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by David Rogofsky, Richard E. Chard, and Joanne Yoong*

Saving for retirement has traditionally been compared to a three-legged stool supported by Social Security benefits, workplace pensions, and household savings. As the prevalence of defined benefit pensions has diminished in recent decades, the importance of household savings has grown. To enable and encourage saving among lower-income Americans, policymakers have established several types of tax incentives. The Earned Income Tax Credit (EITC) provides an immediate reduction in income tax liability (or a larger refund) for eligible households. Additionally, certain types of retirement saving accounts and defined contribution saving plans lower current tax liability by deferring taxation of the amounts contributed until the funds are withdrawn in retirement. Using data from the Understanding America Study, this article compares the retirement-related financial behavior and preparedness of EITC-eligible and ineligible households and examines whether EITC eligibility affects the use of tax-advantaged retirement saving plans.

Introduction

Social Security benefits are central to retirement security. Hence, a robust understanding of how Social Security benefits change depending on individual choices—such as the age at which they are claimed—is a vital component of long-term financial planning and well-being (Gustman and Steinmeier 1999). However, Social Security was never intended to be the sole source of retirement income. Rather, retirement income has traditionally been described as a three-legged stool supported in roughly similar measures by Social Security benefits, workplace pensions, and private savings. For the average retiree, Social Security benefits replace about 40 percent of preretirement earnings, and although the relative importance of each "leg" has changed over the years (see, for example, Miller, Lavenberg, and MacKay 2014), supplementing Social Security benefits with pension income or other savings remains critical. The federal government has tried many ways to increase the public's long-term retirement security by encouraging greater household savings. In this article, we examine how two such federal initiatives combine to affect eligible participants. These efforts aim to encourage retirement saving by way of tax incentives of one kind or another. One initiative is the Earned Income Tax Credit (EITC); the other involves providing tax-advantaged retirement saving vehicles that exempt plan contributions from income tax until the funds are withdrawn. These plans include individual retirement accounts (IRAs) and tax-deferred defined contribution (DC) saving plans. The latter are named for the sections of

Selected Abbreviations

DB	defined benefit
DC	defined contribution
EBRI	Employee Benefit Research Institute
EITC	Earned Income Tax Credit
IRA	individual retirement account
UAS	Understanding America Study

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the United States Tax Code that describe them, as in 401(k) or 403(b).

For policymakers, the absence of long-term savings among many lower-income households is a major concern. According to the 2013 Survey of Consumer Finances, only 9 percent of the population in the lowest income quintile had a tax-advantaged DC plan or IRA. To protect lower-income households from falling into poverty, policymakers established the EITC in 1975. The EITC allows eligible low-income workers to retain resources by substantially reducing their tax burden. Over the years, it has become one of the most significant federal antipoverty programs: "By itself, the EITC lifted 6.7 million people (including 3.4 million children) above the poverty line in 2012" (Sherman and Trisi 2015). However, although the EITC provides current income tax relief, questions remain about the long-term savings and retirement preparedness of EITC-eligible households. A related question is whether the EITC inadvertently undermines the incentives to participate in tax-advantaged retirement saving plans.

In this article, we discuss the role of the EITC in increasing household savings and compare EITC-eligible and ineligible individuals in terms of their retirement preparedness. We examine in particular the extent to which EITC eligibility predicts retirement-related financial behavior patterns, independent of socioeconomic background and financial capability.[1] To do so, we use data collected by the University of Southern California's Understanding America Study (UAS), a longitudinal study using online surveys of a nationally representative sample of households.

This article consists of six sections. Following this introduction, the second section briefly reviews the relevant literature. The third section describes the UAS, our methods, the main sample characteristics, and the subsamples we use for comparative purposes. In the final three sections, we present our main results and conduct robustness checks, discuss policy implications, and conclude by describing study limitations and proposing future work.

Background and Literature Review

The EITC reduces or eliminates the income tax liability of qualifying low- to moderate-income working households (particularly those with children). In some instances, the dollar amount of the credit exceeds the worker's income tax liability; when that occurs, the worker receives the difference as a refund. At present, more than half of the states and the District of Columbia supplement the federal EITC with an additional credit.

In an earlier study, we showed that socioeconomic factors play a significant role in optimal financial decision making, and that individuals from disadvantaged groups (women, minorities, and those with lower income and educational attainment) are subjectively and objectively less prepared for retirement (Chard, Rogofsky, and Yoong 2017). EITC households may therefore be expected to be less prepared for retirement than are non-EITC households simply because of socioeconomic differences. In addition, EITC households may be less likely to work for employers who offer benefits such as 401(k) plans, or may be in work arrangements that make them ineligible for such benefits.

In this article, we examine certain aspects of the EITC that may be negatively associated with incentives to save for retirement. For example, the tax advantage experienced by EITC households may negate the benefits of typical tax-advantaged plans because the tax liability is immediately eliminated rather than deferred until retirement. Therefore, EITC households may be less likely to use tax-advantaged plans, relative to other forms of saving. Additionally, EITC households receive their credit in the form of a lump-sum refund each year, which they are more likely to spend than save. On the other hand, contributing to tax-advantaged accounts such as 401(k) plans reduces adjusted gross income, which can increase EITC eligibility (employer contributions, by contrast, do not affect taxable income, and thus do not affect eligibility). At the margin, therefore, EITC eligibility may be positively associated with saving in tax-advantaged accounts. Nevertheless, Weber (2016, 41) finds that in spite of tax-advantaged federal incentives for EITC-eligible households such as the Saver's Credit and Individual Development Accounts, the EITC

> provides a substantial disincentive for individuals to save and realize investment income because EITC benefits decline as investment income rises over certain income ranges…over the last two decades, an average of 17.6 percent of low-income individuals that claim the EITC have some dividend and interest income, but strikingly, the fraction has declined by more than 50 percent over time, from 26.2 percent in 1988 to just 12.3 percent in 2006.

Finally, many households may not fully understand the EITC and hence may not respond to the tax incentives it contains. The EITC's rules are complex, and tax preparers have to navigate a number of tests to determine eligibility. Given the complexity of the

credit and the relatively low level of financial knowledge among Americans (FINRA Investor Education Foundation 2016), the presence of an empirical relationship between retirement preparedness and EITC participation (particularly as it relates to participation in tax-advantaged plans) is an open question.

Our primary research objective is to determine retirement preparedness among EITC-eligible and ineligible households. Specifically, we test the hypothesis that EITC-eligible households are subjectively and objectively less prepared for retirement than EITC-ineligible households are. We then explore whether differences in retirement preparedness reflect the fact that EITC-eligible households are socioeconomically disadvantaged, or whether EITC status itself is independently associated with differential preparedness, controlling for household socioeconomic characteristics.

Data and Methods

Our data are from the UAS, a panel study consisting of approximately 6,000 households representing the entire United States. The UAS is an Internet panel, which means respondents answer surveys on a computer, tablet, or smart phone, wherever they are and whenever they wish to participate. Panel members respond to surveys about once or twice a month and are paid a nominal fee. Individual surveys are restricted to about 30 minutes per interview. A given panel member's entire history of responses can be linked to provide a wealth of information about his or her financial knowledge and behavior, cognitive capability, and personality. Sampling weights for the UAS are generated using an iterative ranking algorithm tied to the Census Bureau's Current Population Survey Annual Social and Economic Supplement. The pool of UAS respondents is the noninstitutionalized U.S. population aged 18 or older, excluding military personnel. A detailed discussion of the UAS also appears in this issue of the *Social Security Bulletin* (see Alattar, Messel, and Rogofsky 2018).

Our study is based on data collected in three separate surveys (UAS 16, UAS 24, and UAS 26) designed and fielded in May–December 2015.[2] We analyzed only the subsample of nonretired individuals aged 18 to 65, comprising 2,682 respondents. Table 1 shows the demographic characteristics of the entire subsample, the EITC-eligible subsample, and the EITC-ineligible subsample. All values are weighted, here and throughout the analysis. Appendix A presents details on the weights.

We use a proxy measure for EITC eligibility based on reported family size and income, described below. Relative to EITC-ineligible individuals, the EITC population is more likely to be younger, less educated, nonwhite, female, and (by design) to have lower income.

A Proxy for Measuring EITC Eligibility

The UAS does not track EITC eligibility. Because of recall bias or lack of awareness among UAS respondents (many EITC claims are filed by third-party tax preparers), self-reported EITC take-up or eligibility would not necessarily be a useful indicator in any event. Therefore, we constructed a proxy measure of EITC eligibility by matching, as best we could, the eligibility rules for 2015 to UAS data on household income and family composition. A summary of that proxy measure follows.

EITC eligibility is determined by one set of income cutoffs for married taxpayers filing jointly and another set for taxpayers in all other filing statuses. Because the UAS does not directly collect data on filing status, we assume that all married respondents file jointly. The income cutoffs for EITC eligibility are also affected by the presence and number of qualifying children, defined as related children who meet the age criteria for individuals living in the household who are claimed as dependents. The UAS likewise does not directly collect this information, so we count all children, siblings, or grandchildren aged younger than 20 and residing in the UAS respondent's household as qualifying children. The EITC income cutoffs are specific dollar amounts (for example, $45,207 if married filing jointly with one qualifying child), but income data collected by UAS are nonspecific, defined only within broad ranges (such as $40,000–$49,999). Taking a conservative approach, we placed households in the EITC-eligible subsample only if they reported income within a range that is unambiguously below their EITC income threshold. Finally, because investment income of $3,400 or more disqualifies a household for the EITC, we used the total of all self-reported rental, annuity, stock, bond, certificate of deposit (CD), savings, and other asset income to determine if the household is EITC-eligible.

Measuring Retirement Preparedness

In earlier work (Chard, Rogofsky, and Yoong 2017), we used positive retirement saving–related indicators to construct a "Retirement Preparedness Index" and principal components analysis (PCA) to retain one

Table 1.
Percentage distribution of the working-age population, by selected sociodemographic characteristics: Full subsample and by EITC eligibility, 2015 (weighted estimates)

Characteristic	Full subsample	EITC status	
		Eligible	Ineligible
Sex			
Men	50	41	52
Women	50	59	48
Race/ethnicity			
Non-Hispanic white	63	48	67
Non-Hispanic black	13	27	9
Hispanic (any race)	19	21	18
Other	5	3	5
Age			
34 or younger	40	58	35
35–54	43	34	46
55–65	17	8	19
Mean age (years)	40.17	34.87	41.54
Marital status			
Married	60	44	64
Other	40	56	36
Household income ($)			
Less than 30,000	23	78	9
30,000–49,999	17	22	16
50,000–74,999	18	0	23
75,000 or more	42	0	53
Educational attainment			
High school diploma or less	38	61	32
Some college	29	30	28
College degree or more	33	8	39
Employment status			
Employed	89	75	93
Unemployed [a]	11	25	7

SOURCE: Authors' calculations based on UAS data.

NOTES: Full subsample size = 2,682.

Rounded components of percentage distributions do not necessarily sum to 100.

a. A currently unemployed worker may qualify for the EITC based on earnings from earlier in the year.

factor, from which the index is then derived using the factor loadings as weights, which we interpret as being correlated with an underlying principal factor of retirement preparedness. The detailed methodology underlying this index is described in the 2017 study and in Yoong, Chard, and Rogofsky (forthcoming). Although we are not aware of others using this approach for estimating retirement preparedness, it is similar in concept to the widespread use of PCA to estimate wealth or socioeconomic status from a vector of asset indicators (Filmer and Pritchett 2001; McKenzie 2005; Vyas and Kumaranayake 2006).

In this study, we explore retirement preparedness using several alternative measures of subjective individual perceptions as well as objective measures based on (self-reported) behavior and financial status. All respondents were asked how prepared they felt for retirement, assigning themselves a grade from A (very prepared) to D (not prepared at all). We converted the grades to a numerical scale ranging from A = 3 to D = 0. We also investigated general planning and saving behavior using questions similar to those used in other analyses of retirement planning (for example, Lusardi and Mitchell 2007). Respondents were asked whether they have ever tried to make a plan for retirement and if they have ever tried to save for retirement.

Objectively measuring retirement readiness is complicated. It requires making long-term projections not only about Social Security benefits, retirement savings, and pension plans, but also about other

assets (including investments and housing), various insurance arrangements, the ability and intention to continue working, desired lifestyle changes, asset decumulation rates in retirement, household arrangements (accounting for spousal resources, joint decision making, and possible transfers and bequest motives), expectations about mortality and morbidity, and economic conditions. The simplest approach is to rely on highly simplified rules of thumb, such as whether the household has savings equivalent to a given number of years of earnings. To the other extreme, complex measures aim to account for detailed interactions among numerous factors that change over time. For example, the Employee Benefit Research Institute (EBRI) Retirement Readiness Rating[3] is derived from stochastic simulations of wealth from retirement-income sources (Social Security; defined benefit [DB] plan annuities, which provide a fixed income stream in retirement; DC plan or IRA balances, which are accumulated wealth rather than a guaranteed income stream; and housing equity), expenses of every category (particularly health-related expenses, which can vary widely with age and income), and their many possible intersections. Such a comprehensive approach is complicated by potential questions about the quality and quantity of available data.

For this article, we construct a set of (positive) retirement saving–related indicators using data from a UAS survey that is based on the Assets and Income questionnaire section of the University of Michigan's Health and Retirement Study. We first identify whether the respondent has a DB plan, DC plan, or IRA (or is named as a beneficiary of such a plan or account held by another household member). We then calculate the combined balances in these accounts (including up to three IRAs and/or DC plans). To estimate savings adequacy, we compare these total balances to present household income. We then calculate the ratio of retirement-savings balances to income and compare it against an age-specific rule-of-thumb threshold value developed by Fidelity Investments —1:1 at age 35, 3:1 at age 45, 5:1 at age 55, and 8:1 at age 67.[4] We select these ratios because they are cited in popular media[5] and may therefore be familiar to respondents as reasonable subjective savings goals. As these published values are provided only for selected discrete ages, we use linear interpolation to assign threshold values to all ages in between. We also compute the percentage of the total balance attributable to stock holdings for use in another age-based rule of thumb: 100 minus the individual's age. For example, a 40-year-old should invest 60 percent of retirement savings in stocks (Malkiel and Ellis 2010). We categorize the stock allocation as appropriate if it is within ±5 percentage points of the target percentage. Similarly, we account for prudent behaviors, such as making no early withdrawals from a retirement savings account (either the respondent's own or one on which the respondent is a beneficiary) and no early cash-ins (which is reported only for a respondent's own account).

Descriptive Statistics

We first test for differences between EITC-eligible and ineligible households in our measures of preparedness and behavior using simple chi-squared (χ^2) tests of independence and *t*-tests for comparisons of unconditional means. We then conduct a regression analysis for which the outcome measures are our binary indicators of planning and saving and our continuous measures of subjective and objective preparedness (the retirement preparedness perceptions scale and index, respectively). We regress these outcomes on the EITC proxy and a vector of sociodemographic control variables. We further analyze the effects on asset indicators individually, corrected appropriately for multiple hypotheses. Finally, we report the results of an Oaxaca decomposition to estimate the proportion of the gap (if any) that can be attributed to different socioeconomic endowments between the EITC-eligible and ineligible groups, versus the proportion that is due to different coefficients and their interaction effects.

After examining these initial measures, we investigate the effect of the EITC on our two measures of retirement preparedness (self-reported preparedness and the Retirement Preparedness Index) and on two measures of retirement planning (ever planned for retirement and ever tried to save for retirement). We use ordinary least squares to estimate the effect of the EITC using the following equations:

$$\begin{aligned} \textit{Self-Assessed Preparedness}\ (\text{equation 1}) = {} & \beta_0 \\ & + \beta_1\ \text{Female} + \beta_2\ \text{Black} + \beta_3\ \text{Hispanic/Latino} \\ & + \beta_4\ \text{Other ethnicity} + \beta_5\ \text{Age 35–54} + \beta_6\ \text{Age 55–64} \\ & + \beta_7\ \text{Married} + \beta_8\ \text{Income \$30,000–\$49,999} \\ & + \beta_9\ \text{Income \$50,000–\$74,999} \\ & + \beta_{10}\ \text{Income \$75,000 or more} + \beta_{11}\ \text{Some college} \\ & + \beta_{12}\ \text{College degree or more} + \beta_{13}\ \text{EITC proxy} \\ & + \varepsilon. \end{aligned}$$

Retirement Preparedness Index (equation 2) = β_0 + β_1 Female + β_2 Black + β_3 Hispanic/Latino + β_4 Other ethnicity + β_5 Age 35–54 + β_6 Age 55–64 + β_7 Married + β_8 Income $30,000–$49,999 + β_9 Income $50,000–$74,999 + β_{10} Income $75,000 or more + β_{11} Some college + β_{12} College degree or more + β_{13} EITC proxy + ε.

Ever Planned for Retirement (equation 3) = β_0 + β_1 Female + β_2 Black + β_3 Hispanic/Latino + β_4 Other ethnicity + β_5 Age 35–54 + β_6 Age 55–64 + β_7 Married + β_8 Income $30,000–$49,999 + β_9 Income $50,000–$74,999 + β_{10} Income $75,000 or more + β_{11} Some college + β_{12} College degree or more + β_{13} EITC proxy + ε.

Ever Tried to Save for Retirement (equation 4) = β_0 + β_1 Female + β_2 Black + β_3 Hispanic/Latino + β_4 Other ethnicity + β_5 Age 35–54 + β_6 Age 55–64 + β_7 Married + β_8 Income $30,000–$49,999 + β_9 Income $50,000–$74,999 + β_{10} Income $75,000 or more + β_{11} Some college + β_{12} College degree or more + β_{13} EITC proxy + ε.

Results

Table 2 shows that less than 10 percent of subsample respondents consider themselves financially very well-prepared for retirement. Perceived levels of preparedness differ starkly between EITC-eligible and ineligible households, with the former being more than 2.5 times as likely to report being not prepared at all for retirement (63 percent) as are the latter (24 percent). Just under 40 percent of respondents report that they have tried to make a plan for retirement and slightly fewer (35 percent) report that they have actually tried to save (not shown).

Table 3 shows that very few subsample respondents have a DB pension plan (in the overall UAS sample [not shown], approximately 10 percent of respondents have a DB plan). A considerably larger share of members of the full subsample have their own IRAs (31 percent), and that share expands to 35 percent when including those who are named as a beneficiary on someone else's IRA. Table 3 also shows that EITC-eligible households are far less likely to participate in IRAs than ineligible households are.[6]

For ease of interpretation, we examine the association between EITC eligibility and retirement planning and preparedness using ordinary least squares regression analysis, which implies a linear probability model for discrete outcomes. The regression results in Table 4 confirm the descriptive results by showing that, when controlling for other sociodemographic factors, EITC-eligible households are significantly less prepared for retirement, whether measured by subjective means (self-perceptions) or objective indicators (our index of preparedness).

Table 2.
Subjective self-assessment of retirement preparedness: Full subsample and by EITC eligibility, 2015

Response	Full subsample	EITC status	
		Eligible	Ineligible
How financially well-prepared for retirement are you?			
Very	6	2	7
Somewhat	33	12	39
Not too well	29	22	31
Not at all	33	63	24

SOURCE: Authors' calculations based on UAS data.

NOTE: Full subsample size = 2,682.

In Table 5, we regress our proxy variable and sociodemographic control variables on the binary indicators of ever planning and ever saving for retirement to test the hypothesis that EITC-eligible households are less prepared because they lack incentives or knowledge that would help enable planning and saving.

The key takeaways from these additional analyses, including our EITC proxy variable, is that general planning and saving behavior are *not* in fact correlated significantly with being eligible for the EITC.

Discussion

This article aims to contribute both methodologically and substantively to the literature on retirement policy and behavior. Toward the first purpose, we measure Social Security literacy with the Social Security Knowledge Index (Chard, Rogofsky, and Yoong 2017) and retirement preparedness with the Retirement Preparedness Index (Yoong, Chard, and Rogofsky forthcoming). The methodology for replicating these indices is straightforward and can be applied by other researchers using the same set of survey questions. Using these indexes and a rich set of other variables available for a representative sample of the adult

Table 3.
Percentages of UAS respondents reporting selected retirement saving behaviors: Full subsample and by EITC eligibility, 2015 (weighted estimates)

Behavior or characteristic	Full subsample	EITC status	
		Eligible	Ineligible
Participates in a DB pension plan	1	0	1
Is entitled to retirement saving plan assets			
From own IRA	31	5	37
Including plans of which respondent is a beneficiary	35	5	41
IRA wealth exceeds age-adjusted household income threshold			
Own IRA only	5	1	6
Including IRAs of which respondent is a beneficiary	26	5	30
No early withdrawals from IRA			
Own IRA only	2	2	3
Including IRAs of which respondent is a beneficiary	4	2	4
No early cash-in on own IRA	99	98	99
Share of IRA wealth invested in stocks meets age-appropriate threshold			
Own IRA only	3	0	4
Including IRAs of which respondent is a beneficiary	3	0	4
Percentage of IRA assets invested in stocks			
Own IRA only	20	3	23
Including IRAs of which respondent is a beneficiary	21	3	24

SOURCE: Authors' calculations based on UAS data.

NOTE: Full subsample size = 2,682.

population from the UAS, we meet our second purpose by investigating a set of key hypotheses about the determinants of retirement saving behavior in the United States.

Weber (2016) has found that EITC-eligible individuals are less likely to hold interest-bearing savings accounts or investments that produce dividend or capital-gains income. Weber presented evidence that the EITC inadvertently provides its users with disincentives to earn extra income by those means. In this article, we examine whether EITC-eligible individuals have a similar disincentive to participate in tax-advantaged retirement saving plans. We find that they do and that, as Weber showed, they are also less likely to save by income-producing means.

Tax-advantaged retirement saving plans and the EITC reflect policies that would seem to operate at cross purposes, yet our results indicate the two in fact coexist quite well. Although retirement planning and saving behavior are not correlated significantly with the EITC proxy measure (Table 5), our EITC variable is a statistically significant negative predictor in our Retirement Preparedness Index (Table 4), which accounts for all the tax-related policy vehicles. This suggests that, conditional on other social and demographic controls, EITC households' propensity to plan and save is similar to that of non-EITC households. However, EITC households are significantly less likely to save in tax-advantaged vehicles specifically. EITC households also consider themselves less prepared for retirement than non-EITC households do (Table 2). This perception among EITC households may be an artifact of not fully understanding Social Security's progressive benefit formulas, under which lower-income individuals have higher preretirement-income replacement rates. This would be an interesting question to explore as more data become available.

Limitations and Future Research

The UAS sample size is small and our study parameters further limit the sample by age and retirement status. At the time our data were compiled, the sample of likely EITC-eligible individuals meeting our inclusion criteria numbered only approximately 1,000. The UAS currently has approximately 6,000 subjects and is expected to expand, which will enable future analysis to explore subgroup heterogeneity, regional effects, and related topics. For example, we will use data from

Table 4.
Ordinary least squares regression estimates of self-assessed retirement preparedness and Retirement Preparedness Index scores for EITC-eligible respondents, by selected sociodemographic characteristics

	Self-assessed preparedness (subjective measure)		Retirement Preparedness Index (objective measure)	
Characteristic	Estimate	*t*-statistic	Estimate	*t*-statistic
Sex				
Women	-0.014	-0.19	-0.200	-1.83*
Race/ethnicity				
Non-Hispanic black	0.005	-0.04	-0.342	-2.04**
Hispanic	-0.369	-3.51***	-0.768	-5.27***
Other [a]	0.122	1.18	-0.016	-0.08
Age				
35–54	0.329	4.12***	0.752	6.48***
55–64	0.347	3.48***	0.738	4.87***
Marital status				
Married	0.128	1.57	0.134	1.13
Household income ($)				
30,000–49,999	0.073	0.60	0.138	0.83
50,000–74,999	0.405	3.26***	0.419	2.02**
75,000 or more	0.575	4.47***	0.764	3.85***
Educational attainment				
Some college	-0.047	-0.52	0.271	1.90*
College degree or more	0.338	3.49***	0.594	3.53***
EITC proxy	-0.242	-2.22**	-0.312	-1.95*
Constant	0.561	4.39***	-1.091	-5.41***
R-squared	0.29		0.27	
F	21.750		27.354	
Observations	1,147		1,145	

SOURCE: Authors' calculations based on UAS data.

NOTE: * = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$.

a. Refers to race/ethnicities other than non-Hispanic white, non-Hispanic black, and Hispanic.

UAS survey 35, the Yodlee administrative record Internet banking project, to extend the findings of this study. In addition, the UAS surveys used in this study will be readministered at least every 2 years, allowing for time-series panel analysis.

A key limitation of our study is the reliance on self-reported survey data. Although we make every attempt to use validated measures, including the Assets and Income questionnaire section from the Health and Retirement Study, such data are still subject to bias. UAS designers are working to match survey data to financial transaction records, allowing researchers to compare self-reported and actual saving behavior and to evaluate financial behavior more accurately.

We will continue to refine the measurement and definition of critical variables. For instance, we use a pragmatic definition of retirement preparedness that incorporates several rules of thumb and a limited set of financial status indicators, which we will further develop and test in future studies. Our definition of nonretired is likewise pragmatic, as respondents are asked to indicate whether or not they are retired using a "yes" or "no" response. However, the interpretation of retirement is in fact complex and the relationship between work status and Social Security benefit claiming can be ambiguous, particularly for older adults who may experience transitions in and out of work, take up part-time employment, or work as volunteers. We also plan to examine differences in access to retirement saving plans and financial institutions. In addition, we will explore how low- to moderate-income households that are not eligible for the EITC because they have no qualifying children compare with households that have similar income levels but are eligible for the EITC because they do have at least one qualifying child.

Table 5.
Ordinary least squares regression estimates of self-reported history of planning to save and trying to save for retirement for EITC-eligible respondents, by selected sociodemographic characteristics

	Ever planned to save		Ever tried to save	
Characteristic	Estimate	*t*-statistic	Estimate	*t*-statistic
Sex				
Women	-0.015	-0.35	-0.037	-0.90
Race/ethnicity				
Non-Hispanic black	-0.124	-2.13**	-0.086	-1.56
Hispanic	-0.078	-1.24	-0.137	-2.34**
Other [a]	0.018	0.18	-0.070	-0.65
Age				
35–54	0.142	3.17***	0.080	1.86*
55–64	0.221	4.01***	0.145	2.67***
Marital status				
Married	0.062	1.38	0.040	0.89
Household income ($)				
30,000–49,999	-0.057	-0.94	-0.005	-0.08
50,000–74,999	0.143	2.06**	0.134	2.09**
75,000 or more	0.205	2.89***	0.235	3.50***
Educational attainment				
Some college	0.069	1.39	0.104	2.13**
College degree or more	0.186	3.25***	0.254	4.49***
EITC proxy	-0.035	-0.58	0.004	0.06
Constant	0.133	2.08**	0.109	1.85*
R-squared	0.18		0.19	
F	12.868		13.326	
Observations	1,148		1,148	

SOURCE: Authors' calculations based on UAS data.

NOTE: * = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$.

a. Refers to race/ethnicities other than non-Hispanic white, non-Hispanic black, and Hispanic.

Appendix

Table A-1 shows the weights for selected elements of the Retirement Preparedness Index. The highest weights are assigned to being an owner or the beneficiary of an IRA or being entitled to the assets of an IRA.

Table A-1.
Weights for selected individual Retirement Preparedness Index behaviors and characteristics, 2015

Behavior or characteristic	Weight
Participates in a DB pension plan	0.1576
Is entitled to retirement saving plan assets	
From own IRA	0.5184
Including plans of which respondent is a beneficiary	0.5427
IRA wealth exceeds age-adjusted household income threshold	
Own IRA only	. . .
Including IRAs of which respondent is a beneficiary	0.5217
No early withdrawals from IRA	
Own IRA only	. . .
Including IRAs of which respondent is a beneficiary	0.2343
No early cash-in on own IRA	0.0028
Share of IRA wealth invested in stocks meets age-appropriate threshold	
Own IRA only	. . .
Including IRAs of which respondent is a beneficiary	0.2449
Percentage of IRA assets invested in stocks	
Own IRA only	. . .
Including IRAs of which respondent is a beneficiary	0.1576

SOURCE: Authors' calculations based on UAS data.

NOTE: . . . = not applicable.

Notes

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[1] Financial capability—as distinct from the narrower concept of financial literacy—comprises "four components: knowledge, influences, access, and action" (University of Wisconsin-Extension 2013).

[2] For full descriptions of the three surveys, see https://uasdata.usc.edu/UAS-16, https://uasdata.usc.edu/UAS-24, and https://uasdata.usc.edu/UAS-26.

[3] EBRI initially developed the Retirement Readiness Rating in 2003 and publishes periodic Issue Briefs that update the Rating with new data from EBRI's proprietary Retirement Security Projection Model. For details on the modeling, see EBRI (2014).

[4] Fidelity revised these ratios in June 2017. For our analysis, however, we use the ratios given here, which were current at the time of the data collection.

[5] For example, Kadlec (2012) and Carrns (2012).

[6] The difference could in part reflect less access to financial institutions for EITC-eligible households, which we hope to study in future research.

References

Alattar, Laith, Matt Messel, and David Rogofsky. 2018. "An Introduction to the Understanding America Study Internet Panel." *Social Security Bulletin* 78(2): 13–28.

Carrns, Ann. 2012. "Suggested Retirement Savings Goals, by Age." *New York Times,* September 12. https://bucks.blogs.nytimes.com/2012/09/12/suggested-retirement-savings-goals-by-age/.

Chard, Richard, David Rogofsky, and Joanne Yoong. 2017. "Wealthy or Wise: How Knowledge Influences Retirement Savings Behavior." *Journal of Behavioral and Social Sciences* 4(3): 164–180.

[EBRI] Employee Benefit Research Institute. 2014. "What Causes EBRI Retirement Readiness Ratings™ to Vary: Results from the 2014 Retirement Security Projection Model®." Issue Brief No. 396. Washington, DC: EBRI. https://www.ebri.org/publications/ib/index.cfm?fa=ibDisp&content_id=5351.

Filmer, Deon, and Lant H. Pritchett. 2001. "Estimating Wealth Effects Without Expenditure Data—Or Tears: An Application to Educational Enrollments in States of India." *Demography* 38(1): 115–132.

FINRA Investor Education Foundation. 2016. *Financial Capability in the United States 2016.* Washington, DC: FINRA.

Gustman, Alan L., and Thomas L. Steinmeier. 1999. "Effects of Pensions on Savings: Analysis with Data from the Health and Retirement Study." *Carnegie-Rochester Conference Series on Public Policy* 50(1): 271–324.

Kadlec, Dan. 2012. "What You Should Save By 35, 45, and 55 To Be On Target." *Time,* September 21. http://business.time.com/2012/09/21/what-you-should-save-by-35-45-and-55-to-be-on-target/.

Lusardi, Annamaria, and Olivia Mitchell. 2007. "Financial Literacy and Retirement Planning: New Evidence from the Rand American Life Panel." MRRC Working Paper No. 2007-157. Ann Arbor, MI: University of Michigan Retirement Research Center.

Malkiel, Burton G., and Charles D. Ellis. 2010. *The Elements of Investing: Easy Lessons for Every Investor.* Hoboken, NJ: John Wiley & Sons.

McKenzie, David J. 2005. "Measuring Inequality with Asset Indicators." *Journal of Population Economics* 18(2): 229–260.

Miller, Rebecca J., Robert A. Lavenberg, and Ian A. MacKay. 2014. "ERISA: 40 Years Later." *Journal of Accountancy* 218(3): 86.

Sherman, Arloc, and Danilo Trisi. 2015. "Safety Net More Effective Against Poverty Than Previously Thought: Correcting for Underreporting of Benefits Reveals Stronger Reductions in Poverty and Deep Poverty in All States." Center on Budget and Policy Priorities Policy Futures. Washington, DC: CBPP. https://www.cbpp.org/research/safety-net-more-effective-against-poverty-than-previously-thought.

University of Wisconsin-Extension. 2013. "Analyzing the Financial Capability of People in Wisconsin." Issue Brief No. 2013-04. Madison, WI: University of Wisconsin. https://fyi.uwex.edu/financialseries/files/2013/04/April_2013_Fin_Cap1.pdf.

Vyas, Seema, and Lilani Kumaranayake. 2006. "Constructing Socio-Economic Status Indices: How to Use Principal Components Analysis." *Health Policy and Planning* 21(6): 459–468.

Weber, Caroline E. 2016. "Does the Earned Income Tax Credit Reduce Saving by Low-Income Households?" *National Tax Journal* 69(1): 41–76.

Yoong, Joanne, Richard Chard, and David Rogofsky. Forthcoming. "Using Informatics to Examine How Knowledge Influences Retirement Savings Behavior." *Proceedings of the 8th International Multi-Conference on Complexity, Informatics and Cybernetics*.