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DOES SOCIOECONOMIC STATUS LEAD PEOPLE TO RETIRE TOO SOON?

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Introduction

Working longer is a powerful lever to enhance retirement security. Individuals, *on average*, are healthier, live longer, and face less physically demanding jobs, so they should be able to extend the number of years worked. But averages are misleading when differences in health, job prospects, and life expectancy have widened between individuals with low and high socioeconomic status (SES). Thus, a single prescription for all no longer seems appropriate. Rather, it is important to know: 1) how long individuals in different SES groups have to work to maintain their pre-retirement standard of living; 2) how long they plan to work; and 3) what explains any gap between the two.

This *brief*, based on an earlier paper, uses the *Health and Retirement Study* (HRS) to document the disparities across SES quartiles both in the ages at which households will meet their retirement income targets and in their planned retirement ages.[1] It then uses regression analysis to determine the extent to which any gap between the target and planned ages is associated with SES, as opposed to demographic/financial characteristics or health, marital, wealth, or

employment shocks that occur before the HRS interview but too late for the household to adjust its saving (between ages 50-58). The analysis uses education as the SES metric, because educational attainment is determined early in life and affects, but is unaffected by, the focus of this research – late-career labor market activity.

The discussion proceeds as follows. The first section calculates how long individuals in various SES categories have to work to maintain their standard of living. The second section discusses their planned retirement ages and determines the extent to which gaps between planned and target retirement ages exist by SES category. The third section uses regression analysis to assess how SES category is related to the gaps, controlling for both demographic/financial characteristics and shocks. The final section concludes that households in lower-SES quartiles have larger retirement gaps than their higher-income counterparts, even after controlling for other household characteristics and shocks.

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Establishing a Target Retirement Age

The analysis uses data from the *Health and Retirement Study* (HRS), a nationally representative panel survey of older households conducted every two years since 1992, linked with Social Security earnings records. The sample consists of households whose head turns age 58 between 2000-2010.[2] For couples, the male is identified as the head. In the case of same-sex couples, the higher-earning spouse is the head or, if earnings are equivalent, the older respondent is the head. The final sample consists of 3,049 households.[3] Participants were asked about their retirement plans at 58, an age at which households will have begun to consider when to retire but few have already retired.

This part of the analysis involves: 1) identifying a target replacement rate, which would provide each household enough income to maintain its pre-retirement standard of living; 2) projecting an actual replacement rate for each household at each age based on its own circumstances; and 3) comparing the target and projected replacement rates to identify a target retirement age.

The target replacement rates were drawn from Georgia State University's RETIRE Project, which provides rates that vary based on marital status and income (see Table 1). Targets are less than 100 percent of pre-retirement income because retirees pay less in taxes and no longer need to save for retirement, among other factors. The rates from the RE-TIRE Project were adjusted to reflect our projection that a significant proportion of the sample will have either repaid their mortgage by retirement or be able to repay all or part of the balance outstanding at that time by drawing on financial assets.

Armed with retirement income targets, the next step is to calculate the projected retirement replacement rates that the household will achieve at each age if it continues on its present course, maintaining its current saving rate and asset allocation. Total income at retirement consists of Social Security, employer pensions, and income from financial assets (including 401(k) and IRA balances and the proceeds of a reverse mortgage). Social Security benefits are calculated using the HRS Social Security earnings records.[4] Pension income is based on the 1998 and 2004 HRS imputed data for employer-sponsored pension plan wealth in current jobs. Household financial wealth invested in stocks, bonds, and short-term deposits is assumed to earn real returns of 6.5 percent, 3.0 percent, and 1.0 percent, respectively, from the date of the HRS interview until retirement. At retirement, the household is assumed to use its financial assets to buy a nominal joint or single life annuity.

The projected replacement rate for each household is then compared to its target replacement rate at each age, and the target retirement age is when the projected and target replacement rates are equal. The results show that low-SES households are more likely to be unprepared for retirement at any given age (see Figure 1).[5]

Table 1. Target Replacement Rates for Selected Households, by Earnings and Marital Status

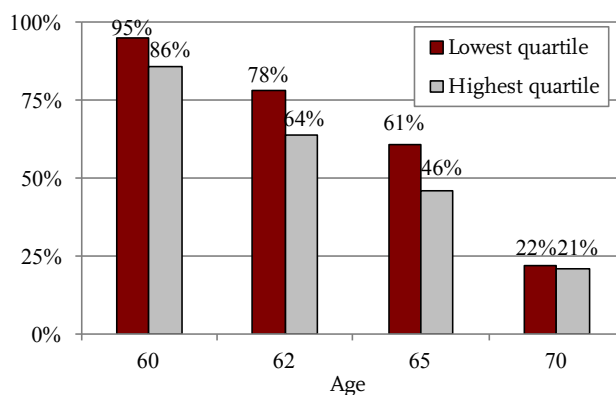| Pre-retirement earnings	Two-earner couple	Single earner
$20,000	94%	88%
$50,000	81	80
$90,000	78	81

Note: The two-earner couple assumes a household head who is age 65 and a spouse who is age 62.
Source: Palmer (2008).

Figure 1. Percentage of Households Ages 60-70 Unprepared at a Specific Age, by SES Quartile

Source: Munnell, Webb, and Chen (2016).

Establishing a Planned Retirement Age

In each wave of the HRS, participants who are working or looking for work are asked about their retirement plans. They are allowed to give multiple responses, including that they plan to "stop work altogether." Those who include "stop work altogether" as one of their responses are asked to indicate the age or year at which they plan to stop working. We refer to these households as *planners*. Those who do not say that they plan to "stop work altogether," but indicate that they have "not given much thought" to the subject or have "no current plans," are asked the age or year at which they think they will stop working.[6] We refer to these households as *thinkers*. Participants who, when asked about their retirement plans, respond that they plan to "never stop work" are not asked when they plan or think they will stop working.[7]

Since most households stop work at some point, our presumption is that the "never-stop-work" households would, if pressed, acknowledge that they would eventually stop and might be able to estimate an age at which this outcome might occur. Similarly, those who do not know when they will stop working or were not asked the question might also be able to provide an age, if pressed. We therefore impute anticipated ages for individuals who did not provide an estimated retirement age, using those who did provide ages as the donor pool.

To determine which donor pool is most appropriate, we look at actual retirement ages.[8] While the analysis focuses on individuals' retirement plans as of age 58, we observe the respondents in subsequent years of the survey, so are able to track them (through 2010) to see when/if they do retire. As shown in Table 2, those who say they plan to never stop working have the highest actual retirement age, on average, and the lowest proportion retired. Interestingly, the average retirement age and the proportion still working among those who plan to never stop working are reasonably comparable to the thinkers. Those who provided no answer are comparable to the average of both the planners and thinkers. Reflecting this pattern, we use thinkers as the donor pool for those who state that they will never stop working, and we use all

respondents as the donor pool for non-respondents. The imputations are based on birth cohort, education level, race, pension type, marital earnings status, and health.

TABLE 2. AVERAGE RETIREMENT AGE AND PERCENTAGE RETIRED BY RETIREMENT PLAN RESPONSE

	Average retirement age	% retired
Answered	63.1	74.3%
Planners	62.7	81.2
Thinkers	63.6	67.6
Never	63.8	66.2
Non-response	63.3	71.8

Source: Munnell, Webb, and Chen (2016).

The next step is to compare the planned retirement ages with the target retirement ages, when individuals would have enough income to maintain their pre-retirement standard of living; this comparison shows whether a gap exists. The percentage of households with a retirement gap, tallied by SES is shown in Figure 2; low-SES households are more likely to have a gap than those in the higher SES-groups.[9]

FIGURE 2. PERCENTAGE OF HOUSEHOLDS WITH A RETIREMENT GAP, BY SES
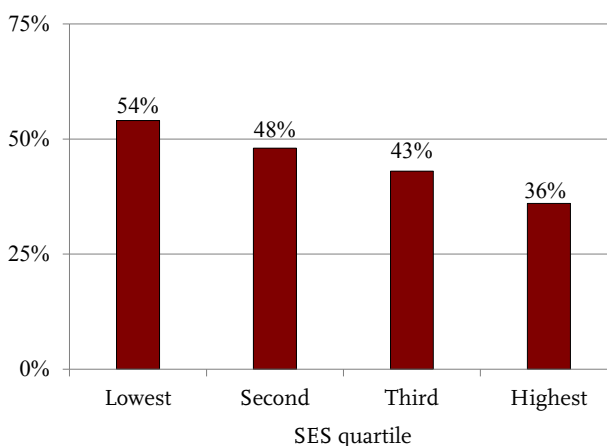
Source: Munnell, Webb, and Chen (2016).

Explaining the Gap

The question is whether the gaps between the target and planned retirement ages by SES remain after accounting for other household characteristics or shocks that cause people to retire prematurely.[11] Shocks are observed between ages 50-58, a period before the HRS participants are interviewed but too recent for them to have adjusted their saving. Health and spousal health shocks are defined as substantial declines in self-reported health status;[10] marital shocks as any change from a couple household to a non-couple household; wealth shocks as any wave-to-wave decline of 20 percent or more in total financial and housing wealth; and employment and spousal employment shocks as any periods of unemployment. Households in the lowest SES quartile have a statistically significant higher incidence of all the shocks than those in the top quartile (see Figure 3).

To investigate the relationships between shocks, SES, and the retirement gap, we estimate the following regression:

$$R_{h,t} = \beta_0 + \beta_1 SES_h + \beta_2 C_h + \beta_3 D_{ht} + \beta_4 S_{ht} + \varepsilon_{ht}$$

The dependent variable $R_{h,t}$ is the number of years between the target and planned retirement age. To understand the extent to which SES characteristics explain the gap, the equation is estimated in three stages. The first stage includes only SES_h, the household's SES quartile, and C_h, the birth cohort of the household head, as explanatory variables. The second stage adds D_{ht}, a vector of demographic/financial characteristics as controls. The third stage adds S_{ht}, a vector of shocks.

The full results are reported in the Appendix. The demographic/financial control variables with statistically significant coefficients have the expected sign. Being black, having poor health, and being a two-earner couple all increase the gap between the age of planned retirement and the age of financial readiness. Having both a DB and a DC plan or a 10-year planning horizon reduces the gap.
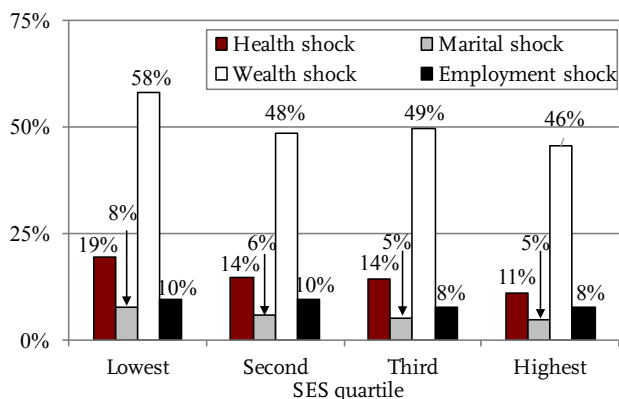
Note: Households which experience both respondent and spousal shocks in a given category are only counted once. *Source*: Authors' calculations from Munnell, Webb, and Chen (2016).

The results for shocks are mixed. Health, marital, and wealth shocks all increase the size of the gap, although only the wealth coefficient is statistically significant. In contrast, an employment shock – that is, becoming unemployed – reduces the gap. Three explanations are possible. One is that periods of unemployment decrease a household's pre-retirement income, which reduces its target replacement rate. The second is that households find a better fitting job, making it easier for them to work longer. The final is that those forced to find a new job in their fifties recognize that they will have to work longer to make ends meet in retirement, so they adjust their plans.

The focus of the analysis, however, is not the control variables themselves but rather the relationship between SES category and the gap once household characteristics and late career shocks have been taken into account. This relationship is highlighted in Figure 4 on the next page. The results show that, even after controlling for demographic/financial characteristics as well as shocks, the retirement gaps for households in the third and the highest SES quartiles are 0.9 and 1.3 years less than those in the lowest SES quartile.

FIGURE 4. IMPACT OF SES ON RETIREMENT GAP, CONTROLLING FOR DEMOGRAPHIC/FINANCIAL CHARACTERISTICS AND SHOCKS
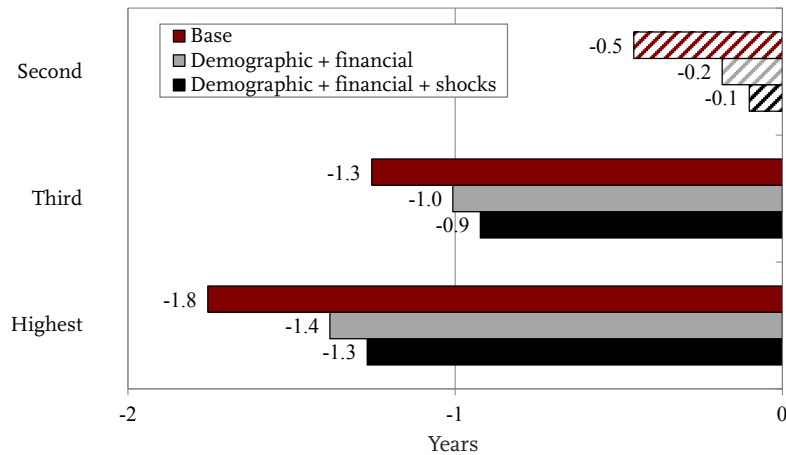
Note: Solid bars are statistically significant.
Source: Munnell, Webb, and Chen (2016).

Conclusion

Working longer is a powerful way to improve retirement security for Americans who are retiring prematurely – that is, before they acquire enough income to maintain their pre-retirement standard of living. This study documents the disparities across SES quartiles both in the ages at which households will meet their retirement income targets and in their planned retirement ages. It also shows that gaps between target and planned retirement ages are significantly smaller for high-SES households than for low-SES households.

These results have important policy implications, because they suggest that the big problem is premature retirement among low-SES households. This same group has seen little improvement in health and life expectancy and faces poor job prospects. It may well be that their retirement shortfalls cannot be bridged by working longer and that other solutions will be needed.

Endnotes

1 Munnell, Webb, and Chen (2016).

2 Households are included if the head has turned 58, but has not yet turned 60 at the next observation.

3 From the original sample, we exclude 751 households whose head was not working for pay at the age-58 wave and 76 households with missing or inconsistent data. These two exclusions reduce the final sample to 3,049 households.

4 When earnings records were not available, earnings histories were imputed using current earnings, earnings at the individual's first HRS interview, and final earnings in his previous job.

5 Butrica, Iams, and Smith (2007) also found that lower-SES households are less likely than the average household to be prepared for retirement.

6 Participants who state that they plan to reduce their work hours (22 percent of the sample), change the kind of work they do (3 percent), or become self-employed (1 percent) are asked the age or year at which they plan to make these changes. We do not use these responses. These changes may result in reductions in income that would necessitate the household delaying retirement in order to meet its replacement rate target, but we have no means of estimating the likely reduction in income.

7 Of the sample, 22 percent specify an age at which they plan to stop working, 19 percent specify an age at which they think they will stop working, 4 percent state that they plan to never stop working, and the remaining 55 percent either don't know or give other responses that resulted in them not being asked when they anticipated stopping work.

8 Previous studies have found that while retirement expectations are generally predictive of the age of retirement (Loughran et al. 2001), some people retire prematurely due to shocks (Bernheim 1989; Dwyer and Hu 1999).

9 Initially, educational attainment naturally falls into four categories: less than high school, high school, some college, and college. However, the percentage of individuals with less than a high school education has become much smaller over time and represents a more disadvantaged SES group than in the past, making it necessary to create quartiles of people ranked by their educational attainment. Making the proportions equal in each quartile requires moving some households from the top SES group (college) into the second-highest group (some college), then from the second-highest group to the third SES group (high school), and finally into the lowest SES group (less than high school). In contrast to Bound, et al. (2014), who reassigned people at random, the probability of being selected and moved is proportional to the probability that someone with that individual's characteristics would not have graduated from college, so that marginal college graduates are more likely to be reassigned. The results of the following analysis are quite similar using the quartile data and using the educational attainment originally reported.

10 Previous research has shown that those in lower-SES groups are less likely to be in good health (Smith, 2005) and retire earlier than their counterparts with higher education levels (Burtless 2013).

11 Self-reported health status in the HRS is measured on a five-point scale. We treat declines of two or more points as substantial.

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APPENDIX

APPENDIX TABLE. IMPACT OF SES ON THE RETIREMENT GAP, CONTROLLING FOR DEMOGRAPHIC/FINANCIAL CHARACTERISTICS AND SHOCKS

Variable	(1) Base	(2) Demographic + financial	(3) Demographic + financial + shocks
SES			
Second	-0.454	-0.184	-0.101
	(0.317)	(0.332)	(0.331)
Third	-1.255 ***	-1.007 ***	-0.923 ***
	(0.322)	(0.338)	(0.336)
Highest	-1.756 ***	-1.383 ***	-1.269 ***
	(0.323)	(0.355)	(0.355)
Demographic			
Male		0.218	0.230
		(0.357)	(0.354)
Black		0.961 ***	0.939 ***
		(0.343)	(0.339)
Hispanic		-0.038	0.008
		(0.425)	(0.420)
Other race		0.105	0.171
		(0.792)	(0.771)
Number of kids		0.010	0.085
		(0.0634)	(0.0637)
Poor health		0.990 ***	1.011 ***
		(0.295)	(0.299)
One-earner couple		0.039	0.071
		(0.417)	(0.413)
Two-earner couple		1.074 ***	1.151 ***
		(0.343)	(0.339)
Financial			
DB only		0.091	0.000
		(0.314)	(0.316)
DC only		0.018	-0.045
		(0.272)	(0.270)
DB and DC		-0.661 *	-0.766 *
		(0.391)	(0.393)
10+ year planning horizon		-0.539**	-0.581 **
		(0.246)	(0.246)

Variable	(1) Base	(2) Demographic + financial	(3) Demographic + financial + shocks
Shocks			
Health shocks			0.119
			(0.377)
Marital shocks			0.093
			(0.551)
Wealth shocks			0.786 ***
			(0.228)
Employment shocks			-1.358 **
			(0.611)
Wave	-0.043	-0.013	-0.0412
	(0.0638)	(0.0669)	(0.0682)
Constant	1.221 **	-0.166	-0.322
	(0.518)	(0.601)	(0.599)
Observations	3,009	3,009	3,009
R-squared	0.017	0.041	0.049

Note: Significance is indicated at the 1-percent level (***), the 5-percent level (**), and the 10-percent level (*).
Source: Munnell, Webb, and Chen (2016).

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The mission of the Center for Retirement Research at Boston College is to produce first-class research and educational tools and forge a strong link between the academic community and decision-makers in the public and private sectors around an issue of critical importance to the nation's future. To achieve this mission, the Center sponsors a wide variety of research projects, transmits new findings to a broad audience, trains new scholars, and broadens access to valuable data sources. Since its inception in 1998, the Center has established a reputation as an authoritative source of information on all major aspects of the retirement income debate.

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