0.00196)	0.000145 (0.00163)	-0.00285*** (0.000756)
Kids—No kids	0.0145*** (0.00405)	0.0150*** (0.00337)	-0.00410*** (0.00156)
No kids—no kids or no kids—kids	0.00996*** (0.00196)	0.00919*** (0.00163)	-0.00113 (0.000756)
Change in household size	0.0153*** (0.00274)	0.00703*** (0.00228)	0.00529*** (0.00105)

	Financial downsize (decrease in net value of home)		
	Owner	Outright owner	Mortgage owner
	(1)	(2)	(3)
Work transitions			
Work–retired	0.00540 (0.00332)	0.00150 (0.00276)	-0.00205 (0.00128)
Retired–work	0.00184 (0.00626)	-0.000675 (0.00522)	0.00165 (0.00241)
Retired–retired	-0.000299 (0.00172)	0.000602 (0.00143)	-0.000234 (0.000662)
Partner: Work–retired	0.00514 (0.00377)	0.00903*** (0.00314)	-0.00249* (0.00145)
Partner: Retired–work	0.00166 (0.00562)	0.00446 (0.00469)	-0.00427** (0.00217)
Partner: Retired–retired	-0.00192 (0.00187)	-0.000111 (0.00155)	-0.00190*** (0.000718)
Ln (house value)	-0.00268** (0.00117)	-0.00346*** (0.000975)	0.00196*** (0.000451)
Ln (house equity)	-0.00338*** (0.00116)	0.000760 (0.000963)	-0.00399*** (0.000445)
Negative home equity	-0.0463*** (0.0157)	0.00262 (0.0131)	-0.0492*** (0.00606)
Average financial assets (\$10,000)	0.000428* (0.000246)	0.000604*** (0.000205)	-0.000160* (0.0000949)
Health improved	0.00507 (0.00335)	0.00144 (0.00279)	-0.0000438 (0.00129)
Health worsened	0.00522* (0.00285)	0.000257 (0.00238)	0.00359*** (0.00110)
Log (median house prices at baseline)	-0.00149 (0.00106)	-0.00209** (0.000885)	0.000194 (0.000409)
AP income test			
(+/- 10% income cut-off)	0.00345 (0.00264)	0.00288 (0.00220)	0.000790 (0.00102)

	Financial downsize (decrease in net value of home)		
	Owner	Outright owner	Mortgage owner
	(1)	(2)	(3)
Under 90% of income cut-off	0.00306 (0.00239)	0.00349* (0.00199)	-0.000617 (0.000919)
AP eligible x average fin. asset	-0.000313 (0.000285)	-0.000354 (0.000238)	0.000120 (0.000110)
AP eligible x log (house price)	0.00358*** (0.00121)	0.00303*** (0.00101)	0.000635 (0.000467)
AP eligible x health improved	0.00548 (0.00451)	0.00888** (0.00376)	-0.000108 (0.00174)
AP eligible x health worsened	-0.00503 (0.00349)	-0.0000115 (0.00290)	-0.00394*** (0.00134)

Notes: * p-value is less than 0.1; ** p-value is less than 0.05; *** p-value is less than 0.01.

Source: Authors' own calculations, using HILDA Waves 1–17.

Table A4: Mobility intentions in the next 12 months, by age and tenure

Age (years)	Do not want to move	Likely to move	Unlikely to move	Do not want to move	Likely to move	Unlikely to move
	Renters			Owners		
2007/08						
55–64	75	16	8	88	7	6
65–74	84	10	6	90	5	4
75+	87	6	7	95	3	2
2013/14						
55–64	68	21	11	85	7	8
65–74	81	11	8	88	6	5
75+	87	7	6	93	4	3

Notes: Figures show the percentage of renters or owners by mobility intentions. Due to rounding the sum of those who do not want to move, are likely to move and are unlikely to move within a given age range, year and tenure status may not sum to 100 percent.

Source: Authors' own calculations using the SIH 2007 and 2013.

Table A5: Barriers to geographic mobility, by age

	Dwelling costs	Moving costs	Effort	Health	Dwelling costs	Moving costs	Effort	Health
	Renters				Owners			
Age (years)	2007/08							
55–64	38	43	-	18	40	15	14	31
65–74	42	33	8	17	53	2	18	28
75+	48	6	-	47	32	-	13	55
	2013/14							
55–64	31	18	8	43	39	6	11	43
65–74	23	27	15	36	42	6	17	35
75+	18	33	7	42	46	13	22	20

Notes: Figures show the percentage of renters or owners citing each of cost (dwelling or moving), effort or health as the main barrier to geographic mobility. Due to rounding the sum of those citing each barrier within a given age range, year and tenure status may not sum to 100 percent. Moving costs include, for example, stamp duty and removalists.

Source: Authors' own calculations using the SIH 2007 and 2013.

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