

Trends in Retirement Income Adequacy: Evidence from IRS Tax Data

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21st Annual SSA Research Consortium Meeting

August 1 & 2, 2019

National Press Club

529 14th Street NW

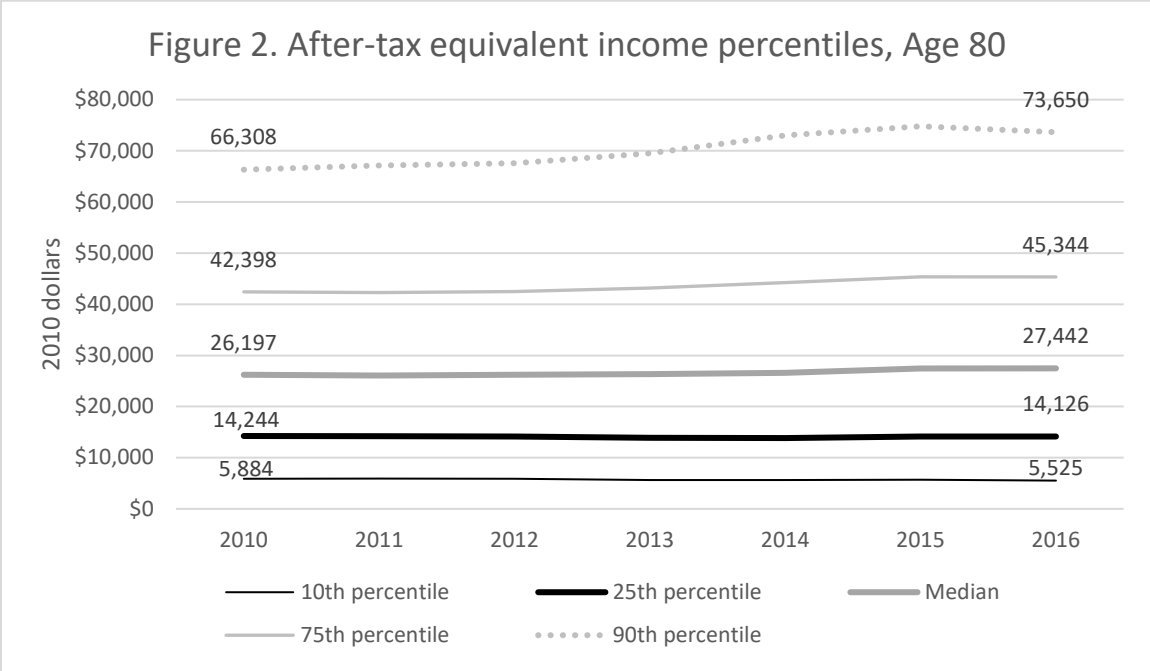
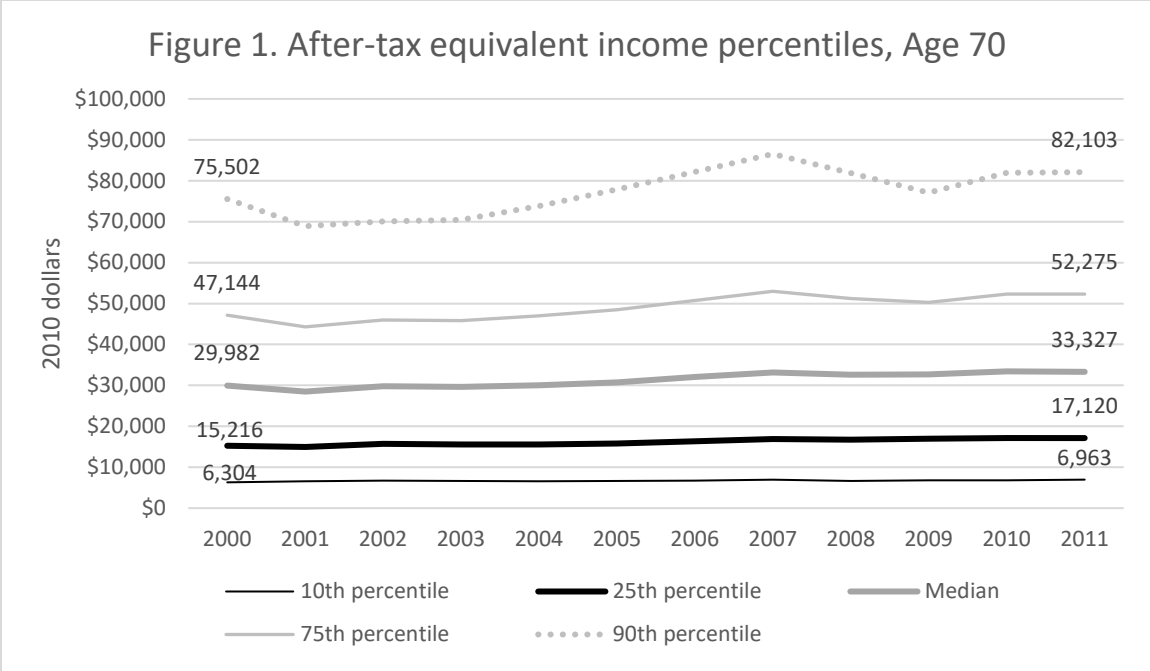
Washington, D.C.

This research was supported by a grant from the U.S. Social Security Administration (SSA) as part of the Retirement and Disability Research Consortium (RDRC). Justin Katz provided excellent research assistance. Beshears is on the advisory board of Nutmeg, a robo-advice asset management company. Laibson has been compensated to present academic research at events hosted by financial institutions. See the authors' websites for a complete list of outside activities. The findings and conclusions are solely those of the authors and do not represent the views of SSA, the Department of the Treasury, any agency of the federal government, or the NBER Retirement and Disability Research Center.

Concerns that Americans are not saving enough for retirement, and that this problem is getting worse over time, are common. For example, Munnell, Hou, and Sanzenbacher (2018) estimate that the fraction of working-age American households that will have inadequate income in retirement to maintain their pre-retirement standard of living has grown from 31% in 1983 to 40% in 1998 to 50% in 2016.

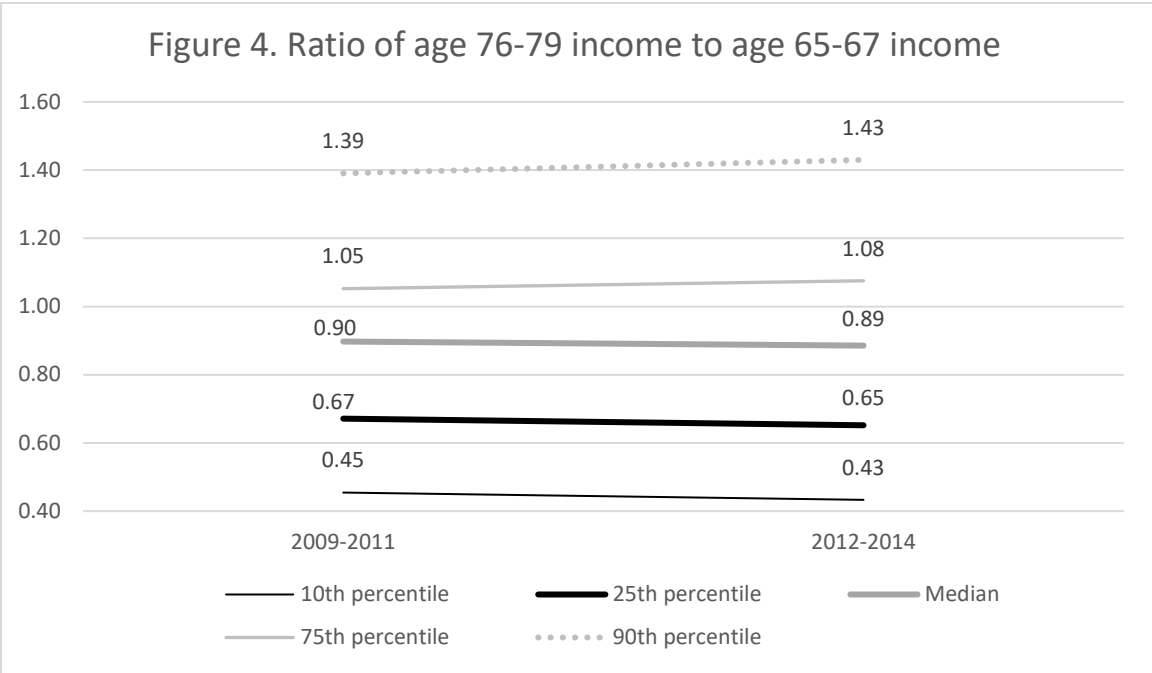
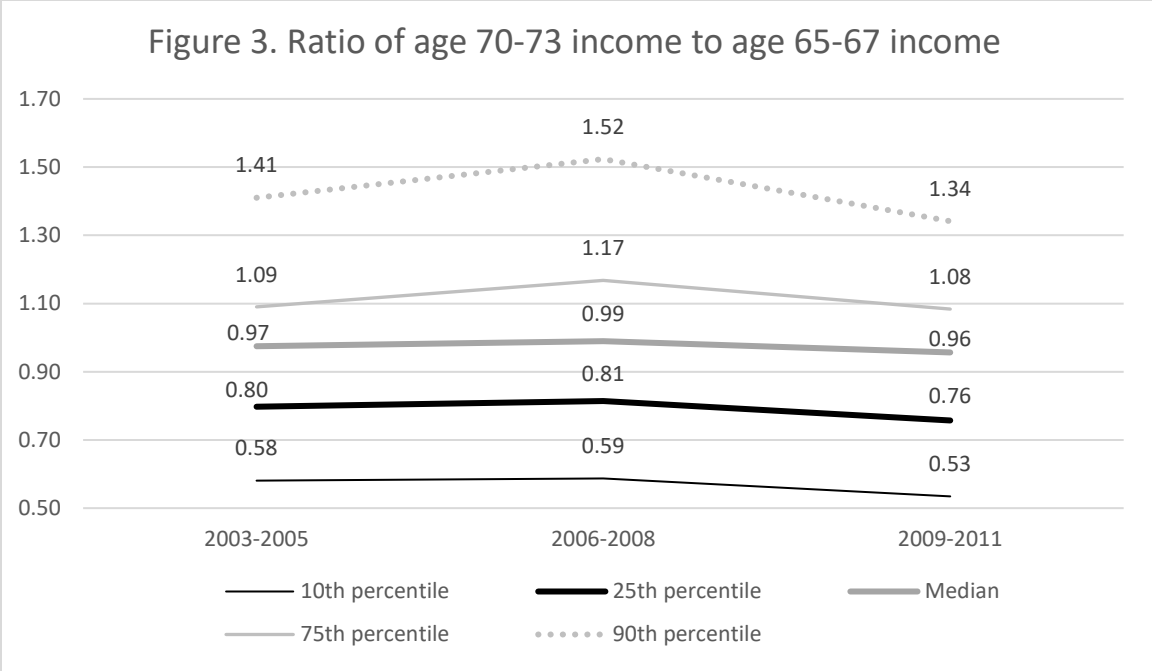
In this paper, we examine trends in retirement income across the 1930-1941 birth cohorts using a 5% random sample from IRS tax data, comprising 22.6 million person-years. An advantage of our analysis is that we do not rely upon survey reports of income, whose accuracy has been a subject of concern (e.g., Bee and Mitchell, 2017; Chen, Munnell, and Sanzenbacher, 2018). To adjust income for household size, we divide income by the square root of the number of people in the tax unit (either 1 or 2, as we do not consider dependents) to obtain an equivalent income measure, following OECD (2008, 2011). Our income measure does not include SSI income and SNAP benefits, which are important for the left tail of the income distribution.

We first analyze trends in household equivalent income percentiles at ages 70 and 80. Figures 1 and 2 show that, consistent with Bee and Mitchell's (2017) analysis of the tax data, late-life real equivalent income has not generally been falling with time. From 2000 to 2011, age 70 real equivalent income rose from \$29,982 to \$33,327 at the median, from \$15,216 to \$17,120 at the 25th percentile, and from \$47,144 to \$52,275 at the 75th percentile. From 2010 to 2016, age 80 real equivalent income rose from \$26,197 to \$27,442 at the median, \$42,398 to \$45,344 at the 75th percentile, and remained essentially flat from \$14,244 to \$14,126 at the 25th percentile. Notably, however, income is generally lower at age 80 than at age 70.



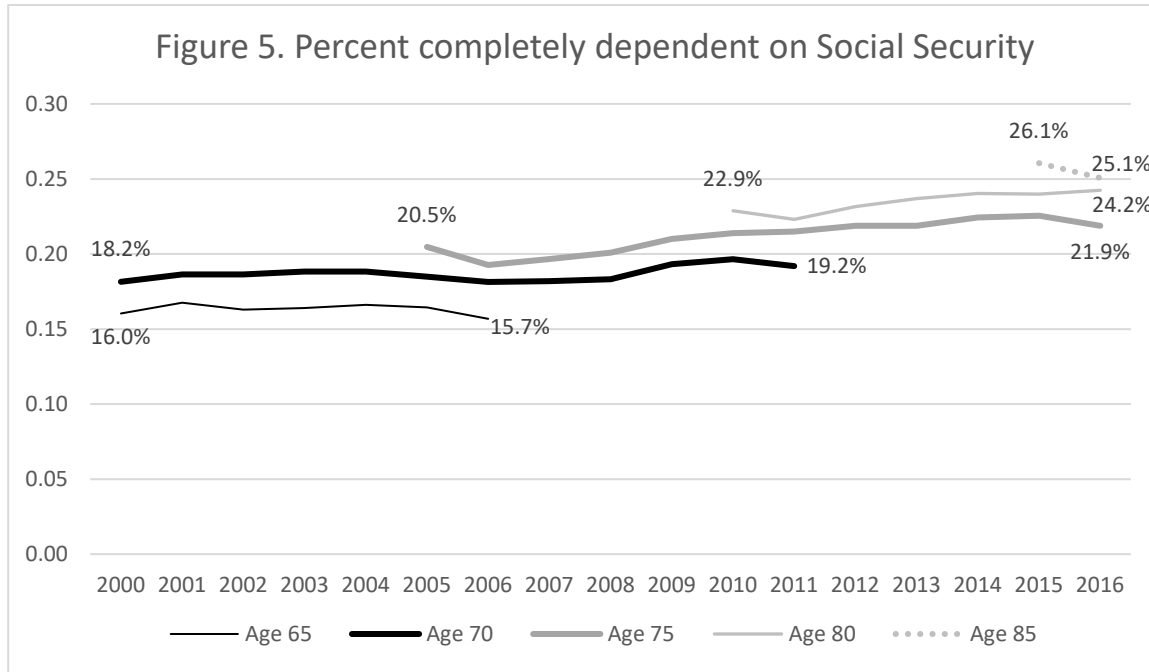
Just because income at given ages has trended higher over time does not necessarily imply that households are doing a better job at saving for retirement. Economic optimality is judged by households' ability to maintain their pre-retirement standard of living, not only the absolute standard of living they enjoy in retirement. In

Figures 3 and 4, we plot percentiles of ratios of equivalent after-tax income averaged over ages 70-73 or 76-79 to equivalent after-tax income average over ages 65-67. We see that at the median and the 75th percentile, the 70-73 to 65-67 ratio has not changed significantly from 2003-2005 to 2009-2011. However, at the 10th, 25th, and 90th percentiles, the ratio has fallen by 4-7 percentage points. Looking at the income replacement ratio later in life, we see that the 76-79 to 65-67 income ratio has been flat or rising at or above the median, but has fallen by 2 percentage points at the 10th and 25th percentiles from the 2009-2011 to the 2012-2014 window. Overall, the picture that is painted is one where income replacement rates have not worsened over time for



households at or above the median, but have deteriorated for households below the median.

Another way to assess how the left tail is doing over time is to see how the percentage of tax units at each given age that are completely dependent upon Social Security has changed over time. We define complete Social Security dependence as



having less than \$100 (in 2010 dollars) in non-Social Security income *and* zero balances in the IRA. Figure 5 shows that this percentage not only increases with age within each given calendar year, but has also been increasing over time.

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