The Adequacy of Economic Resources in Retirement

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The most common metric for assessing the adequacy of economic preparation for retirement is the income replacement rate, the ratio of income after retirement to income before retirement. This metric is usually applied without regard to family circumstances or to the complete portfolio of economic resources, particularly wealth. For example, it is often stated that a single person or a couple is adequately prepared if their postretirement income is in some fixed ratio (such as 80%) to their pre-retirement income.

However both economic theory and common sense say that someone is adequately prepared if she is able to maintain her level of economic well-being, which is not the same as maintaining her level of income or some fixed proportion of income. Well-being or utility is pretty accurately measured by the level of consumption not by the level of income at some particular point in time. From this point of view we would want to ask whether someone has the economic resources in retirement to consume at the same level as prior to retirement and to maintain that consumption level with adjustment for possible widowing and mortality. Because taxes are much lower after retirement and people can consume out of wealth, income could change by a great deal at retirement, yet consumption could be maintained.

The overall goal of this research is to assess economic preparation for retirement in a way that takes into account many of the deficiencies of the income replacement rate concept. We define a wealth replacement rate which shows the amount by which bequeathable wealth at retirement either exceeds or falls short of the amount needed to finance a consumption plan from retirement through the end of life. We define a consumtion replacement rate which is the amount by which consumption could be increased in the case where economic resources are more than adequate to finance that plan or the amount by which consumption would have to be reduced in the case where economic resources are less than adequate.

Because lifetime is uncertain, and wealth is not typically annuitized, we also find the resources that will permit the consumption path to be followed with a high degree of probability. Here the uncertainty is length of life, so the question is equivalent to finding whether the resources will sustain the path until advanced old age where the probability of survival is very small. Someone with a moderate level of pre-retirement consumption could sustain post-retirement consumption with a moderate level of Social Security benefits, some pension income and a moderate amount of wealth. Someone with low pre-retirement consumption may only need Social Security and a small amount of savings. These requirements are likely to differ substantially from what would be required to consume at the pre-retirement income level.

Economic resources are a combination of post-retirement income, housing wealth and nonhousing wealth. The replacement rates account for mortality, and, in the case of couples, the lifetime of the couple and the subse

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quent loss of returns-to-scale in consumption on the death of the first spouse. It recognizes that consumption need not be constant with age.

Our analyses are based on data from the Health and Retirement Study (HRS) and data from the Consumption and Activities Mail Survey (CAMS). We have three waves of CAMS longitudinal data on total consumption which we use to estimate life-cycle consumption paths by marital status and education. Beginning with consumption by single persons and couples who are in their late 60s we construct a life-cycle path for each which we match against available economic resources. We ask: could the single person or couple maintain the consumption path until death or would they run out of resources before death? If the answer is "yes," they are adequately prepared. If the answer is "no" we find the level of wealth that would allow the consumption path to be maintained.

A large literature on the gradient between socioeconomic status (SES) and health documents that individuals with high SES such as high education live longer than those with low SES. Because households are not fully annuitized, long-lived households have to be prepared to finance consumption over a longer remaining time horizon. We take this into account in our simulations by applying survival probabilities that differentiate by education as well as by age, sex and marital status.

We find that about 89% of couples in their late 60s are adequately prepared for retirement: the chance of the surviving spouse running out of wealth is 5 percent or less in our preferred specification. However, there is substantial variation by education level: just 81% of those lacking a high school education are adequately prepared whereas 92% of those with a college education are adequately prepared. Among single persons the results are much less favorable: 74% are adequately prepared, but among those lacking a high school education just 57% are prepared. These figures do not account for taxes.

When we take taxes into account the percentage prepared declines by 5.4 percentage points for couples and by 4.0 percentage points for single persons. We do not view these reductions as major changes. However, among college graduates accounting for taxes reduces preparation by a substantial amount, 17.9 percentage points among married persons and 9.5 percentage points among single persons.

Our conclusion is that a substantial majority of those just past the usual retirement age are adequately prepared for retirement in that they will be able to follow a path of consumption that begins at their current level of consumption and then follows an agepattern similar to that of current retirees. This is not true, however, for all groups in the population. In particular, many singles lacking a high school education are likely to be forced to reduce consumption: almost half could reduce initial consumption substantially (15%) yet they would still face a probability of running out of wealth greater than 5 percent.