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HOUSEHOLD SPENDING PATTERNS IN RETIREMENT

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AARON MINNEY F FIN, CHALLENGER

This paper considers the relevance of the traditional assumption of constant real spending through retirement. Using measures of actual spending by retirees, including longitudinal data from the HILDA surveys along with ABS data, changes in household expenditure can be measured through retirement. The data indicate that there are two different types of spending that people will fund through their retirement. It also notes a 'cohort effect' in living standards for retirees.

Introduction

One of the biggest challenges in retirement income planning is understanding retiree spending patterns. It is hard enough for many retirees to understand their current expenses let alone predict how their spending will change over time. Drawing on the life cycle hypothesis of Modigliani, it is often assumed that retirees wish to maintain a constant level of expenditure, adjusted for inflation, throughout retirement. Actual behaviour differs from that. Many studies have highlighted that older retirees spend less than younger retirees, but what is not always clear is the path that the spending takes.

This is where the Household Income and Labour Dynamics of Australia Survey (HILDA) can be applied to shed more light on what actually happens. This paper utilises the HILDA survey to describe how household spending changes through retirement.
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Spending models

The traditional retirement planning approach follows the economics literature of Modigliani around the lifecycle hypotheses such as described in Ando and Modigliani (1963). The assumption is that because people prefer smooth spending patterns, then consumption in retirement should be maintained in real terms. Bengen's (1994) well-known '4% rule' follows this precisely. The rule recommends that a retiree spend:

4% of their initial wealth at retirement, increased in line with inflation every year after that.

The assumption of smooth consumption in real terms has been challenged by many, including Statman (2017), who observes that most people do not and probably cannot smooth their consumption.

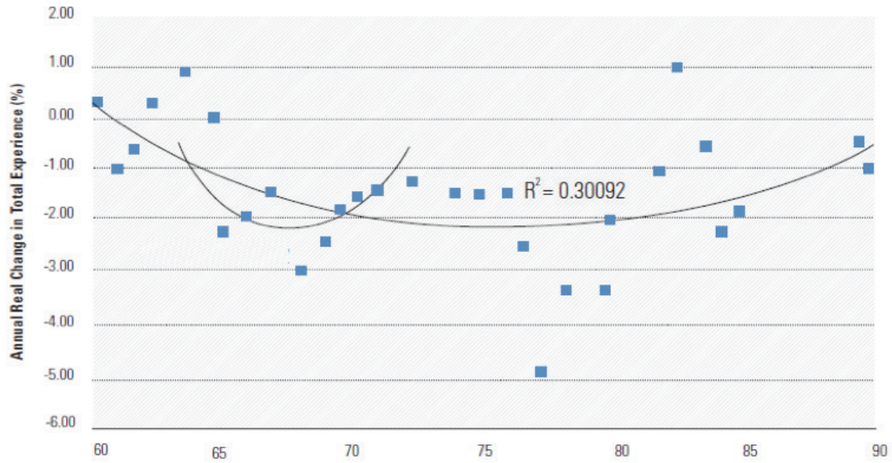
Observations of spending in retirement

Using US data, Blanchett (2014) measures the differences in spending across households of different (retirement) ages. He then imputes a growth rate for the change in spending at different ages. Graphically, this creates a retirement spending 'smile' that can be seen in Figure 1.[ii]

This chart measures the real rate of spending growth. While spending is stable in the first couple of years in retirement, Blanchett observes lower spending in real terms at older ages. For even older retirees (say 80+) there is no increase in spending, it just stops falling.

Observations of spending in retirement

FIGURE 1 ANNUAL REAL CHANGE IN RETIREE SPENDING



SOURCE Blanchett (2014)

This observation of falling spending is consistent with another commonly used framework. Many models of retirement income (such as the representative version in Figure 2) look at retirement in three stages:

1. Active retirement living when retirees are healthy, seek to travel and enjoy a range of activities.

2. Passive retirement living when retires reduce their levels of activity, due to either poorer health or a reduced availability of funds.

3. Frail living when the health of a retiree deteriorates often requiring part or full-time care.

The level of spending is lower in the passive phase, but there are different views on the cost of the frail phase to the retiree. Medical costs often rise dramatically, while other expenses typically fall in the final frail stage of life. Blanchett (2014) observes that there is limited change in total real spending at older ages. Figure 1 indicates that spending is no longer falling, with the rate of real change rising to zero. This is evidence that in the US the cost of the frail stage is no more than the cost of the passive stage. In Australia, more of the medical costs will be paid by the government, so it is likely that total household spending in Australia would be even lower in the frail stage.

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FIGURE 2 THREE STAGES FOR RETIREMENT SPENDING

Observations of spending in retirement

Studies of spending patterns in Australia indicate a similar pattern of expenditure falling at advanced ages. For example, see Ding (2013), Clare (2014) or ACFS (2016). This paper seeks to address two issues in the pattern of spending at the household level over time. First, the observation that older retirees are currently spending less than younger retirees does not automatically mean that their spending has fallen over time. An alternative explanation is that there is a so-called 'cohort effect' (where behaviour or a characteristic is shared by people in a particular age group or 'cohort') and that it is necessary to look at the continuum of retiree spending, not just what they might be spending at a point in time. The traditional assumption that spending is maintained in real terms is consistent with the observation of older retirees spending less than a younger cohort if they had been spending less than the younger cohort at the same age. In other words, older retirees spending less than younger ones does is not necessarily evidence that they are slowing their spending. They might have started retirement with a lower spending level. Second, the paper examines whether there are different patterns for different categories of spending.

The HILDA survey

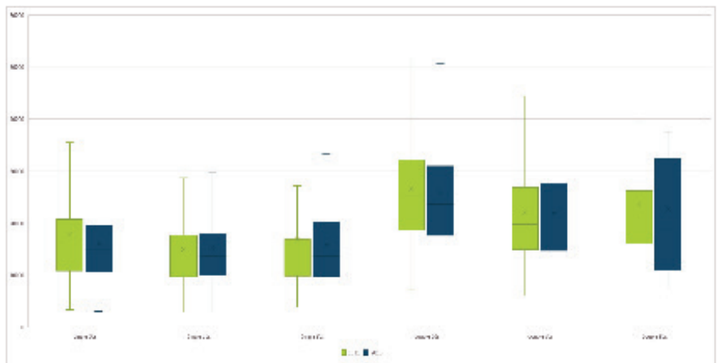
The Household Income and Labour Dynamics of Australia Survey (HILDA) is a panel survey of Australian households. It has been conducted since 2001 on a range of issues and tracks the members of a household over time. Data on expenditure that have been included since 2005 provide an indication of how household spending changes over time. The data on expenditure are not complete and their quality was reviewed by Wilkins and Sun (2010). They noted that regularly purchased items were relatively well measured, but items purchased irregularly (such as an overseas holiday) were problematic. As a result, the HILDA survey ceased to collect information on irregular purchases after 2010. Thus, we can only get a reliable estimate of spending on regular household items over time. To capture more 'lumpy' expenditure, we need an alternative measure such as the Household Expenditure Survey (HES) from the Australian Bureau of Statistics (ABS).

Household expenditure data in the HILDA survey

The composition of a household can change over time, so we need to adjust for this in the longitudinal data. We also want to be able to compare retired households of different ages to confirm that the HILDA data matches other observations that older people spend less than younger people. Households were thus grouped in the following way:

- Households were included when all members were retired (not working).
- Only single and couple households were considered because the sample size for larger retired households was too small.
- Households were matched for five-year periods. For example, only households that had two people in both 2010 and 2015 were included in that comparison. The data in HILDA from 2005 to 2016 enable seven overlapping comparisons.
- Households were grouped by age in the first year of comparison, using the younger member of a couple:
  - Aged 60–69
  - Aged 70–79
  - Aged 80+
- Expenditure was measured for those items which persisted across the 12 years (i.e. 2005 to 2016), ignoring the irregular items that were measured in a limited sample. The expenditure included is set out in Appendix A.
- Average expenditure was calculated for each household group. Real comparisons were made using the CPI level from June in each relevant year from the ABS.

The comparison in spending between 2011 and 2016 is provided by the box plots in Figure 3. Each pair represents the spending of the same household in 2011 and 2016 adjusted to 2011 prices. The boxes (which represent the 25th–75th percentile range) are relatively stable between the years. For the couples over 80, the range expands, but the sample size is small, with less than 30 households in the sample.



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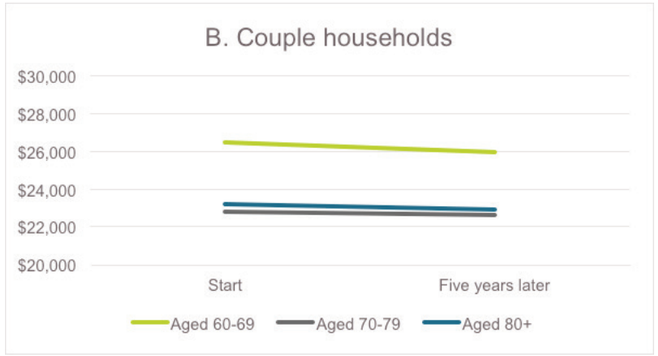
Real growth in regular spending

Comparisons are made across different five-year periods from the survey. To enable comparisons, the results are combined by measuring the change in real spending across the household types. Adjustments are made to levels using the CPI to enable comparisons of real spending across the different years. Figure 4 illustrates the average change in spending for single and couple households over five-year periods. These indicate broadly constant spending levels in real terms, with a small increase in real spending for some single household cohorts and a small decrease for some couple household cohorts.

FIGURE 4: ANNUAL HOUSEHOLD SPENDING CHANGES BY AGE AND HOUSEHOLD TYPE



SOURCE: Calculated from the HILDA database. Spending is across all items excluding rent collected in HILDA survey by retired households of 1 or 2 persons for overlapping 5-year periods between 2005 and 2016. Values are adjusted to 2016 prices using June CPI levels.

The pattern of needs and wants in retirement

The regular expenditure data collected in the HILDA survey cover most of the essential needs of a household. By tracking the spending across a range of households, we can track how the spending of retiree households changes over time. For example, we can see that retired single households in 2010, who were still living on their own in 2015, spent $14,734 in 2010 and $15,962 in 2015 on the HILDA expenditure categories. This was less than the age pension, but does not reflect the spending of the household on items not captured by the HILDA survey. The ABS measure of total spending was just over $27,000 for 2015–16 for a retired single household. In contrast, retired single households spent just under $22,000 in 2009–10 on average according to the ABS.

Constant needs, but declining wants

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But what about wants? Do retirees continue to spend the same on discretionary items throughout retirement?

The short answer is no. While HILDA does not have the data on luxury spending, ABS data show that the spending on luxury goods falls with age. Data are available from the ABS on total household spending in 2009–10 and 2015–16. Split across the same household/age groups, the fall in luxury spending can be seen in Figure 6.

Generally, the proportion of spending on irregular items is lower for older households. With a sustained level of regular essential spending and lower spending on irregular items, the total level of spending of retirees falls as they get older. These aggregate data do not distinguish between a desired drop in consumption and a decline due to lack of funds. Whether by design or forced through affordability, the decline in spending is quarantined to discretionary items. Retirees maintain their spending on needs.

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FIGURE 6: REGULAR NEEDS AND OTHER HOUSEHOLD SPENDING, BY AGE AND HOUSEHOLD 2009–10 AND 2015–16

Implications for retirement planning

Expenditure in retirement can take one of (at least) two forms. One type of expenditure is a consistent amount (adjusted for inflation) that can be used for regular, everyday needs. This will be sustained through retirement. They also have irregular spending on items that they could potentially do without. As they get older, many retirees will spend less on wants, while continuing their spending on everyday needs.

Financial planning for retirement involves making sure that finances will be available to meet all the expenditure desired by retirees. With two different forms of expenditure, it is likely that the best plans will involve different ways to generate the cash flow required for the different expenditure. One approach would be to use a secure layer of income to meet spending 'needs' through retirement, along with a flexible approach to other income to pay for the various wants as they are consumed across retirement. This would align with the pattern of expenditure that is observed in households over time.

THE PAPER USES THE GENERAL RELEASE FILE OF THE HOUSEHOLD, INCOME AND LABOUR DYNAMICS IN AUSTRALIA (HILDA) SURVEY. HILDA IS FUNDED BY THE AUSTRALIAN GOVERNMENT DEPARTMENT OF SOCIAL SERVICES (DSS) AND MANAGED BY THE MELBOURNE INSTITUTE. THE FINDINGS AND VIEWS REPORTED IN THIS PAPER ARE THOSE OF THE AUTHORS ALONE AND SHOULD NOT BE ATTRIBUTED TO EITHER DSS OR THE MELBOURNE INSTITUTE.

Appendix A:

Expenditure items from HILDA

The following expenditure items have been included from the HILDA surveys, represented as regular needs in this paper:

- *Household groceries*
- *Alcohol*
- *Tobacco*
- *Meals out*
- *Women's clothing and footwear (included in total clothing and footwear in 2005)*
- *Men's clothing and footwear (included in total clothing and footwear in 2005)*
- *Children's clothing and footwear (included in total clothing and footwear in 2005)*
- *Telephone and internet charges*
- *Utilities (electricity, gas, other heating, water)*
- *Health practitioners*
- *Private health insurance*
- *Other insurance*
- *Pharmaceuticals*
- *Motor vehicle repairs*
- *Public transport and taxis*
- *Education*

The HILDA measure of home repairs and renovations was considered and excluded from the final calculations. Overall, the change in average spending was similar, but some cohorts were impacted by extremely large renovation costs in particular years which were not matched in subsequent years for that cohort.

1. I would like to acknowledge contributions from Jeremy Cooper and Amara Haqqani as well as suggestions from co-workers at Challenger and an anonymous reviewer that improved the paper. Any residual fault remains with the author.

2. The R2 in the figure relates to the fit of Blanchett's 'smile': the estimate of expenditure changes as a second-order polynomial based on age.

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