Ageing in Place and the Decision to Move: A Longitudinal Study of Australia

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Abstract: This study investigates the principal factors driving the residential mobility decisions (i.e. to stay or move) of the rising number of older Australians using the Australian Panel Data, Household, Income and Labour Dynamics of Australia (HILDA), 2001-2010. The HILDA survey is particularly suited for this research because it comprises a comprehensive range of mobility related variables that uncover the prevalence, frequency, timing and distance of moves over the period of the survey. Many older people may wish to age in place rather than move in with their children or be institutionalized, and continue to be active in their local communities, maintaining their existing social networks. However, they often change location due to higher levels of relationship breakdown and healthcare needs in later life. Modified housing, downsizing to a lower density dwelling, the movement from an owner-occupied home to a rental property, and the need for institutionalized healthcare are closely associated with the location decision of those who move. This research therefore examines the mobility decision of older Australians as they stay or move and identifies major socioeconomic and demogrpahic factors that provide a contextual understanding of ageing in place or ageing in neighbourhood.

Introduction

Population ageing has major social and economic consequences: it both affects the demand for a broad range of welfare services, notably health and income support, and at the same time adversely affects the capacity of governments to meet this demand with sufficient and appropriate services and may even slow the growth of the broader economy (Productivity Commission, 2013). According to the Australian Bureau of Statistics (ABS, 2013c), people aged 65 and over comprised 8% of the population in 1972 compared with 14% in 2012, and nearly tripled from 1.1 million to 3.2 million. The location decisions of older people, and their consequent mobility patterns, will have a significant impact on the achievement of broader policy goals, particularly health resource allocation, balanced regional community development and local economic growth (Han and Corcoran, 2014). Yet we as a nation understand little of the complex location decision process of retiring citizens in later life. Location decision of ageing population is therefore critical to aged care service planning and residential service allocation across the Australian cities and towns. However, an important policy question remains as to whether the rising number of baby boomers in urban areas, particularly the Australian metropolitan regions, will choose to age in place or relocate at retirement (aged 55-74 years) and again in the very later life (aged 75 years and over) if the elderly will return to close to their families.

Within the Australian context a demographic transformation began during the post-war period and more recently has begun to impact adversely on Australia's capacity to meet important social needs, especially as the baby-boomer generation begins retirement (Han and Corcoran, 2014). Based on ABS medium-level growth scenarios (ABS population forecast series B), the Australian population is projected to grow to 29.1 million people by 2032—an increase of 28% from 2012. Over the same period, the number of people aged 65 and over is projected to increase by 82% between 2012 and 2032 to reach 23% of the Australian population. For the cohort of people aged 85 and over, the projected increase between 2012 and 2032 is more than 100% (ABS, 2013b).

This paper examines the elderly location decision making process and elucidates both ageing in place and ageing in neighborhood emerging in this critical area of policy concern. This research focuses on both understanding the individual decisions observed over time and assisting the complex policymaking required to governments seeking to address issues of resource provision and allocation across Australian communities. A key set of questions are:
1. How many old people decide to move or stay, how far do they move, and when did these moves happen in later life?
2. What are the major socioeconomic, demographic and health related characteristics of the people who decide move?
3. How different are the ageing in place of older people in Australia compared with those of ageing in neighborhood?

Literature review

Population ageing is a major issue in Australia, as elsewhere in the western world (United Nations, 2013), and will only increase in importance over the next few decades (Productivity Commission, 2013; ABS, 2013b). Previous international and Australian research into the area of population ageing and movement has suggested that two major residential decisions – ageing in place and retirement move (i.e. downsizing) are made by older people in Australia as revealed in their locational choices at retirement age. The proposed research project uses the two types as a platform to form the analytical framework. An annotated literature review of the two major mobility decision is provided below:

Ageing in place

Studies from around the world looking at older people's residential locational choices indicate that some people living in urban areas tend to relocate at retirement, while others wish to age in place (Kim and Han, 2014; Löfqvist, at al., 2013). According to the 2006 ABS Census, whilst the numbers of persons moving reduces by successive age brackets after the 30-34 age bracket, the proportion of the population moving starts increasing again from 16% in the 75-79 age bracket to 33% for the over 90 age bracket. International studies show that diverse emotional and behavioural factors influencing movement decisions are in play. In general, reasons not to move reflect a strong attachment to the home and neighbourhood. Moreover, reasons not to move reflect practical aspects such as

economy and strain, as well as a fear of losing continuity of habits and routines (Löfqvist et al., 2013). In general low-income elders were more likely to expect to age in place than their higher-income counterparts (Lehning, Smith, & Dunkle, 2013). However, it is unclear whether this expectation resulted from a desire to remain in the home or simply that there is no other place else for them to go.

Australia's problems in planning for service-care provision for an ageing population in an increasingly urbanised setting are closely related to relocation decisions made by the urban elderly in later life. Overall, in 2011 two thirds of older Australians lived in Major Urban areas. Of the younger elderly, those in the 65–74 years age group, 62% of men and 65% of women lived in Major Urban areas (ABS, 2013a). People aged 75–84 years, the 'older age', were more likely to live in urban areas and less likely to live in the rural areas than their younger peers (ABS, 2013a). However, there is uncertainty behind individual relocation process over time. The changes in location decisions over time and motivations of the urban elderly are a critical dimension of long term planning for elderly care-provision and service allocation. In this context it is particularly important from a policy perspective to address the social issue that there are already significant disparities between urban, peri-urban and rural areas in access to health services and suitable housing, notably in retirement villages in Australia (Han, et al, 2011).

Residential change is highly distance dependent and thus distance of move is a key spatial dimension in the relocation of older people. Some studies have indicated that the relocation of old people is triggered at retirement but the propensity to move falls as retirement age rises in Australia (Sander and Bell, 2014). Over 70% of older people aged 65 over who make residential change move from homes within close proximity of the retirement village they move to in Australia (Thornton, 2011). In particular, staying close to family and the known neighbourhood is important among the elderly, and the moves to retirement accommodation or institutional care mostly occurred within a radius of 12km of the former home (Howe, 2006). While ageing in place and short-distance moves (less than 30km) are the primary aspiration of older people's housing choice, research has identified an emerging trend of long-distance moves (over 30km). Long-distance moves among older people have been in largely explained by the life stage of older people (Clark, 2013). 'Sea change' moves to high amenity coastal areas or migration from metro to non-metro areas, is a major form of amenity moves in Australia (Gurran, Squires, & Blakely, 2006). However, it should be noted that the trend of movement of old people is not uniformly one of counter-urbanism (Pinnegar et al., 2012). That is, migration from non-metro to metro is also a noticeable move (Marshall, Murphy, Burnley, & Hugo, 2005).

Retirement Migration
International studies have argued that job opportunities, which made urban areas initially attractive, hence rural to urban migration, are no longer important post-retirement (Kim and Han, 2014). As a result, baby-boomers may relocate to coastal regions (sea changes) or rural hinterland (tree changes). Young retirees who have intact marriages, are relatively healthy, and have enough retirement income may choose retirement migrations to locations that enhance lifestyle or improve access to social networks, which tends to be a long distance move from metropolitan to non-metropolitan areas (e.g. Sun-Belt moves in America and sea change moves in Australia)(Gurran and Blakely, 2007). Second, moves occur later in the course of older age when older people develop supporting needs in carrying out everyday household tasks. Relocating to be closer to one's children is typical of this category as are moves to age-specific housing (retirement villages) and from non-metropolitan to metropolitan areas (for informal care services). Third, moves generally encompass the move from care by family members to institutional care among those of very advanced age. Most of third stage moves are local rather than long-distance moves over 30km (Morrison and Clark, 2011). There is uncertainty behind the individual migration patterns of older people in Australia and the subsequent changes in relocation decision over time.

Downsizing is another frequent mobility in the later life. It refers to moving from a larger to a smaller dwelling as measured by number of bedrooms or floor area and/or garden/yard requiring less maintenance and often including a reduction in personal belongings (de-cluttering), lifestyle changes and occasionally reductions in housing value or equity (Judd, et al., 2014). Based on the assumption of increasing preference of higher density dwellings for older people, it is important to know if densification in Australia may attract older people to inner-city areas where a number of high-rise apartments have been developed (Chettri et al. 2013). However, there are limited empirical studies to confirm the significant changes in older people's housing preferences in Australia (Clark, 2013). It is

uncertain that downsizing can be attributed to average levels of home ownership and housing wealth decline significantly with age.

Relocating to be closer to one's children for informal care services or to age-specific housing is typical of this category. This assistance migration takes the form of return migration, and thus takes place from non-metropolitan to metropolitan areas (Hugo, Feist, & Tan, 2013). Overall, people aged 65 and over in Australia were least likely to make more than one move. Multiple moves often took the form of return migration, rather than onwards moves (Bell & Hugo, 2000). Return migration (returning to place of birth) often takes place in order to gain assistance from family members (Conway and Rock, 2011). Return migration may be used as a strategy to ease the negative impacts of giving up a home, sustaining a sense of continuity, and reinforcing the previous social relationships (Rowles & Bernard, 2013). However, it is uncertain whether the decrease of dependency is related to a return migration, nor do we know which retirees might chose a return migration in later life.

Data and Method

This paper examines the housing mobility patterns over time by measuring changes in housing characteristics of housing tenure, dwelling type and location using the Household, Income and Labour Dynamics in Australia (HILDA). HILDA is an Australian household-based panel study that was developed in 2001. It has been used for examining dynamic changes in many longitudinal studies such as the incidence of persistent poverty, assets and income in the transition to retirement, the correlations between and impacts of changes in physical and mental health, and an international comparison of wealth and happiness (HILDA 2013). The wave 1 panel consisted of 7,682 households and 19,914 individuals. In wave 11, this was topped up with an additional 2,153 households and 5,477 individuals. In this paper, we used ten waves of HILDA data (2001 to 2010), using the cohort of respondents who moved during the period. We created a person-period dataset from 2001 to 2010 to trace all the household movements over time.

We used descriptive Statistics on 'Ageing in Place' by breaking down into the two mobility decisions of 'Ageing in Home' and 'Ageing in Neighbourhood'. This includes possibility to change residence within the local community, holding a social and cultural tie. We examined whether the elderly has a significant tendency to continue living in the current home or neighbourhood by comparing the mobility intentions of other age groups. This questionnaire asks "How likely to move in next 12 months?" with a Likert scale response, "Very likely; Likely; Neither/nor sure; Unlikely; Very unlikely". We also use the variable of the duration of stay in the current residence (years at current address) and the variable of the preference to continue living in area with "strong preference to stay; moderate preference to stay; unsure/no strong preference to stay or to leave; moderate preference to leave; strong preference to leave". This variable shows the preference of ageing in community.

In comparison of 'ageing in place' and 'ageing in community' we used a binominal logistic regression analysis to identify statistically significant determinants of the mobility decisions between 'ageing in place' and 'retirement migration' (ageing in community). The respondents who aged 55 years and over were selected in the logistic regression model. Dependent variables are dichotomous, which shows a preference in home or community or does not show a preference. For instance, the dependent variable of ageing in home (how likely to move in next 12 months?) is binary if the answer is 'very likely/likely' or the others. Similarly, for the variable of ageing in neighbourhood (preference to continue living in area) the binary has if the answer is 'strong preference to stay' or 'moderate preference to stay'. Four major mobility factors were considered as independent variables. Housing satisfaction, proximity to family, residential density and community/neighbourhood satisfaction were included in the logistic regression models.

Table 1. Independent Variables

	Independent Variables
Housing	• Satisfaction for the home in which you live (0 if totally dissatisfied, 5 if neither satisfied nor dissatisfied and 10 if totally satisfied) • Number of bedrooms • Homeownership (including rent-free or life-tenure)
Individual/Family	• Age • Income • Health status • Nearchild (1 if non-resident children lives within 50km) • Nearparents (1 if parents(or single parent) live within 50km) • Nearsibling (1 if non-resident brother or sister lives within 50km)
Location	• Population density (1 if the census collection district is the urban areas with a population of 100,000 and over based on the 'Section-of-State' criteria) • Sections of State (SOS) Major urban: Urban areas with a population of 100,000 and over Other urban: Urban areas with a population of 1,000 to 99,999 Bounded locality: Rural areas with a population of 200 to 999 Rural Balance: The remainder of the State/Territory Migratory: Areas composed of off-shore, shipping, and migratory
Neighborhood & Community	• Satisfaction for the neighbourhood in which you live (0 if totally dissatisfied, 5 if neither satisfied nor dissatisfied, and 10 if totally satisfied) • Satisfaction for the feeling part of his/her local community (0 if totally dissatisfied, 5 if neither satisfied nor dissatisfied, and 10 if totally satisfied)

Results and Discussion

Duration of Stay

Figure 1 shows the string correlation between age and the duration of stay. Around 70% of the people aged 75 years and over stayed the current residence over the past 10 years. Whereas 65.6% of the people aged between 25 and 35 lived in the current house less than 3 years, which shows that younger people are more frequently move than the older people.
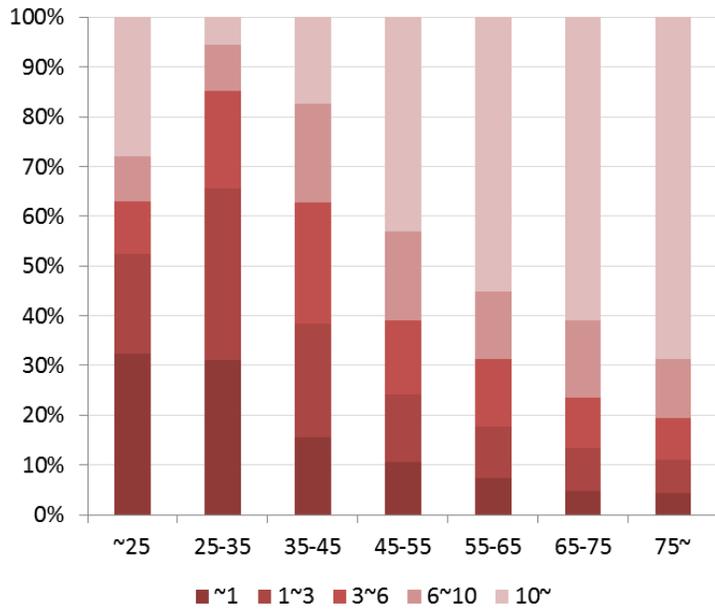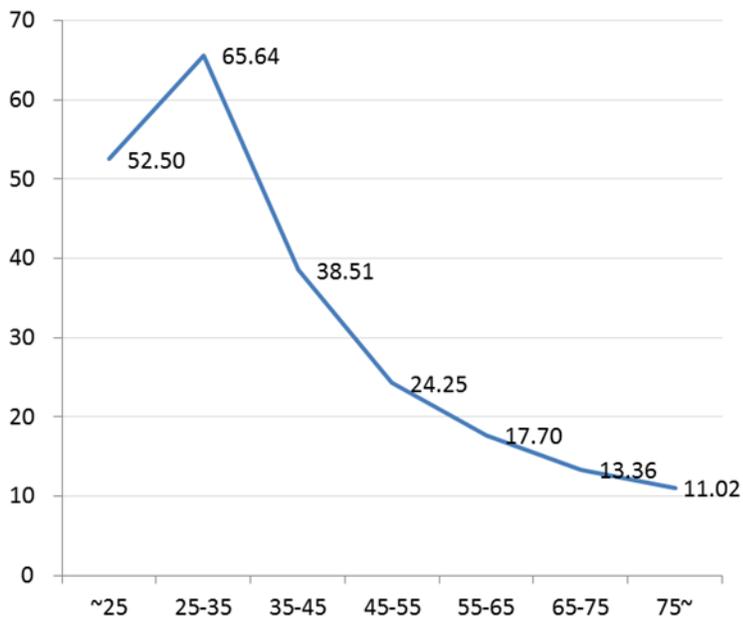
Figure 1. Duration of the current residence

Figure 2. Proportion of the duration of the current residence less than 3 years by the age group

Preference to stay

Regarding ageing in Home Figure 3 show how likely they move next 12 months. A strong negative correlation is found that the probability of moving decreases over ageing. In the youngest group (less than 25 years), about 58% of people will stay while the people aged 75 years or over increase to 93%.
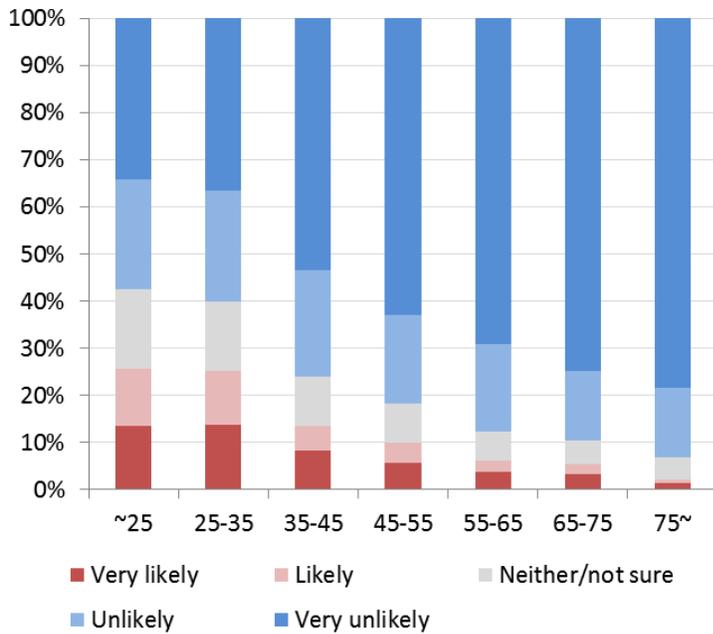
Figure 3. Preference to stay in the current residence

Location preference

In order to understand 'ageing in neighbourhood' the variable of the reference to continue living in area was analysed. Figure 4 shows that the elderly have greater preference to stay at the current neighbourhood. The proportion of the people who stay at current area is just over 59% for the youngest group, but it increases to 89% for the oldest group.
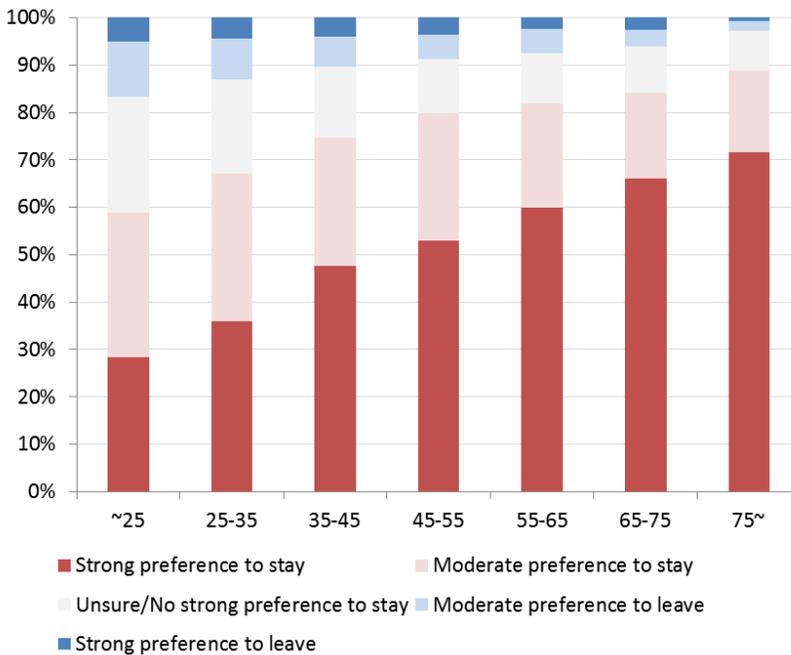

Figure 4. Preference to stay in the community

Mobility decision of 'ageing in home' and 'ageing in community'

Two logistic regression models were used to identify the key determinants of the mobility decision between ageing in home and ageing in community. The results of the models show that the individual socioeconomic factors have a significant effect on both the decisions. Among the elderly, ageing is still a strong barrier to move to other house or neighbourhood. The variable of couple is significant in Model I, which shows that having a spouse makes people stay at current address. Health is not significant in both models. Deterioration of health may not necessarily drive the elderly relocate to a retirement village or aged-care facilities. However the model found that retirement is statistically significant for ageing in home (Model I). Retirement is more likely to make people decide to move house, but not their neighbourhoods. Income variable is an important determinant of both ageing in home and ageing in neighborhood. The model results show that higher-income people are more likely to move the current house, but not change the current neighborhood.

The people with higher housing stress are more likely to move the current house, not the neighbourhood. If they stay longer in the place they are less likely to move for the future. It seems that the attachment to neighborhood with collective knowledge and experience is one of the most prominent determinants in mobility decision. Home ownership makes people not to move. It may be attributed to a large associated moving cost and strong attachment to home and social network to the current neighborhood.

For the family related variables we tested the three variables with a proximity to their family, nearby child, nearby parents, nearby sibling. However, we found 'Nearchild' is only statistically significant in Model II. The proximity to their children is an important determinant to stay at the current neighbourhood. In the higher density area the old people are more likely to search house to move, but would not move the current neighbourhood. In particular the level of satisfaction with their community such as the feeling part of local community is important. The respondents would not move the current area if they feel a sense of belonging to their local community.

Table 2 Logistic regression models

Model	Model I: Likely to move in next 12 months			Model II: Prefer to continue living in area			
Variable	Unstd.		Wald	Std.	Unstd.		Wald	Std.
Intercept	0.6542		0.77		-4.3767	***	93.07	
Age	-0.0171	*	2.83	-0.084	0.0204	***	11.78	0.1003
Couple	-0.4042	**	6.38	-0.1071	0.0852		0.79	0.0226
Health	-0.2582		1.41	-0.0501	-0.1883		2.44	-0.0365
Retired	0.6969	***	8.75	0.096	-0.1368		0.63	-0.0188
Income	0.0073	**	4.3	0.0495	0.0115	*	3.51	0.0786
Notpayrent	0.5481	*	3.62	0.0552	-0.1202		0.28	-0.012
Years_lived	-0.0384	***	26.06	-0.3124	0.0201	***	30.1	0.1631
Nearchild	-0.199		1.69	-0.0541	0.2574	***	7.52	0.07
Nearparents	-0.2718		1.2	-0.0465	0.1107		0.5	0.0189
Nearsibling	0.0637		0.15	0.0168	0.1477		2.14	0.039
SOS_urban	0.2749	*	3.01	0.075	0.1149		1.48	0.0313
Satisfy_home	-0.293	***	63.14	-0.2522				
Bedroom	0.3198	***	16.76	0.1696				
Own	-0.8355	***	20.94	-0.1595				

Satisfy_neighbour		0.413	***	184.49	0.3608
Satisfy_community		0.1263	***	29.02	0.1462

Observation used	4,513	4,487
-2LL	-2LL(0)=1,705, -2LL(x)=1,484, LR p-value<0.0001	-2LL(0)=3,882, -2LL(x)=3,311, LR p-value<0.0001
Max-rescaled R2	0.1513	0.2064
Percent Concordant	75.5	75.2

Note: *** p<0.01, ** p<0.05, * P<0.1

Conclusion

Some people at all ages relocate frequently. Those who relocate frequently are more likely to have the capacity to adapt to and commit to changes in their local environment while those who age in place are likely to retain their social ties and attachments (Rowles & Bernard, 2013). Our paper bridges the existing research gap between individual location decisions of older people using the logistic regression analysis. The findings reveal how many elderly decide to move at retirement, how often they move after retirement, and when these moves happened again in later life. In particular the research examines differences between the ageing in place of older people and those of ageing in neighbourhood.

We found that the elderly prefer staying at current neighbourhood and the variables such as 'Couple', 'Retired', 'Notpayrent', 'SOS_Urban' affect housing choice, not necessarily the neighbourhood choice. Being a single, retired, higher housing stress and living in higher density areas are more likely to move the current house, not to change the current local community. We found that higher income elderly are more likely to move house, but want to stay in the same community with a strong social tie. In the policy implication it is important to provide more affordable housing, new housing opportunity and housing type choices for the elderly to stay at the current neighbourhood.
The elderly decision to move or not depends on a level of satisfaction with their neighbourhood, and the feeling of belonging. Strong family tie and supports are also important. Our finding reveals that 'Nearchild' increases likelihood to age in the current neighbourhood if their children live close to them. Couples tend to downsize home as house size deceased over ageing. The event of retirement entails the adjustment of housing consumption pattern at later stage of life cycle. Given the number of bedrooms is an important predictor of mobility decision; a policy supports active mobility among the elderly to meet their needs within the current neighbourhood.

Overall this study have social benefits for Australian cities and towns where the majority of retirement migration and ageing in place occur, pressing local communities and retirement industries and placing a disproportionate burden on local health and care services. The Intergenerational Report (2015) estimated that Australian Government expenditure on aged care would increase from 0.8% of GDP in 2010 to 1.8% of GDP by 2050. Local governments in Australia have a disproportionate share of older people in their population, assisting them to plan for significant growth in demand for an adequate standard of basic infrastructure and an adequate and appropriate range of local government services. If the outcomes to meet the local needs of age care services and human infrastructure resulted in balanced resource allocations across cities and towns it is expected that care service disparity and cost reduction.

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