DO RETIREES WANT TO CONSUME MORE, LESS, OR THE SAME AS THEY AGE?

By Anqi Chen and Alicia H. Munnell*

Introduction

Whether households prefer a constant, increasing, or decreasing path of consumption in retirement has important implications for our understanding of retirement adequacy. Financial planners and researchers often assume that retirees would like to maintain a constant standard of living. Similarly, Social Security benefits are based on the premise that people want steady inflation-adjusted benefits. However, several studies suggest that retired households actually decrease their consumption over time.

This brief, which reports the results of a recent study, uses data from two longitudinal surveys to examine the consumption behavior of retired households. The analysis builds on the existing literature by: 1) examining retirement consumption over longer periods; 2) using wealth and health to separate constrained and unconstrained households in order to determine whether any declines in consumption are driven by necessity or preferences; and 3) exploring whether, within unconstrained households, those with shorter expected lifespans have faster declines in preferred consumption.

The discussion proceeds as follows. The first section provides background on retirees’ consumption preferences. The second section describes the data and methodology. The third section presents the results, which show that when households have assets and their health, they keep real consumption relatively flat over their retirement. This pattern is evident when comparing wealthy and healthy households separately and when comparing groups by health status within the top wealth tercile. For those with less wealth or with health issues, consumption declines as households age. In terms of life expectancies, households that expect to live longer, such as married households, have flatter consumption. The final section concludes that wealth and health constraints or longevity expectations may be important reasons that consumption drops over time for retired households as a group.

Background

Economists’ life-cycle model assumes that forward-looking retirees smooth their marginal utility of consumption over their lifespan. Under certain assumptions – such as the rate of return being equal to the individual’s time preference – the model predicts that retirees would prefer constant consumption. This result is intuitive, and financial planners and

* Anqi Chen is a research economist and assistant director of savings research at the Center for Retirement Research at Boston College (CRR). Alicia H. Munnell is director of the CRR and the Peter F. Drucker Professor of Management Sciences at Boston College’s Carroll School of Management. The authors thank Nilufer Gok for excellent research assistance and Gal Wettstein for helpful comments.
Data and Methodology

This project uses data from two surveys that follow consumption behavior over extended periods of time. The first is the *Health and Retirement Study’s (HRS) Consumption and Activities Mail Survey (CAMS)*, linked with the U.S. Social Security Administration’s administrative cross-year benefits file. The second is consumption data from the *Panel Study of Income Dynamics (PSID)*. Each dataset has its advantages and disadvantages. One advantage of the CAMS is that it includes more households at older ages. One disadvantage is that the CAMS is only given to a subset of the HRS respondents, and respondents can enter and leave the consumption panel. In the PSID, consumption questions are asked of the entire population, but the survey contains a far smaller sample of retirees than the CAMS.

Table 1 shows that the demographic and socio-economic characteristics of retired households in the HRS and PSID are generally quite similar, although households in the PSID are somewhat better educated and tend not to have a defined benefit plan, likely because they are from later cohorts.

<table>
<thead>
<tr>
<th>Table 1. Characteristics of the CAMS and PSID Samples</th>
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<tbody>
<tr>
<td>CAMS</td>
</tr>
<tr>
<td>Number of households</td>
</tr>
<tr>
<td>Average age at retirement</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Less than high school</td>
</tr>
<tr>
<td>High school</td>
</tr>
<tr>
<td>Some college or more</td>
</tr>
<tr>
<td>Race – white</td>
</tr>
<tr>
<td>Married</td>
</tr>
<tr>
<td>Median net wealth</td>
</tr>
<tr>
<td>Homeowner</td>
</tr>
<tr>
<td>Has a defined benefit pension plan</td>
</tr>
<tr>
<td>Health status at retirement year</td>
</tr>
<tr>
<td>Fair/poor</td>
</tr>
<tr>
<td>Good</td>
</tr>
<tr>
<td>Very good/excellent</td>
</tr>
</tbody>
</table>

The analysis involves estimating fixed effect regression equations that calculate the change in each household’s consumption from one survey year to the next, controlling for changes in household size. A simplified form of the basic equation is:

Household consumption = \( f \) (years since retirement, household size, other household characteristics)

This equation is similar to that used by previous researchers, simply applied to more recent consumption data.\(^{11}\) The focus is on non-durable consumption, as the purchase of durable goods can be viewed as a form of savings.\(^ {12}\)

The goal of this analysis, however, is not just to document consumption patterns but to understand preferred consumption in retirement. For example, how households prefer to consume may be different than what is observed if they have not saved enough. Lower-income households may prefer to spend more but do not have enough savings, so the consumption path of wealthier households might better represent preferred consumption.\(^ {13}\) Similarly, households in poor health may prefer to consume more by traveling and dining out but are unable to due to health constraints. To assess whether these constraints affect consumption paths, the analysis re-estimates the equation described above for different wealth terciles and health status. The hypothesis is that households in higher wealth terciles or in better health would have more constant consumption.

In addition to financial or health constraints, survival probabilities could also influence households’ consumption paths. That is, those who expect to live longer may consume less to stretch out their resources, while those with shorter expected longevity may want to consume more earlier when they are more likely to be alive. To test whether households who perceive they will live longer – such as married couples – have flatter consumption, the equation is re-estimated once again for different types of households in the top wealth tercile. The hypothesis is that unconstrained households and those with a higher probability of being alive at older ages will have more constant consumption.

Results

The results start with looking at the pattern of consumption for retired households as a group. The findings from the equation described above are presented in Figure 1. They confirm the results from prior studies: overall, consumption declines as households age. The rates of decline in the CAMS and the PSID data are very close – 1.5-1.6 percent every two years (0.75-0.80 percent a year) – which means that 20 years into retirement, consumption could be about 12-13 percent lower than at the beginning of retirement. Moreover, the downward sloping pattern in the CAMS suggests that the decline slightly speeds up later in retirement.\(^ {14}\)

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**Figure 1. Non-durable Consumption in Retirement**

<table>
<thead>
<tr>
<th></th>
<th>a. CAMS</th>
<th>b. PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Log</td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>non-durable consumption</td>
<td>11</td>
<td>11</td>
</tr>
</tbody>
</table>

**Sources:** Authors’ calculations from HRS/CAMS, SSA, and PSID.
The question is whether this observed decline is merely the result of financial, health, or perceived life expectancy. If these constraints – rather than preferences – are driving consumption declines, then unconstrained households should see smaller or no declines. Since the results of the CAMS and the PSID are basically consistent throughout the analysis, the following discussion focuses on the CAMS.

**Financial Constraints**

If households have not saved enough to maintain their spending, consumption would have to decline through retirement, regardless of household preferences. Indeed, the results show that consumption paths in both the CAMS and the PSID are much flatter for households in higher wealth terciles (see Figure 2). Consumption decreases by about 0.7 percent every two years (0.35 percent a year) for those in the top wealth tercile compared to 1.6 percent and 2.0 percent every two years (0.8 and 1.0 percent a year) for the middle and bottom wealth tercile, respectively. And, although the slope is still somewhat negative for all households, consumption is not only flatter but the decline also slows down over time in the top two terciles. In contrast, at the bottom of the wealth distribution, declines in consumption speed up in later years. These results suggest that financial constraints are at least partially behind consumption declines in retirement.

**Health Status**

The second constraint that may impact consumption patterns is health. For example, households may want to travel or eat out more but cannot due to health limitations. Indeed, re-estimating the equation to include self-reported health status at the beginning of retirement shows that retirees in better health have flatter consumption paths (see Figure 3). Consumption for those in very good/excellent health decreases by about 1.3 percent every two years (0.65 percent a year) while consumption for those who self-report good health or fair/poor health decreases by 1.5 percent and 3.1 percent every two years (0.7 and 1.5 percent a year), respectively. Interestingly, the consumption of households with poor health tends to tick up in later years, which might reflect higher late-life medical expenses. These results suggest that health constraints are also driving part of the observed declines in consumption in retirement.

**Perceived Life Expectancy**

A final constraint involves the length of the retirement period. Those who expect to live longer may want to consume more slowly, while those who think they have a low probability of living to old age may
want to front-load their consumption. However, since longer life expectancies are highly correlated with higher wealth, this analysis focuses on the variation in consumption paths by health status and household type for unconstrained households (those in the top wealth tercile).\textsuperscript{17}

In terms of health status, the results are shown in Figure 4. The higher-wealth households who self-report very good/excellent health at retirement have a virtually flat consumption pattern, declining by only about 0.6 percent every two years (0.3 percent every year), whereas consumption for those who start retirement with good or fair/poor health declines by about 1.1 percent and 3.2 percent, respectively. The results also show some consumption increases later in retirement for those households in fair/poor health.

Figure 4. CAMS: Non-durable Consumption in Retirement for the Top Wealth Tercile, by Self-reported Health at Retirement

Sources: Authors’ calculations from HRS/CAMS and SSA.

Shifting from health status to household type, married households, as noted, are more likely to live to older ages. In line with expectations, married retired households, as a whole, clearly have a flatter consumption pattern (see Figure 5).

That same pattern appears to hold for the top wealth tercile, as shown in Figure 6, but unlike all the earlier results, the slopes of the three lines are not statistically different. It is unclear whether mortality differences are less pronounced across married and single households in the top tercile or if our analysis is limited by sample size.

The key overall finding that emerges from the analysis of consumption paths is that consumption for wealthy and healthy households declines much more slowly than for other households.

Figure 5. CAMS: Non-durable Consumption in Retirement, by Marital Status at Retirement

Figure 6. CAMS: Non-durable Consumption in Retirement for the Top Wealth Tercile, by Marital Status at Retirement

Sources: Authors’ calculations from HRS/CAMS and SSA.
Conclusion

Whether households prefer a constant, increasing, or decreasing path of consumption in retirement has important implications for understanding retirement adequacy. Financial planners and researchers often assume that retirees would like to maintain their pre-retirement standard of living. Similarly, Social Security benefits are based on the premise that people want steady inflation-adjusted income.

The results show that, for the population as a whole, consumption declines over retirement. But constraints also matter: wealthier and healthier households have relatively flat consumption paths, suggesting that constraints are at least in part driving the observed declines for the whole population. Declining consumption paths may also reflect differences in life expectancy; however, these results are less clear. Healthier individuals and women, for example, have longer life expectancies, so to the extent that consumption declines reflect different mortality profiles, healthier and married households within the top wealth tercile should also have flatter consumption paths. The results show that these healthy unconstrained households do have flatter consumption paths. And for the population as a whole, married couples have flatter consumption profiles.

This analysis shows that wealth and health are important determinants of consumption paths in retirement and that preferred consumption is likely much flatter than observed in the data. However, many questions remain, including whether consumption profiles continue to get flatter for the top quintile or decile, a clearer picture of whether survival expectations matter, or whether other factors such as risk aversion or bequest motives may determine consumption paths. Hopefully, as more years of data become available, a clearer picture will emerge.
Endnotes

1 Chen and Munnell (2021).


4 Fisher et al. (2008) and Aguiar and Hurst (2013).

5 Aguiar and Hurst (2005).


8 The authors define adequacy as the difference between annuitized pre-retirement income and annuitized retirement income with some other adjustments – something close to a replacement rate. Their results found that log-income before retirement was similar across adequacy groups.

9 Another potential reason for the decline suggested by preliminary data from Hudomiet, Hurd, and Rohwedder (forthcoming) is that retirees receive less enjoyment from consumption over time perhaps, the authors hypothesize, due to declining health, the loss of a spouse with whom to share activities, and increasing age itself.

10 We use administrative benefits and claiming data for individuals who can be linked and self-reported data for those who cannot be linked. While the CAMS was first administered in 2001, consumption categories were not consistent until 2005.

11 Guo, Skinner, and Zeldes (2018) included time relative to retirement dummies. Since our interest is in the consumption paths, rather than the difference between waves in retirement, we used a time trend with a quadratic term instead. For more details on the methodology, see Chen and Munnell (2021).

12 Durable goods represent a small share of consumption for most households.

13 Guo, Skinner, and Zeldes (2018) examined consumption paths for different adequacy groups, but other constraints may also influence households’ consumption paths. The authors’ definition of adequacy groups is similar to replacement rates. Lower-income households have higher replacement rates from Social Security. Since they are less likely to be able to cut back and have few outside assets to allow for consumption increases, mixing in low-income households with high-income households may make consumption paths for high adequacy groups look flatter than preferred. That is why our analysis uses wealth terciles instead.

14 The results from the PSID could not indicate whether the speed of decline changed through retirement, likely due to a smaller sample size.

15 These results are consistent with Guo, Skinner, and Zeldes (2018).

16 The results from the PSID did not show statistically significant differences in paths, likely due to limited sample size. We also looked at the top 20 percent and top 10 percent of the wealth distribution but, again, did not have enough power.

17 Individuals with good health also might have low discount rates if good health reflects health investments, which would also result in flatter consumption paths (see Grossman 1972).
References


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Contact Information
Center for Retirement Research
Boston College
Hovey House
140 Commonwealth Avenue
Chestnut Hill, MA 02467-3808
Phone: (617) 552-1762
Fax: (617) 552-0191
E-mail: crr@bc.edu
Website: https://crr.bc.edu

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