Does the owner-occupier exemption from the pensions means test affect housing choice of the elderly? Evidence from Australia.*

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Abstract

Many developed economies offer the elderly a means tested pension; in most cases the owner occupied home receives preferential treatment. Such policies create price distortions which will adversely affect household choice in an important market, and which has the potential to generate a serious economy-wide misallocation of resources. We study the impacts of the owner occupied exemption for residential choice among Australia’s elderly, many of whom enjoy access to a means tested age pension, by estimating a model of trade-down behaviour conditional on mobility, using the the Household, Income and Labour Dynamics (HILDA) data set spanning 5 years from Australia. Results suggest that the exemption of the owner-occupied home in the age pension means test generates sticky trade-down behaviour, consistent with resource misallocation.

Keywords: means-testing; owner-occupier exemption; home-equity drawdown; elderly

JEL Classification: I38; H5; J14; R2

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1 Introduction

Most developed economies have as part of their transfer system a means tested pension. This is sometimes a part of a broader social assistance policy, as for example with the US Supplemental Security Income (SSI) and Medicaid; sometimes it specifically targets older cohorts, as is the case with the UK Pension Credit or the Australian Age Pension. Many of these programs exempt the owner-occupied home from means testing in assessing the eligibility of program participants.

Exemption of the owner-occupier home from the means test may encourage households to concentrate their wealth in owner occupied housing so that in old age they remain eligible for welfare payments. If on the other hand, a trade-down occurs, proceeds from the sale of a house would usually count as assets and the returns from the investment of these assets would count as income towards the income test. It follows that any decision to liquidate wealth held in the owner occupied home may reduce welfare entitlements, and consequently inhibit residential mobility and trade-downs.

Research on the incentive effects of means-testing has mainly focused on savings and labour-supply. Hubbard et al. (1994, 1995) show that assets tests discourage saving by families who view welfare programmes as a valuable alternative source of income. More recent research on various means tested welfare programmes (such as the SSI, Medicaid, AFDC) in the US by Neumark & Powers (1998, 2000), Powers (1998), Gruber & Yelowtiz (1999) and Ziliak (2003) confirms this finding. Jimnez-Martin & Sanchez-Martin (2007) evaluate the life cycle effects of the minimum pension in Spain and find that the minimum pension increases the opportunity cost of the forgone pension income and eliminates the incentive to work. Sefton et al. (2008) conclude that the lightening of the taper rates of the means-test with the replacement of the Minimum Income Guarantee by the Pension Credit in the UK reflects a reasonable compromise across the various distortions by the policy. By contrast, residence exemption appears to have escaped analytic attention. Neumark & Powers (1998) only briefly allude to housing wealth, unlike saving, not being influenced by SSI as housing is excluded from countable wealth.

The literature on residential choice amongst the elderly has focused on whether equity is drawn-down in retirement to help smooth consumption over the life-cycle. It might be expected that the elderly draw down their housing wealth, generally by moving to a smaller home, but what
evidence we have suggests the contrary (Venti & Wise 1987, 1989, 2001).\footnote{There are a few studies that claim otherwise. Sheiner & Weil (1992) point out that other studies have looked at the behaviour of the “young old” and when the “old old” were taken into account average levels of home-ownership and housing wealth declined significantly with age. In a similar vein Hurd (1990) claims that wealth does decline, but the age at which we observe such declines depends in a complicated way on the utility function, the time path of annuities and the time path of mortality rates.} Where trades do occur, they are frequently a response to a precipitating shock, such as death of a spouse or a change in marital status, and are less frequent than in the population at large once health-induced moves are excluded.\footnote{The greater influence of non-economic factors on the mobility decision as compared to the economic factors has been documented by Vanderhart (1994), Ellwood & Kane (1989), Boersch-Supan (1989), Merrill (1984) and Megbolugbe et al. (1997).} These studies appear to ignore the incentive effects of taxation and welfare policies.

This paper studies how the exemption of owner-occupied housing in the Australian age pension affects residential choice. It examines both the frequency and nature of residential transitions among older cohorts, and especially among those who have reached the access age for the program, exploiting a panel data set of Household Income and Labour Dynamics (HILDA). The age-pension in Australia is a means tested (owner occupied home exempted) welfare payment for people above the age of 65 and constitutes the major source of income for a large part of the age-group.\footnote{The access age for women is 63 and is going to be phased to 65 by 2013.} At the same time, the value of the owner-occupier home in Australia is greater on average than the value of all financial assets for these cohorts, including private retirement assets (AMP.NATSEM 2007). It follows that when the prospect of selling the home confronts households, financial considerations stemming from the potential loss of the age pension loom large. The structure of the assets test is such that it will impact households whose non-housing assets are close to the permissible limit (or cut-off). If the assets test binds we should observe greater trade-downs by pensioners who have non-housing assets below the permissible limit. Our results are consistent with this hypothesis. We find that pensioners have a lower conditional probability of trading down than non pensioners. We also find that pensioners with non housing assets such that the means test does not bind have a greater conditional probability of a trade-down than otherwise. This result is significant for pensioners whose home values are greater than the median.

Reluctance of the elderly to trade-down their family homes has important ramifications for the resource allocation in the economy especially when, as in Australia, about half of the elderly claim to have spare capacity in their homes, indicating excess housing services consumption.\footnote{Australian Bureau of Statistics, Household Expenditure Survey, 2004}
If the exemption of the family home from the assets test does inhibit mobility and trade-down behaviour, this suggests a major price distortion in reducing the owner occupied housing assets. In economic efficiency terms, this is likely to be a serious source of economic inefficiency, restricting trades in an important market: in Australia, residential real estate comprises more than half the personal wealth. Various writers have argued that asset price distortions are likely to dominate inter-temporal and other price distortions in generating resource misallocations, because of the magnitudes of the infrastructure involved. Hamilton & Whalley (1985) and Hamilton (1987) both argue the dominance of asset price distortions over other forms of economic inefficiency. Skinner (1996) argues that the welfare cost of preferential housing is nearly five times that measured by earlier studies: he claims that the general equilibrium efficiency cost of exempting housing stock from capital taxation is estimated to be as much as 2.2% of GNP or $110 billion annually. Given this background, it is important that policymakers pay serious attention to opportunities for reforming policies which introduce such distortions.

We begin section 2 with an overview of the age-pension and the means-testing rules in Australia. In section 3 we present a simple explanation of elderly housing dynamics and present what we know of the transition behaviour of elderly Australians. Our focus here is on households whose head is 65+ as the age-pension cannot be received until age 65. We provide estimates of mobility and trade-down behaviour from a Heckman selection model in section 4. Section 5 concludes.

2 The age pension in Australia: institutional details

The age-pension in Australia is the centerpiece of the Australian transfer programme and has been in existence for about a century. About 2 million older Australians receive the age-pension (Harmer 2008). It is a Federal Government funded payment made every fortnight to Australian citizens (or permanent residents) above the age of 65, whose income and assets fall below a certain threshold. As of July 2008, the full fortnightly pension for single pensioners stood at $546.80 and for couples stood at $456.80 each. The age-pension is usually adjusted twice a year in line with the Consumer Price Index (CPI) and is also benchmarked to 25% of the Male Total Average Weekly Earnings (MTAWE).

The age pension payment is calculated under both the income and assets tests. The test that
results in the lower rate (or zero) applies. Although the owner-occupier home is exempt from the means-test different asset test schedules apply to homeowners and non-homeowners. The cut-offs as of July 2008 are listed in Table 1. A single home-owner can have non-housing assets worth $171,000 and an income of less than $138 per fortnight and receive the full pension. The pension is reduced by $1.5 for every $1000 above $171,750 up to $540,250, the part-pension cut off, beyond which the person ceases to be a pensioner. The cut-offs for non homeowners are higher. There are similar cut-offs for the income test, and the pension is reduced by 40 cents in the dollar for income over the full-pension cut-off. The idea behind means testing is to target assistance to those most in need. In the last 14 years, the income and assets test have undergone major changes and have been relaxed to improve returns from work and incentives to save for retirement. Most recently, in September 2007, the assets test taper rate was reduced by half from $3 per $1000 above the full pension cut-off to the current $1.5.

In addition to the pension payment itself, people on the age-pension receive a Pensioner Concession Card which entitles pensioners to discounts on various utilities including public transport, rates etc. Being on the age-pension is important not just for the pension payment but also for other assistance which might drop sharply otherwise. This produces strong incentives for people to remain eligible for at least a part pension to ensure that the concession card is retained.

Age pension eligibility is reviewed from time to time in light of changes in income or assets.

<table>
<thead>
<tr>
<th>Table 1 Assets test rules for the age-pension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td><strong>Asset-test</strong></td>
</tr>
<tr>
<td><strong>Homeowners</strong></td>
</tr>
<tr>
<td>Full pension cut-off</td>
</tr>
<tr>
<td>$171,750</td>
</tr>
<tr>
<td>Part pension cut-off</td>
</tr>
<tr>
<td>$540,250</td>
</tr>
<tr>
<td><strong>Non home-owners</strong></td>
</tr>
<tr>
<td>Full pension cut-off</td>
</tr>
<tr>
<td>$296,250</td>
</tr>
<tr>
<td>Part pension cut-off</td>
</tr>
<tr>
<td>$664,750</td>
</tr>
<tr>
<td><strong>Income test</strong></td>
</tr>
<tr>
<td>Full pension cut-off (p.f.)</td>
</tr>
<tr>
<td>$138</td>
</tr>
<tr>
<td>Part pension cut-off (p.f.)</td>
</tr>
<tr>
<td>$1,519.50</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
3 Analysing elderly housing dynamics

A household evaluates the utility from continuing to stay in its current residence and from a move. The household then chooses that which gives it a higher utility. Utility depends on housing (HC) and non-housing services (NHC) consumption, subject to the sum total of housing wealth (HW), non housing wealth or other assets (OA) and annuity value of future income (or transfer payments).

Formerly, a household can choose between an allocation of wealth in housing (HW) and other assets (OA) and a level of pension (P) that it is entitled to given the combination of HW and OA.

\[
HW \neq 0
\]

\[
P = \begin{cases} 
  x1 & \text{if } OA \leq y_1 \\
  x1 - (OA - y_1/1000) \times 1.5 & \text{if } y_1 \leq OA \leq y_2 \\
  0 & \text{if } OA \geq y_2 
\end{cases}
\]

\[
HW = 0
\]

\[
P = \begin{cases} 
  x1 & \text{if } OA \leq z_1 \\
  x1 - (OA - z_1/1000) \times 1.5 & \text{if } z_1 \leq OA \leq z_2 \\
  0 & \text{if } OA \geq z_2 
\end{cases}
\]

These rules essentially imply kinks in the budget constraint of the household at the full and part pension cut-offs. The household can release into other assets an amount that ensures that it stays within the bounds of the asset test. This value would differ for each household: a household with a home that will sell for very little, might be able to release the entire amount to other assets, switch to being a renter and still retain the pension. On the other hand, households with home values that are very large, will be able to trade-down only a fraction of the home value to be able to retain the pension.

To simplify our analysis, we calculate how far each household is from the full pension assets-test cut-off, given its current level of other assets. We then look at two categories of households: those who have fewer assets than the full pension cut-off and those that have assets greater than the full pension cut-off. We expect that households with assets lower than the full pension cut-off will trade-down more than households whose assets are already greater than the full pension cut-off. Those

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5Here $y_1$ and $z_1$ are the full pension cut-offs and $y_2$ and $z_2$ are the part pension cut-offs as described in Section 2
with assets greater than the full pension cut-off might actually find it beneficial to trade-up and reallocate wealth into the family home. One additional concern however is that a rise in investment income (from the other assets) may also lead the household to lose the pension, not because the assets test binds, but because the income test does. This implies that the household can trade-down small amounts at each instance, and thus reallocate wealth over several moves. However, if transactions costs are sufficiently high, this might generate behaviour where households don’t move at all as making many small value trade-downs becomes costly. If transactions costs are low, it might lead to households making many moves, whereby a small value is traded down at each move.

We examine detailed wealth and residential transitions of the elderly between 2001-2006 from the Household, Income and Labour Dynamics (HILDA) panel data set from Australia. Detailed wealth estimates of households were collected in the second wave in 2002, and we therefore use the household data from this wave (Wave 2) for our wealth estimates. To understand residential transition in our data, we follow respondents who were present in Wave 1 and ignore new entrants in subsequent waves. This implies that the mobility numbers that we report also reflect an ageing of the cohort effect. We lose respondents in subsequent waves owing to death, illness/infirmity or refusal and our sample size gets smaller each wave. Because the composition of a “household” may often change from wave to wave, we focus on individual respondents and treat them as representing their “household” whatever that may be. We use only one respondent per household. Any changes in household composition will show up in variables such as marital status. Our income and wealth variables are those of the household the respondent belongs to.

Before analysing residential transition of those who have reached the access age for the pension, we briefly consider the wealth aggregation of those close to this age. If residential choice is affected by the assets test rules then we would expect to observe anticipatory behaviour by those approaching pension age. As Table 2 indicates we find that people who become pensioners hold far greater wealth in the family home than otherwise. An interesting observation is that there is a significant rise in the ratio of home wealth to total wealth in the four years of those who become pensioners after they turn 65. This suggests that the exclusion of the family home promotes greater holding

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6 In total, we lose 168 of the 1504 (11%) respondents between Wave 1-2, 125 of the 1336 (9.3%) respondents between Wave 2-3, 118 of the 1211 (9.7%) respondents between Wave 3-4, 73 of the 1093 (6.7%) respondents between Wave 4-5 and 73 of the 1020 (7.2%) respondents between Wave 5-6. Between 1-10 people in each wave are lost because they are not traceable.
Table 2  Home to total wealth ratios of non-retirees (age 61 to 64)

<table>
<thead>
<tr>
<th></th>
<th>Pensioner in 2006</th>
<th>Non-pensioner in 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median home-wealth ratio (2002)</td>
<td>0.61**</td>
<td>0.36</td>
</tr>
<tr>
<td>Median home-wealth ratio (2006)</td>
<td>0.70</td>
<td>0.38</td>
</tr>
</tbody>
</table>

Source: HILDA
** indicates 0.61 is significantly different from 0.70

of home wealth to being with.

Table 3 presents moves recorded between consecutive years and is consistent with the 4% moves each year reported in the Census data between 1996 and 2001 (Olsberg & Winters 2005).\(^7\) These

Table 3  Households whose address has changed between waves

<table>
<thead>
<tr>
<th>Wave</th>
<th>Movers (%)</th>
<th>Pensioners who moved (%)</th>
<th>Non-pensioners who moved (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>4.46 (0.58)</td>
<td>4.51 (0.68)</td>
<td>4.37 (1.08)</td>
</tr>
<tr>
<td>2-3</td>
<td>4.28 (0.60)</td>
<td>4.82 (0.76)</td>
<td>3.03 (0.92)</td>
</tr>
<tr>
<td>3-4</td>
<td>4.28 (0.67)</td>
<td>4.28 (0.67)</td>
<td>4.29 (1.59)</td>
</tr>
<tr>
<td>4-5</td>
<td>3.38 (0.57)</td>
<td>3.32 (0.62)</td>
<td>3.55 (1.28)</td>
</tr>
<tr>
<td>5-6</td>
<td>3.48 (0.56)</td>
<td>3.43 (0.65)</td>
<td>3.59 (1.1)</td>
</tr>
</tbody>
</table>

Source: HILDA
The numbers in the parenthesis indicate standard errors

numbers reflect households moving and not necessarily downsizing their home. Moves could be associated with trade-downs or trade-ups, tenure changes or could even be to non-private dwellings such as nursing homes. The table also indicates that there is not much of a difference between the mobility of pensioners and non-pensioners except for Wave 2-3, where non-pensioners had a surprisingly low mobility. One can only conjecture that non-pensioners held on to the rise in house prices in 2002-03 more than pensioners. This might not correctly disentangle the influence of home-ownership and pension status on the decision to move as a lot more pensioners are also renters and it is tenure that may be the dominant factor causing a move. For example, 6.6% of non home-owners moved between Wave 2-3 as opposed to 3.7% of outright owners.

\(^7\) A difference in the numbers that we report and those reflected in the studies from the US is that the US panels are of longer duration and the years between subsequent interviews are also greater, thus spanning a greater amount of time. Most US studies have included people above the age of 55, whereas our focus is the elderly above the age of 65 as we are interested in studying the impact of age-pension on mobility and the age-pension is received only after 65.
Tenure change also encompasses moves to non-private dwellings such as nursing homes. A home-owner moving from own home to a nursing home is recorded as a non-owner in the next wave. Between 8% to 14% of the movers moved to a non-private dwelling each year.

We trace the impact of events in each wave on mobility in future waves. If the household faced a major event, it is likely that the response in the form of a move will be seen in the next few years. Of the people who witnessed death of a spouse in 2001, only 2 registered a move by 2005. Of the people who witnessed an injury to a family member, about 19% moved in the next few waves. Of the people who claimed to have experienced a financial worsening in 2001, 27% moved in subsequent waves. These numbers are quite small and suggest a reluctance amongst the Australian elderly to leave their primary residence, compared to international evidence where such shocks have led to moves (Vanderhart 1994, Merrill 1984, Ellwood & Kane 1989).

We then focus on home-owners on a pension and those without one. We find that of all home-owners about 68% are on an age pension. We also find that on average, home-owners pensioners (h+p) have lower disposable incomes than home-owner non-pensioners (h+np). This is not surprising given that the income test needs to be satisfied as well to be eligible for the age-pension. h+p also have lower home values: for example in Wave 2 (2002), the median home value is around $230,000 and for a h+np is $350,000. A trade-down is said to have occurred when the value of the home in the subsequent year is lower than the previous year. We find that amongst the home-owner pensioners who moved, about 60-70% also traded down. We also examined the move and trade-down behaviour of households with other assets greater and lower than the full pension cut-off. As shown in Table 4 we find that households whose assets are lower than the full pension cut-off have a larger percentage of movers and trade-downs than households whose assets are equal to or greater than the full pension cut-off. This is what we would expect as people who have other assets lower than the cut-off can add to other assets larger amounts before they lose the age-pension.

There are two things to bear in mind: one that a person could move from being a full pensioner to a part pensioner and therefore, the full pension assets test cut-off will may not be that binding. Second, the assets-test cut-offs for non-homeowners are higher. Therefore it is conceivable that pensioners could switch tenure to renting and therefore have higher cut-offs for the eligibility and continue to be on the pension. We find that of all the movers more than 90% continued to be on
Table 4 Move behaviour of homeowner pensioners (Wave 2-3)

<table>
<thead>
<tr>
<th></th>
<th>Assets less than the full pension cut-off</th>
<th>Assets greater than the full pension cut-off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movers (%)</td>
<td>4.59</td>
<td>3.11</td>
</tr>
<tr>
<td>Traded-down: value or size (%)</td>
<td>67.35</td>
<td>32.98</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Assets less than the part pension cut-off</th>
<th>Assets greater than the part pension cut-off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movers (%)</td>
<td>4.43</td>
<td>NA</td>
</tr>
<tr>
<td>Traded-down: value or size (%)</td>
<td>59.91</td>
<td>NA</td>
</tr>
</tbody>
</table>

the age-pension in the next year. This implies that only those moves and trade-downs occur which ensure that the pension status of the mover stays unchanged.\(^8\)

4 Econometric estimation and results

We are ultimately interested in observing changes in residential choice by modeling trade-down behaviour. However a trade-down is observed only if the household has moved. This causes a potential selection issue and applying a binary probit model of trade-down may lead to biased estimates. An econometric model which deals with this problem can be defined as a selection model in terms of the marginal probability that a household will move in a year, and conditional upon moving, trade-down.

\[
y_{it}^* = x_{it}\beta + \epsilon_{2it} \tag{1}
\]

\[
z_{it}^* = w_{it}\gamma + \epsilon_{1it} \tag{2}
\]

\[
Corr(\epsilon_{2it}, \epsilon_{1it}) = \rho \tag{3}
\]

\[
y_{it} = 1[y_{it}^* > 0] \tag{4}
\]

\[
z_{it}^* = 1[z_{it}^* > 0] \tag{5}
\]

Here \(z_{it}^*\) is a latent variable indicating whether the household moved or not and \(y_{it}^*\) indicates a trade-down conditional upon moving. \(y_{it}\) is observed only if \(z_{it} = 1\). Thus our selection equation models \(Pr(\text{move})\) and the outcome equation models \(Pr(\text{trade-down}|\text{move})\).

Our data-set contains residential transition data for five years. It however has wealth data only for

\(^8\)As noted above even a small amount of pension entitlement can have important consequences because it qualifies the recipient to hold the Pensioner Concession Card.
one year. We therefore estimate this model for just one year for which we have the wealth data and also for all the years pooled in. For the latter, we use the same data on wealth. We only report results of the pooled data as the results of the two models are similar. We observe whether the respondent (representing the household) indicates a move between two years. We also observe the value of the home prior to and post a move and a lower value post a move or a fall in the number of bedrooms of the home indicates a trade-down. We focus only on home-owners who did not move to a nursing home. A move to a nursing home is different from all others as it is made on most occasions out of compulsion and not out of a desire to reallocate wealth out of the family home to other assets.

There are two potential problems with modeling the initial decision to move. The first is that of individual heterogeneity. A binary probit model treats the observations across waves as independent and ignores the possibility of a correlation over time. However, unobserved characteristics of households will be correlated across the choice occasions (in our case time). To control for unobserved heterogeneity we estimated a random effects probit model for the move decision. We found the correlation estimate $\rho$ to be insignificant and we therefore do not incorporate this in our final selection model and instead assume housing behaviour can be modeled as an independent Bernoulli process over years (with time dependent explanatory variables). The second potential problem is that of state dependence owing to few multiple movers in our data set. We deal with state dependence by restricting ourselves to the first move of households. Once a household moves, we remove it from our data set. To account for the panel structure of the data we specify standard errors that allow for intragroup correlation i.e. we assume that observations are independent across groups, but not within groups, where group refers to the respondent (household) in our estimation. Our analysis is focused on examining the incidence of “trade-downs” and does not model transitions between alternative states.

For our selection equation, we use variables which have been outlined as important to mobility in the literature. These include the number of years spent in the current home (yrs.home), age and age-square (age2), sex, existence of a long-term health condition (health prob.), a dummy variable (age pension) indicating whether the person is a pension recipient, annual household income from all sources (hh inc), home value (hh val), a dummy variable for family type with a other family type as the base and a couple family and a lone person being the remaining two and satisfaction
with the neighbourhood of current residence (neigh. satis) and a variable (otherasset) indicating the value of other assets owned by the household a dummy variable (FP) indicating whether the households other assets are lower than the full pension cut-off.

For the outcome equation we use a subset of the variables in the selection equation. We also account for satisfaction with the home (home satis) the household resides in. Housing choices will also be sensitive to housing prices, but we do not construct housing prices for the full panel of the elderly in HILDA, and leave the analysis of their effect for future research. Our results are presented in

Table 5. We find that higher the number of years spent in a particular home, the lower is the probability of moving. As people get older, the probability of a move falls, rising again at older
ages consistent with the intuition that the “old old” exhibit greater mobility induced by health and family considerations. The greater the household income, greater is the probability of a move, but lower is the probability of a trade-down. This probably has a bearing on the income test – higher income may also lead the household to lose its pension. Greater the value of the home greater is the probability of a trade-down: trading down a smaller valued home may not add much to consumption from home wealth. The greater the satisfaction with ones neighbourhood, lower is the probability of a move. Pensioners are more likely to move, but less likely to trade-down, significant at 5% and 10% LOS respectively. This is an important result as it implies that the assets-test might have a bearing on this outcome. It also implies that if pensioners move they are more likely to trade-up and thus hold greater proportion of their wealth in the family home, which is exempt from the assets test. We also find that if other assets are lower than the full pension cut-off, the conditional probability of a trade-down is lower than otherwise, though not significant.

To gain insight on the impact of these results on the probabilities of moving and trading down, we derive the probability of a move and a trade-down conditional upon the move for each respondent in the sample. We then calculate the means of these estimated probabilities over the entire sample and over selected groups. This allows us to compare an “average” respondent between the groups. We present these in Table 6. We find that pensioners on the whole have a greater predicted probability of moving, but a lower probability of trading down conditional upon moving, significant at 1% LOS. There is not a significant difference between the conditional trade-down probability of pensioners with assets above and below the full pension cut-off. However, pensioners with assets lower than the full pension cut-off have significantly lower mobility than pensioners with assets higher than the cut-off. Pensioners with a larger home trade down more than those with a smaller home. Amongst the pensioners who have a large home, those with lower assets will trade-down more. This can be taken as evidence for the working of the assets test: in the category of pensioners, those who have lower non-housing assets trade-down more. An interesting comparison to make is that of pensioners and non-pensioners with assets greater or lower than the full pension cut-off.

We find that non-pensioners with lower assets have a conditional trade-down probability of 88% and those with assets greater have a conditional probability of 77%, greater than that of pensioners. The lowest probability is observed for pensioners with assets greater than the full pension cut off.
Table 6 Mean estimated probabilities

|                        | Pr(Tradedown=1|move=1) | Pr(move=1) |
|------------------------|-------------|-----------|
| All                    | 77.55%      | 3.54%     |
|                        | (0.0021)    | (0.0003)  |
| Pensioners             | 75.69%***   | 3.94%***  |
|                        | (0.0018)    | (0.0050)  |
| Non-pensioners         | 81.26%      | 2.74%     |
|                        | (0.0004)    | (0.0005)  |
| Pensioners             |             |           |
| Assets lower than full pension cut-off | 75.85%      | 3.86%***  |
|                        | (0.0019)    | (0.0004)  |
| Assets higher than full pension cut-off | 75.15%      | 4.18%     |
|                        | (0.0049)    | (0.0009)  |
| Small home value       | 71.50%***   | 3.98%     |
|                        | (0.0021)    | (0.0005)  |
| Large home value       | 80.94%      | 3.88%     |
|                        | (0.0026)    | (0.0005)  |
| Large home, assets lower than full pension cut-off | 81.91%***   | 3.80%     |
|                        | (0.0026)    | (0.0006)  |
| Large home, assets greater than full pension cut-off | 78.66%      | 4.06%     |
|                        | (0.0064)    | (0.0012)  |

The numbers in the parenthesis indicate standard errors.

We have used the full pension cut-off for our econometric specification and predicted probabilities. A pensioner could move from being a full pensioner to a part-pensioner and be better off if the rise in the income from the draw-down of equity is greater than the fall in the pension. This may be one reason that may explain greater mobility within particular other asset-home wealth configurations. This can be approached by using more sophisticated specifications that take into account the kinked nature of the budget constraint or multinomial choice specifications that can model transitions between various states and is left for further research.

5 Conclusion

The goal of this paper is to quantify the behavioural impacts of the exemption of the owner-occupied home from means-tested welfare payments for the elderly. While previous research has examined the effect on savings and labour supply, implications for residential choice and draw-down of home equity by the elderly have not been considered. We use a selection model to evaluate the impact of the exemption of the family home from the assets test for the age-pension in Australia on trade-down behaviour amongst the Australian elderly home owners. Our results point to two important
features about mobility and trade down behaviour. First, pensioners exhibit greater mobility, but
lower conditional trade-downs than non-pensioners. The loss of the age pension may frequently lead
to a decision against moving and trading-down. Second, amongst the pensioners, those with assets
lower than the permissible cut-offs exhibit higher conditional probability of a trade-down, but a
lower probability of a move. This result is significant for pensioners with a home-value greater than
the median, implying that when the amount to be added to non-housing assets is large, trade-downs
are lower. In sum, trade-downs seem to inhibited amongst elderly pensioners.

This raises important questions for public policy, since housing is an important asset in most
national economies, and increased flexibility in the consumption of housing services by the elderly
might be expected to release housing stock to the market. The treatment of the principal residence
in means tested programs is a complex issue. But our findings suggest that the efficiency cost
of exemption may have been neglected in weighing alternative policy designs. Eligibility criteria,
taper rates, and interactions between assets and income means test schedules are all possible policy
instruments that may be deployed to reduce this cost.
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