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Learning by doing: Active employer sponsored retirement savings plan participation and household wealth accumulation

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ABSTRACT

This paper investigates the impact of household exposure to employer pension plan features using the Health and Retirement Survey. We investigate whether exposure to active management (choice) or participation in plan-sponsored financial education seminars impacts household portfolio allocations and wealth. We consider interactions between pension design and investment patterns outside of workers' pension plans, utilizing two parametric estimators: the random effects probit and the multivariate probit. We extend our results non-parametrically via propensity score matching. We find repeated evidence that both of the plan features improve asset allocations and financial outcomes for recent retirees, especially when used together.

1. Introduction

If portfolio composition and wealth change as households gain experience with financial markets then it follows that the evolution of employer-based Defined Contribution (DC) retirement savings plans is related to the evolution of household savings and wealth. In this paper we consider two DC plan features: (i) investment choice and (ii) financial education. We find that that the ability to choose investments increases a household's propensity to hold wealth in relatively risky assets such as equities, after controlling for other factors such as preferences for risk and planning horizons. This is good news for most cohorts of recent retirees given observed equity premiums, however increasing equity holdings will not always be optimal. For this reason we also consider employer-sponsored financial education offerings and find attendance linked to greater household wealth at retirement.

Both plan features: choice and education are thus observed to be valuable for enhancing private savings and capital formation outside of the employer plan setting. Because household savings are linked to both the nation's wealth and its population's social insurance needs, we encourage the reader to consider this study of employer and household habits in terms of both private and public pension and savings policy.

2. Background

Life-cycle models determine household saving as a function of retirement consumption needs. The aims are generally to maximize lifecycle utility via improvements in the amount and the consistency of consumption, presuming rationality, predictable planning horizons, and perfect information. While the models aims are straightforward however, its dependence on these three presumptions may be quite debilitating. Going back as far as Aesop's fable, *the Ant and the Grasshopper* suggests that some may fail to prepare for predictable adversity (winter) – suggesting limits to rationality or significant variation in the willingness to plan. More recently an academic literature devoted to retirement preparedness has debated whether Americans by and large have saved enough to maintain their living standards in retirement. Work here is not one sided – some authors document large declines in the post war US savings rate to zero or near-zero rates (Parker Jonathan, 2000), while other studies temper this decline markedly by adjusting measures of savings to account for evolutions in savings and consumption habits such as holdings of consumer durables such as housing, and the introduction of several new retirement savings vehicles (Gale and Sabelhaus, 1999). Shackleton (2004) employs ratios of family wealth to income derived from the Survey of

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Consumer Finances and finds that roughly half of the baby boomer generation has saved enough to maintain their standard of living while roughly a quarter are likely to be heavily dependent on social insurance programs in retirement.[1] Moving more broadly from savings habits to retirement preparation, propensities for planning have been emphasized as important (Ameriks, Caplin and Leahy, 2003) as have costs associated with it (Lusardi, 2002). Some pieces have tried to reduce planning and selection costs with simpler assessment metrics such as an asset-to-salary ratio, (Hammond and Richardson, 2010) or consumption-framed marketing messages for investments such as annuities (Agnew, Anderson, Gerlach, & Szykman, 2008). Finally regarding needs and preparedness, the evidence is again mixed with some suggesting that recent cohorts are more likely to transition to partial retirement (Maestas, 2007) to maintain standards of living. Other work suggests that after accounting for differences between income and real personal consumption stemming from child rearing and other lumpy household expenditures across the lifecycle that households are by and large "optimally" preparing to maintain standards of living in retirement (Scholz, Seshadri & Khitatrakun, 2006).

A few findings are less positive. In particular, given historic returns fewer households hold stocks than theory would predict (Haliassos and Bertaut, 1995). The departure may derive from lack of experience with financial markets.[2] In this case framing to a familiar context (Agnew et al., 2008) is not as possible. However offering a lifecycle rule-of-thumb ratio (as in Hammond and Richardson, 2010) for expected equity exposure, may motivate interest in equities. Generally exposure to financial decisions and education may improve household savings behavior, thereby improving consumption across the lifecycle in line with theory.

Defined Contribution savings plans thus may be a catalyst for increasing exposure to equity markets, improving financial management by way of experience. Over the period 1992–2002, workers increasingly faced three responsibilities: first, to decide to participate in employer plans; second, to select contribution levels; and, third to decide portfolio allocations over time.[3] We posit that exposure to these decisions has important implications for workers' non-pension savings as well, investigating two related issues inclusively: (1) the effect of allowing retirement plan allocation choices and (2) the impact of financial education on the amount and composition of household savings.

Previous researchers have provided evidence of misinformed asset allocations within employer plans: Bernartzi and Thaler (2001) report 'naïve' diversification strategies and Madrian & Shea (2001) report 'passive' lock-in of default allocations. Following these, Bernheim and Garrett (2003), Lusardi (2004), Maki (2004) and Bayer, Bernheim & Scholz (2008) have studied employer sponsored financial literacy programs and retirement preparedness. Generally these authors find positive impacts for household equity holdings, especially among lesser-compensated employees.

The ability to choose employer-plan allocations is studied by Weisbenner (2002) who uses a Survey of Consumer Finance cross section and finds increased probability of owning risky assets outside of the plan. Papke (2004) employs the 1992 National Longitudinal Survey of Mature Women and the first wave of the HRS; she finds choice increases contributions, account balances, and the proportion of employer-plan savings held as equities.

In contrast to these earlier papers, we employ a six wave panel of data from the HRS spanning 12 years. Additionally, both choice and education are considered to account for impacts of each feature more accurately.

3. Data

The HRS surveys a sample born between 1931 and 1941 every two years since 1992.[4] Thus over the period of observation respondents generally mature from late career to retirement ages. Surveys include information on income, assets, health, demographic characteristics, family and employment. The RAND Corporation offers a public-use panel containing imputations of missing observations of wealth, income, and medical expenditures in a methodologically consistent manner. Herein the RAND data (1992-2002) are augmented with additional data from HRS. We classify observed assets into three categories:

1. *Safe assets*: Checking & savings accounts, money market funds, CDs, US savings bonds, T-bills
2. *Risky assets*: Bonds, stocks, and mutual funds (held directly).
3. *Retirement assets*: Individual Retirement Accounts (IRAs) and Keoghs.[5]

Because we are interested in observing behavioral spillovers from the workplace to personal finance we restrict our focus to non-pension financial wealth. Herein the safe assets category includes traditional FDIC insured checking and savings accounts and measures basic participation in the financial system—being "banked." The other two categories evidence more sophisticated participation. HRS does not ask questions on portfolio composition (the intensive margin) and so we are restricted to examining the impact of financial education and/or choice on ownership probabilities of asset class ownership—including stock market participation.[6]

Outside of the constructed RAND panel, HRS queries participants in each wave about the opportunity to select assets in employer plans by asking them the following question: "*Are you able to choose how the money in your account is invested?*" Additionally HRS queries participants at two points over time (1992, and 2000) regarding financial education by asking them the following question in its survey modules on retirement decision: "*Have you ever attended any meetings on retirement or retirement planning?*" Table 1 gives summary statistics on these and other pertinent variables.

The average age of those reporting educational seminar attendance or the ability to choose assets is near the general DC plan population—useful for making wealth accumulation comparisons. Married couples constitute over three fourths of the population, but a smaller portion of the population holding no plan. Women comprise roughly 53% of respondents, but lower levels of those holding either DB- or DC-type plans (44% and 42%, respectively). Women are a larger share of those reporting attendance of a

[1] Shackleton's measures extend to 2001, given the relative state of labor and financial markets from 2007 to 2012 the proportion of Baby Boomers able to preserve their standards of living in retirement has likely declined. For more on labor and financial market impacts on lifecycle savings see Seligman and Wenger (2006).

[2] Loss aversion as described by Kahneman and Tversky (1979) is consistent with trepidation in lieu of experience.

[3] Following the Pension Reform Act of 2006, this first responsibility has shifted somewhat away from workers, as defaults into plans have become more common.

[4] The HRS (Health and Retirement Study) is sponsored by the National Institute on Aging (grant number NIA U01AG009740) and is conducted by the University of Michigan.

[5] This measure is loosely based on Hurd (2001). We amend his categories in two ways, first: we lump his medium and high risk assets together, and second: we treat retirement assets as a separate category. This is done because retirement assets differ from directly held risky assets in their tax treatment, as suggested by Bergstrasser and Poterba (2004) on asset allocation decisions and tax incentives.

[6] Intensive margin analysis would require knowledge of inter-temporal trading behavior.