

CONSUMPTION AND DIFFERENTIAL MORTALITY

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September 2011

Introduction

Ongoing Congressional deliberations about reforming Social Security and Medicare require accurate assessments of the economic status of the retiring population. The most direct indicator of economic well-being is consumption. Yet our understanding of how consumption evolves with age is limited. The primary data source in the United States for understanding spending patterns over the life cycle has been the Consumer Expenditure Survey (CEX), which collects cross-sectional data on consumption. However, for several reasons, the variation in the level of consumption with age suggested by the CEX data may not truly reflect life-cycle spending trajectories. First, because cohorts differ in the resources they have accrued over the lifetime, at least some component of the apparent variation with age is in fact the result of differing resources. Second, if mortality varies with levels of consumption, as is suggested by the well-known associations between mortality and socioeconomic status, then the cross-sectional pattern in consumption will reflect the differential mortality rates of the wealthier and less wealthy participants. That is, average cross-sectional consumption could increase with age simply because the members of a cohort who survive to advanced old age are likely to have greater economic resources than those who died. Third, a variety of evidence shows that consumption is likely to increase in the year or two preceding death due to out-of-pocket medical expenses. The purpose of this study is to document the extent and the implications of differential mortality for understanding the trajectory of consumption among the elderly.

Methods

This study used data from the Health and Retirement Study (HRS), a longitudinal, biennial survey of some 13,000 U.S. households comprising individuals over the age of 50, to document the association between mortality in the period immediately preceding a particular wave of data collection and wealth, stratified by age and marital status. We then used data from the Consumption and Activities Mail Survey (CAMS), a supplemental survey of household spending that is also conducted biennially among a randomly selected subset of 4,000 HRS households, to examine trajectories in consumption with age. Using five waves of CAMS data, spanning the period from 2001 through 2009, we constructed age profiles of consumption based on three methods — cross-sectional data, true longitudinal participant panels, and synthetic panels — and compared them.

Results

Wealth and Mortality. We first compared the wealth of single individuals and couples who survived to the next survey wave with that of those who died or who lost a spouse by the time of the next wave of data collection. This comparison allowed us to demonstrate the strength of the association between mortality and wealth in the HRS data.

Analysis of the HRS data for the 2000, 2002, and 2004 waves across all age groups showed that among single persons, the mean per-household wealth in the wave prior to death was 81 percent of that of survivors. However, this figure varied with

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age, ranging from 12 percent in the 55- to 59-year-old age group to nearly 100 percent in those 85 and over. The median wealth of those who became deceased was only 45 percent that of survivors (again ranging from about 1 percent in the 55 to 59 group to 71 percent in those 90 and over).

Among couples, the mean wealth of those couples where one member became deceased was 66 percent that of couples where both survived. The disparity in median wealth was nearly identical, 65 percent.

Consumption and Mortality. We then examined the association between mortality and consumption across five waves of the CAMS. Among single individuals age 65 to 74, mean spending prior to death was approximately 95 percent of spending by survivors, whereas among singles 75 and over, spending prior to death exceeded that of spending by survivors by approximately 9 percent. Persons who became single through widowhood spent more than those who had been single for some time.

Among couples age 65 to 74, mean spending prior to the death of one member of the couple was approximately 90 percent of that of spending by surviving couples, whereas among those 75 and over, spending prior to the death of one member of the couple was approximately 85 percent of that of surviving couples. Thus, wealth showed greater effects of differential mortality than did spending.

Analyzing Spending to Wealth Ratios. Comparing spending as a proportion of wealth across all demographic groups showed that relative spending was higher for those who died than for survivors. At least part of this difference could be accounted for by out-of-pocket health expenses.

Consumption Trajectories. We then investigated the differences between cross-sectional age profiles (data pooled by age and marital status across five waves of the CAMS), those based on synthetic panels (panels artificially constructed by assessing average spending and age of a series of cohorts and then calculating rates of change in spending) and those based on actual panel data. The actual and synthetic panel data showed that spending declined steadily with age for both singles and couples. The trajectories constructed from cross-sectional data reflected the panel trajectories poorly, predicting, for example, that spending by those over 90 would be twice as great as that predicted by the true panel.

Conclusions

This study shows that cross-sectional age profiles do not provide good estimates of the consumption trajectories that individuals and households follow: the cross-sectional profiles decline much more slowly with age than the panel profiles. Thus, the results of cross-sectional profiles overestimate the needs of individuals and households for economic resources in retirement. Synthetic panels provide a fairly close approximation to true panels, which means that studies based on the CEX are likely to approximate studies based on panel data.

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The research reported herein was performed pursuant to a grant from the U.S. Social Security Administration (SSA) through the Michigan Retirement Research Center (MRRC). The findings and conclusions expressed are solely those of the author(s) and do not represent the views of SSA, any agency of the federal government, or the MRRC.

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