Explaining Why So Many People Do Not Save

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CRR WP 2001-05
September 2001

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*Annamaria Lusardi is an Associate Professor of Economics at Dartmouth College. The research reported herein was performed, in part, pursuant to a grant from the U.S. Social Security Administration (SSA) to the Center for Retirement Research at Boston College (CRR) funded as part of the Retirement Research Consortium. This grant was awarded through the CRR's Steven H. Sandell Grant Program for Junior Scholars in Retirement Research. The opinions and conclusions are solely those of the author and should not be construed as representing the opinions or policy of the SSA or any agency of the Federal Government or of the CRR. Financial support for the construction of the variables and the final sample and preliminary work on this project was also obtained from The Brookings Institution, the National Institute on Aging (grant n. R01-AG13893), and the National Science Foundation (grant n. SES 9905453). The author would like to thank Rob Alessie, Patty Anderson, Doug Bernheim, Norman Bradburn, Greg Duncan, Jeff Dominitz, Sven Feldman, Mike Hurd, David Laibson, George Loewenstein, David Loughran, Erzo Luttmer, Bob Michael, Susan Mayer, Sendhil Mullainathan, Matthew Rabin, Jon Skinner, Noriyuki Takayama, Dick Thaler, Steve Venti, Mark Warshawsky, participants at the Third Annual Conference of the Retirement Research Consortium, Washington, D.C., and participants at several other conferences and universities' seminars for suggestions and comments. Any errors are the author's responsibility.

About the Sandell Grant Program

This paper received funding from the *Steven H. Sandell Grant Program for Junior Scholars in Retirement Research*. Established in 1999, the Sandell program's purpose is to promote research on retirement issues by junior scholars in a wide variety of disciplines, including actuarial science, demography, economics, finance, gerontology, political science, psychology, public administration, public policy, sociology, social work, and statistics. The program is funded through a grant from the Social Security Administration (SSA). Each grant awarded is up to $25,000. In addition to submitting a paper, successful applicants also present their results to SSA in Washington, DC. For more information on the Sandell program, please visit our web site at *http://www.bc.edu/bc_org/avp/csom/executive/crr/sandellguidelines.shtml*, send e-mail to crr@bc.edu or call Elizabeth Lidstone at (617) 552-1677.

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Abstract

There are vast differences in wealth holdings, even among households in similar age groups. In addition, a large percentage of U.S. households arrive close to retirement with little or no wealth. While many explanations can be found to rationalize these facts, approximately thirty percent of households whose head is close to retirement have done little or no planning for retirement.

Planning is shaped by the experience of other individuals: individuals learn to plan for retirement from older siblings. They also learn from the experience of old parents. In particular, unpleasant events, such as financial difficulties and health shocks at the end of life, provide incentives toward planning. In addition, planning affects wealth levels as well as portfolio choice. Individuals who plan are more likely to hold large amounts of wealth and to invest their wealth holdings in high return assets, such as stocks. Thus, planning plays an important role in explaining the saving behavior of many households.

JEL classification: D91, E21, C21.

Keywords: Planning; siblings; wealth and portfolio choice.

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1. Introduction

The intertemporal optimization model, such as the life-cycle-permanent income model, has been the basis for the work on savings. The basic implication of the model is that agents plan consumption and saving considering their life-time resources. Thus, agents are forward-looking, they anticipate the decline in income at retirement and save to offset the change in resources in the future.

There have been several extensions and modifications to this basic model. For example, a precautionary motive and a bequest motive have been incorporated into the intertemporal scheme.[1] It is still rather difficult, however, to generate an accurate match of the distribution of wealth in the U.S.. What is particularly difficult to rationalize is the huge differences in wealth holdings among households of similar characteristics and economic status. Many studies have documented that households with similar patterns of income end up accumulating vastly different amounts of wealth.[2] We know relatively little about what is causing the huge differences in wealth holdings that we observe across households and why some households save so little.

One aspect of behavior that the basic model of saving and intertemporal optimization has not much considered is that planning for retirement is a complex task, and many individuals may perform it very imperfectly, up to the extreme of postponing the decision until it is too late. Just to mention a few of the difficulties involved in the process, the information required for making decisions is extensive, and the rules concerning Social Security and pensions are rather elaborate. There is little evidence that households are well informed about their Social Security and pension benefits.[3]

Very little work has been done in investigating how households make saving plans and how they collect all the relevant information to make saving decisions. In particular, almost all models assume that there are no planning costs and, for example, no differences in how individuals access (and evaluate) information and how they overcome all the difficulties of

[1]See the review of the work on consumption and savings in Deaton (1992) and Browning and Lusardi (1996).

[2]See Venti and Wise (1997) for a thorough examination of the dispersion of wealth around the time of retirement.

[3]See Gustman and Steinmeier (2000).

devising saving plans. However, these costs may exist and differences in devising saving plans and carrying those plans out can be powerful determinants of both wealth holdings and portfolio choice.

This topic is of importance not only to advance our knowledge of saving, but also to inform the current debate on the effectiveness of saving incentives, on the effects of privatizing Social Security, and on the consequences of different pension schemes (such as the current shift among employers from a defined benefit pension scheme to a defined contribution scheme).

In this paper, I use data from the Health and Retirement Study (HRS) to examine savings in older families. I show that approximately thirty percent of households whose head is close to retirement have done little or no planning for retirement. I also show that planning is shaped by the experience of other individuals: individuals learn to plan for retirement from older siblings. They also learn from the experience of old parents. In particular, unpleasant events, such as financial difficulties and health shocks at the end of life, induce people to plan. Households whose head does not plan have substantially lower wealth holdings than households whose head has made some retirement plans. They also hold different portfolios and, most specifically, they are less likely to hold stocks. Those who do not plan are also more likely to face difficulties in retirement.

The paper is organized as follows: in Section 2, I describe some empirical findings about savings and consumption. In Sections 3 and 4, I describe the empirical evidence on savings and portfolio choice and the effects of planning for retirement. In Section 5, I examine the consequences of not planning for retirement. In Section 6, I discuss my findings. In Section 7, I provide some brief conclusions.

2. Some Facts

The empirical evidence on savings presents some challenges to existing models of saving behavior. Browning and Lusardi (1996) present a review of the work in this literature and show that there are several unresolved issues about savings. Many works emphasize that there is huge heterogeneity in household saving behavior, and much more than can be justified in traditional models of saving. For example, Diamond and Hausman (1984), Poterba, Venti and Wise (1994), Venti and Wise (1997, 1998), and Lusardi (1999) all show that there are vast

disparities in wealth holdings and that those disparities persist even when looking among households of similar age and economic status. Not only do wealth holdings vary widely across households, but also many families report low savings even close to retirement. Diamond and Hausman (1984) were among the first to point out that a large fraction of households arrive at retirement with as little as $1,500 (in 1966 dollars). Other studies, such as Hubbard, Skinner and Zeldes (1995) and Bernheim and Scholz (1993) note that wealth holdings are particularly low for households whose head has low education.

As mentioned before, in this paper I use data from the HRS, a sample of U.S. households whose respondents were born between 1931 and 1941, to shed light on savings of households whose head is only a few years away from retirement. This survey provides detailed information on wealth and the retirement process, with a focus on health, labor markets, and economic and psycho-social factors, and provides the researcher with an unusually rich set of information with which to analyze household behavior.[4] Below, I report some simple descriptive statistics about household wealth holdings.

In Table 1, I consider the sample of households in the first wave of the HRS, exclude those where respondents are partially or fully retired, and those with respondents younger than 50 or older than 61. I report two measures of wealth: liquid and total net worth. The first measure of wealth is defined as the sum of checking and saving accounts, bonds, stocks, and other assets, minus short-term debt. The second measure is obtained by adding housing equity, other real estate, IRAs and Keoghs, business equity, and vehicles to financial wealth. To look more closely at major components of wealth, I also report the amount of wealth in retirement assets (IRAs and Keoghs) and housing equity. The data refer to the year 1992, and all values are in 1992 dollars. Since the HRS oversamples black and Hispanic households as well as households from Florida, I use household weights to obtain statistics representative of the population.

[4]There are several advantages in using this data set. First, there is much information about households which is not present in other U.S. data sets, as will be explained later. Second, since it concentrates on a specific cohort, the sample size is much bigger than in other data sets that cover the entire population. Third, the implementation of new techniques to elicit information about wealth has led to rather accurate wealth reports. For a thorough examination of the HRS, the quality of the data, and comparisons with other data sets, see Juster and Smith (1997) and Smith (1995). Also, see the data appendix.

The first important feature to note is that there is a tremendous amount of heterogeneity in household wealth holdings, even when looking at a narrow age group in the population. While some households have amassed large amounts of wealth, others have accumulated very little. Those differences persist even when accounting for household characteristics such as income, race, and education.[5] It is also apparent from Table 1 that housing is an important asset in many household portfolios, and many have little in anything else than their home equity. It is an issue, however, whether households use housing equity to support their consumption at retirement. A series of studies show that there is a limited downsizing of housing after retirement and a limited use of contracts such as reverse mortgages.[6] Retirement assets, such as IRAs, have been one of the fastest growing components of household wealth in the 1980s and 1990s. However, ownership and the amount invested in these tax-favored assets are heterogeneous across the sample.[7]

A second important feature to note in Table 1 is the proportion of households that arrive close to retirement with little or no wealth. A quarter of the households in the sample have less than $30,000 in total net worth. To put values in perspective, this amount would buy an annuity of approximately $2,200 a year. While total net worth is only a partial measure of accumulation, since it does not include wealth in Social Security and pensions, it is hard to borrow against retirement assets, and it is not obvious how households with only $850 (the first decile of the distribution of net worth) can offset potential shocks to income, health, or family circumstances, and how quickly they can accumulate a stock of wealth in the remaining years up to retirement.

Not only is wealth very heterogeneous, but also portfolios vary widely across households. Retirement assets, such as IRAs and Keoghs, are concentrated among households whose head has at least a high school education. Only a fraction of the population hold stocks

[5]See Smith (1995) and Lusardi (1999).

[6]See, among others, Venti and Wise (1990, 1991), and Sheiner and Weil (1992).

[7]A substantial portion of total net worth is also accounted for by business equity. Even though the households owning (one or more) businesses account for only 15 percent of the population in this sample, their wealth holdings are large. The conditional mean and median are $75,000 and $281,620 respectively. Again, it is not clear that business equity characterizes accumulation for retirement, since in this case the retirement motive is mixed with the enterprise motive.

and bonds, and those assets are also heavily concentrated among households whose head has a high school education. Most importantly, the less educated respondents are not only less likely to hold stocks and bonds, but they also do not hold basic assets, such as saving and checking accounts.

Note that a sizable proportion of households, i.e., 15%, do not hold any of the conventional financial assets (i.e., checking and saving accounts, certificates of deposits and Treasury bills, bonds, stocks, IRAs and Keoghs, and other assets). In fact, the composition of many portfolios is rather naive: as many as 32% have all of their financial wealth in one asset (the proportion goes to 47% if we consider households with zero or only one asset). A large fraction of households (49%) do not hold any of the assets that have delivered relatively high returns throughout the years (not only real estate and businesses, but also bonds and stocks) and more than 50% of the families in this age group do not hold any stocks or IRAs.

A simple way of evaluating household patterns of accumulation is provided in Warshawsky and Ameriks (2000). They perform the experiment of imputing the current wealth holdings of U.S. households, as reported in the Survey of Consumer Finances (SCF), into one of the most popular financial planners: Quicken Financial Planner. According to the predictions of the planner, they find that about half of working middle class American households will not have fully funded retirements. Some will actually run out of resources very shortly after retirement. These findings are concentrated on specific groups of households, in particular those with little education and the ones close to retirement (age 50 or more as in the HRS sample). Additionally, one of the problems that these authors emphasize is that many households have limited resources until late in their life-cycle or start saving very late, up to the point where it is not possible to do much accumulation.

Similar findings are reported by Moore and Mitchell (2000). They use data from the HRS to determine how much wealth (including Social Security and pensions) older households have, and how much they would need to save if they wished to preserve consumption levels after retirement. They conclude that the majority of older households will not be able to maintain current levels of consumption into retirement without additional saving. In particular, the median HRS household would still have to save an additional 16% of income to smooth consumption

after retirement.

The empirical works on consumption suggest that these predictions may turn out to be accurate. There is a mounting set of evidence that consumption falls sharply at retirement, and much more than can be rationalized by explanations consistent with traditional models of saving, and/or extensions that take non-separabilities between consumption and leisure into account (such as, for example, the costs of going to work). In an early study, Hamermesh (1984) reports that consumption by white married couples early in retirement exceeds by 14% the income that their financial, pension, and Social Security wealth can generate. Thus, resources available to these retirees are insufficient to allow them to sustain the level of real consumption. As the author shows, both cross-sectional and longitudinal data demonstrate that households respond to the insufficiency of resources by reducing their consumption as they age.[8]

Using more recent data, Bernheim, Skinner, and Weinberg (1997) again document that consumption exhibits a sharp drop at the time of retirement and an even more pronounced decline post-retirement. Most importantly, they find a strong negative correlation between retirement savings and the magnitude of the consumption drop; consumption falls sharply for those with little wealth. They also look into the composition of consumption and find little evidence that relative tastes for leisure, home production, or work-related expenses can rationalize the lack of consumption smoothing.

3.1 Costs of Planning

How can we explain the huge heterogeneity in savings that we observe empirically? Households may differ substantially in the way they implement saving plans because they face different costs of planning and different ways of learning. There is some indirect evidence on these issues both in the SCF and in the HRS. In the 1995 SCF respondents are asked to report what sort of information they use to make decisions about saving and investment (see Table 2a). To be consistent with the HRS sample I use in the empirical work, I examined a limited age group in the SCF (the ones who are 51-61 years old).

Households rely on several sources of information. However, respondents most often

[8]Mariger (1987), Hausman and Paquette (1987), Banks, Blundell and Tanner (1998) report additional evidence of a decline in consumption at retirement.

report that they rely on planners or brokers, read magazines and newspapers, "call around", and rely on relatives and friends.[9] Households whose head has high education (more than high school education) rely most often on planners and brokers, and also make use of accountants and lawyers. They also rely more often than low education respondents on magazines and newspapers. Most importantly, both high and low education groups rely on relatives and friends to make decisions about saving and investment.

The effort of search is not only influenced by how hard the task is but also by how unpleasant it is. First, obtaining and evaluating information can be an unpleasant task for consumers with little financial literacy. Second, retirement is not a pleasant event for every individual. In fact, some may view it as a time when one is unproductive, or lonely, or unhealthy. There is some evidence in support of this hypothesis in the HRS.

Table 2b reports the proportion of respondents in the HRS sample according to how they evaluate a list of facts about retirement. Note that for a sizable fraction of respondents retirement is not necessarily an event to look for. Most importantly, the table indicates that health problems represent a worry for many respondents, and I will try to use this insight to explain household planning behavior, as will be explained in Sections 4.1 and 4.3.

3.2 Evidence on Planning

A simple way to evaluate how households obey the simple predictions of the life cycle model is to look directly at the evidence on planning. Little work has been done on this topic so far, but a few papers offer suggestions. Yakoboski and Dickemper (1997) examine data from the 1997 Retirement Confidence Survey, which collected information on American workers's retirement planning and saving behavior. They report that a large proportion of workers have done little or no planning for retirement; only 36% of current workers have tried to determine how much they need to save to fund a comfortable retirement.[10] An important feature, however,

[9]The figures reported in Table 2a are the proportion of respondents who have indicated the specific source of information listed in the first column (all figures are weighted to take account of oversampling of rich households in the SCF). Since multiples answers are possible, the proportions sum to more than one. The remaining categories mentioned by respondents refer to not saving or investing, not getting advice, using other sources such as investment seminars and clubs, material from work, television, etc.

[10] While older workers are more likely to report a retirement saving goal, only 44% of pre-boomers have done a retirement saving needs calculation as compared with 32% of late boomers. See Yakoboski and Dickemper

is that many of the workers who have done the calculation could not give a figure when asked. Thus, according to this survey, as many as 3/4 of workers have little idea regarding how much money they need to accumulate for retirement.

When questioned why the calculation was not attempted, many reported they could not save more or retirement was too distant to know what would be needed. Interestingly, a significant proportion reported they could not find the time and also that they were afraid of the answer. The other answers were that the process is either too complicated or they did not know how to find help to do it.

Benartzi and Thaler (1999) examine data on retirement planning of recently hired (non-faculty) staff employees at the University of Southern California. They report that most of the respondents did not read other material than the one provided by their pension fund company and did not consult with anyone other than family members.

There are many books on financial planning and on saving for retirement, and it is instructive to read their suggestions. Many explain basic concepts, such as compound interest, risk diversification, etc. While sources of advice, to implement the strategies suggested in these books, individuals would still need to collect additional information before making investment decisions.[11] It is also useful to note the common "mistakes" reported in these books concerning how people manage their personal finances. For example, in her list of common mistakes, Glink (1999) places at the very top the tendency of people to "put it off 'till tomorrow". The Ernst & Young's Retirement Planning Guide (1997) lists the major obstacles to a secure retirement and placed procrastination in third place in order of importance, after inflation and taxes.

The HRS provides some information on indicators of planning. In section K on "Retirement Plans", respondents are asked to report how much they have thought about retirement. Respondents can only choose across four different answers which are reported at

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(1997) for detail. These figures are close to my findings in the HRS.

[11]There is much information on retirement planning on the Internet. As reported by B. O'Brian in a Wall Street Journal article on February 7, 2000, a simple search on the web turned up 933 sites with retirement calculators. The problem of using that information, however, is that there are major differences in the suggestions offered by the most popular retirement planners.

the top of Table 3.[12] The first feature to notice is that approximately one third of respondents in this sample have "hardly thought" about retirement. This is a large percentage, in particular considering the age of the respondents. Many respondents are only a few years away from retirement and the event is imminent.

Since the wording of the question under consideration is rather generic and can lead to several interpretations, I also report the characteristics of respondents across different answer modes (the figures are the fraction of households in each group). Consistent with the fact that education and financial literacy can be more conducive to planning (search costs are lower), respondents who do not think about retirement are more likely to have low education. Not only is their education low, but also the education of their family of origin tends to be low (father or mother do not have a high school education). Individuals who have not thought about retirement are also less likely to be married. Additionally, they are less likely to have older siblings (older than 62) that could provide some guidance or experience on what happens after retirement.

The bottom three rows of the table report the average scores on the measures of cognitive abilities available in the HRS: 1) ability to think quickly (the score goes from 1 to 5, where 1 means excellent and 5 poor); 2) memory, which measures the numbers of words one person is able to recall in two subsequent trials (the total number of words is 20, and the total score therefore goes from 0 to 40); and 3) analogy, which measures the ability to report how some things are alike (there are 7 questions totaling 2 points each for a total score of 14). Overall the people who have not thought about retirement receive the worst average score on all questions. In particular, the question about analogy is where they get a score that is significantly lower than that of other groups of respondents. This is relevant, since this is one characteristic that can be most useful as a skill for planning for the future.

3.3 Planning and Household Savings

Do households whose head does not plan accumulate less wealth than households whose head does some planning? In Table 4, I report a simple classification of total net worth

[12]The sample is smaller in this case (from 5,292 observations it goes to 4,489 observations) since respondents who report they will never retire completely are not asked to report how much they have thought about retirement.

across how much respondents have thought about retirement. Respondents who have "hardly" thought about retirement stand out as a very different group than those who have thought "a little" or "a lot" about retirement; their median wealth holdings are almost half the size of those who have thought about retirement and many households in this group report negative or little savings.[13]

It is not easy to interpret this evidence since there are many reasons why households have low wealth holdings close to retirement and the variable measuring planning could simply be a proxy for economic circumstance or for preferences. There are several different explanations for low accumulation that could be consistent with the life-cycle model or an enlarged version of the intertemporal optimization model of saving. For example, households may rely on pensions or Social Security. They may have little savings because they have low lifetime resources or have been hit by many shocks. In addition, they may accumulate little because they do not face high risks (for example, unemployment or health risks), or they have formal or informal insurance (through a network of families and friends) against adverse events. They may also expect to receive inheritances, or to enjoy big capital gains on their assets. In addition, they may expect a short retirement period, due perhaps to short longevity, or they may simply be impatient and discount the future heavily.

This long but still partial list of explanations serves to emphasize that it is very hard to interpret the evidence on the lack of savings, and, in particular, that one needs much data about individual circumstances to address this issue. In the following section, I describe the richness of information provided by the HRS and the many determinants of savings I can account for when analyzing household behavior.

3.4 The Determinants of Household Savings

A criticism often raised in the empirical work on saving is that researchers use a very restrictive version of the life-cycle model and it becomes perhaps too easy to find evidence that

[13]There are also a non-trivial number of respondents in the sample who plan to never retire completely. This group is rather heterogeneous in terms of wealth holdings; some respondents report a high amount of wealth and others very little wealth. Approximately 30 percent of this group is accounted for by the self-employed, thus many will be excluded in the final sample because many of the questions about retirement and future expectations are not asked of these respondents.

does not support the predictions of the model. One of the advantages of using the HRS is that it does provide a lot of information on individual respondents. This allows the researcher to examine many of the reasons for household behavior towards savings.

Below, I briefly examine four important sets of information that can help in gaining insights into household saving behavior and in explaining the differences in patterns of accumulation:

1) Pension and Social Security wealth: Using the HRS, it is possible to link to the Social Security records of respondents and use that information to calculate Social Security wealth.[14] However, not every household has given authorization to access their Social Security records, and I have used imputed Social Security wealth data for those households.[15] It is also possible to construct pension wealth from the self-reported pension information.[16] Thus, I can rely on a complete measure of household accumulation when examining saving behavior.

2) Past economic circumstances: The HRS provides information on past economic circumstances, such as past shocks. Respondents are asked whether they have been unemployed in the past. In addition, they are asked to report whether they faced any episodes that made it difficult to meet financial needs. There are also positive shocks in the past that affect household wealth, such as receiving inheritances, money from insurance settlements, or money from relatives and friends. These positive and negative shocks can be another important explanation for the wide differences in wealth holdings that we observe empirically.

3) Expectations about the future: In addition to the past, it is important to have information about future resources. In the HRS, respondents are asked to report the probabilities that home prices will increase more than the increase in the general price level, and that Social Security will become less generous in the future. Respondents are also asked to

[14]Special authorization is needed to access Social Security records. For detail on the construction of Social Security wealth, see Mitchell, Olson and Steinmeier (2000).

[15]I thank Al Gustman and Tom Steinmeier for providing the imputed Social Security wealth data. For more information on pension and Social Security wealth in the HRS, see Gustman and Steinmeier (1999).

[16]For a detailed explanation of the construction of the pension data, see Venti and Wise (1997).

report the probability of living up to 75 and 85.[17] In addition, respondents report the probability they will have to give major financial help to family members in the next 10 years.

Most importantly, respondents are asked about the probability of losing their job next year. I use this variable to construct a measure of income variation.[18] If households have a precautionary saving motive, they care not only about the decline in income at retirement, but also about risk, which can be measured empirically by the variance of earnings. Precautionary motives can be important and are another potential explanation for the lack of a long planning horizon and the presence of what can resemble a high discount rate for the future.

4) Preferences: Another, not yet well explored dimension along which households can differ, is preferences. While it is very hard to measure individual preferences, it is also the case that parameters, such as the coefficient of risk aversion or the rate of time preference, play a pivotal role in many models of intertemporal optimization. There is a way to infer this information in the HRS, and therefore to account for variation in preferences when explaining household wealth holdings. In particular, I use the analysis provided in Barsky, Kimball, Juster, and Shapiro (1997) on willingness to take gambles to construct proxies for the coefficient of risk aversion. I also use data on smoking, drinking, caring about one's health, and exercising regularly to proxy for the rate of time preference. Demographic variables that could be related to the rate of time preference, such as education, race, and country of origin, are also included in the empirical estimation.

In the empirical work reported below, I examine household behavior by considering several regressions of household savings (and assets ownership) on this extensive set of variables. This can be seen as a reduced form equation of a saving model, but also as a way to assess how well we can explain differences across households by using this rich set of information about households. In addition, and most importantly, I can examine whether, after accounting for many of the reasons that can explain savings, lack of planning plays any role in explaining the differences across households. Since lack of planning is the result of choice, I

[17] An excellent examination of subjective probabilities in the HRS is provided in Hurd and McGarry (1995).

[18] See, also, Lusardi (1998).

cannot simply run OLS regressions, but have to instrument for this variable.

4. Empirical Estimates

4.1 Household Savings

As illustrated in Tables 3 and 4, respondents who have "hardly thought" about retirement represent a large group of the population and they stand out from the others in terms of their characteristics. I have thus defined a simple planning dummy that takes the value one if respondents have indicated they hardly thought about retirement.

Thinking about retirement is one indicator for retirement planning, but there is more information in the HRS concerning planning. I use this information to construct an index that measures a series of activities toward retirement planning. The method I follow in constructing this index is as follows: I assign points to respondents for how much they have thought about retirement (the ones who have "hardly thought about retirement" get 1 point, while the ones that have thought a lot about retirement get 4 points), and I add points for each additional planning activity. For example, I add a point if respondents have asked the Social Security administration to calculate their retirement benefits and another point if they have ever attended a retirement seminar.[19] In the empirical regressions reported below I use two indicators for retirement planning: the index I just described and the simple dummy variable for respondents who report they have hardly thought about retirement. In this way, I can examine different proxies for planning and also check upon the robustness of the empirical results.

As mentioned before, I cannot simply regress savings (or asset ownership) on whether households have planned for retirement since both variables can be the result of choice. Additionally, the variables measuring planning are themselves proxies and may be affected by much measurement error, perhaps resulting from the ambiguity in interpreting the question and/or mis-classification in picking the appropriate answer. I address these problems by performing Instrumental Variables (IV) estimation.

As mentioned earlier, search and psychological costs affect planning. I use the age of siblings to capture these costs. One simple (and perhaps inexpensive) way of learning is to rely

[19]Even though it is arbitrary to assign the same weight to different retirement activities, it is very useful to concentrate all the information on retirement planning into one variable.

on siblings, in particular older siblings that already have experience with retirement and savings.[20] In Table 3, there is evidence that respondents with older siblings are more likely to think about retirement. There is also evidence from the SCF that relatives and friends are often consulted to make financial decisions. Since the order of birth may capture specific personality features (some have argued that a first-born is less likely to rebel), and there can be interaction and learning from other members of the family, I have also used the age of the siblings of the spouse. This could also avoid the problem of genetic transmission of preferences, at least as long as preferences of siblings and their spouses are not perfectly correlated.[21]

The instrument I use is the difference between the age of the oldest sibling and the age of the respondent (for respondents without siblings or with only younger siblings this difference is set to zero). I also use the difference squared to capture potential non-linearities. Note that the age difference is not small. For respondents with older siblings, the difference is six years on average. Additionally, many households have siblings that have passed the retirement age (siblings older than 62). Thus, the potential for learning is present. I also use the number of older siblings to capture the potential for interaction and learning. Since the number of siblings could proxy for inheritances, I add among the set of controls in the first stage regression a variable for whether at least one parent is still alive.

In Table 5 (column 1), I report the results of regressing the simple dummy for not thinking about retirement on these variables. The age difference is a good predictor for planning; respondents with older siblings are less likely to report they have not thought about retirement.

The HRS reports information on the financial situation of siblings and whether it is better or worse than the financial situation of the respondent. Respondents are more likely to plan for retirement if the financial situation of older siblings is worse than their current financial situation

[20]I thank David Laibson for providing many suggestions on the instrument set.

[21]One might argue that respondents with older siblings have also older parents. There is some (suggestive) evidence on the literature on savings that households who were born before the Great Depression have different preferences than younger generations. In particular, they are supposed to be more thrifty and alert to risk. Those households could have passed these types of preferences down to their children. As discussed in Browning and Lusardi (1996), this finding is still very controversial. Additionally, given the relatively narrow age range of respondents, it is doubtful that differences in preferences across adjacent generations are so large. Furthermore, given the way I have defined it, respondents could have older siblings simply because the siblings of the spouse are older.

(see Table 5, column 2). Thus, older siblings can not only provide information about retirement but one could also learn from the mistakes of others. In addition, witnessing the financial difficulties of siblings may perhaps diminish the reluctance to undertake an unpleasant task. These variables remain significant even when accounting for the large set of controls in the first stage regression.

One might argue that households save to help out their older siblings (particularly the ones in bad financial conditions). However, in the first stage, I account for the probability that households will have to give financial help to family members in the future. Thus, these variables are not likely to proxy for this additional motive for saving.

To pursue this argument further, apart from the experience of siblings, agents can learn from their own past experiences. There is information in the HRS about whether "in the last 20 years there were any really large expenses or events that have made it very difficult to meet your financial goals." Respondents who experienced those past shocks are much more likely to plan for retirement (Table 5, column 3). Past events can provide valuable information and, in particular, can provide incentives for putting effort in an unpleasant task. Note, however, that I cannot use past shocks as instruments. Past events can have a direct effect on wealth. Households that experienced past shocks could have suffered a substantial drain of resources and may therefore display lower wealth holdings than households who did not experience those shocks. Thus, past shocks are also used as controls in the first stage regressions.[22]

As mentioned before, there are costs associated with the pain of dealing with an unpleasant event. As reported in Table 2b, health is the concern cited most often by respondents. One way to capture these costs is to use information on parents. Respondents may be afraid of being unhealthy after retirement if their parents have been unhealthy. Not only can illnesses be genetically transmitted, but also the health problems of a parent may be very painful experiences (as the above past shocks). In the HRS, I have information about whether the mother/father of the respondent (and spouse) had an illness lasting 3 months or more during

[22]It is useful to note that in the regressions of household savings on the large set of variables mentioned before, the empirical estimates for past shocks become more negative when accounting for whether households have thought about retirement.

the last year she/he was alive, and whether they ever lived in nursing homes. The health experience of parents while providing worries and making perhaps planning more unpleasant can also provide information on the costs one may incur after retirement. Thus, the sign of these variables is ambiguous ex-ante. The empirical evidence shows that respondents whose parents suffered health problems before dying or lived in nursing homes are more likely to think about retirement. As in the case of siblings and past shocks, painful events may induce individuals to put effort into planning for retirement. Since in the first stage regression I account for the current health status of the respondent and the subjective probability of living up to 75, these variables are not likely to account for individual longevity.

The extensive information about siblings and parents provided in the HRS has predictive power in explaining the lack of thinking about retirement (as measured by the dummy for the ones who have "hardly thought" about retirement) and plans for retirement (as measured by the index variable), even after accounting for all the other economic variables listed before. The predictive power of the instruments is not very high (the R^2 is only 1%), but the F-test on the excluded instruments rejects strongly the hypothesis that the instruments are not jointly significant (the F-value is always bigger than 2, and sometimes much bigger, taking the value of 6 in large instrument sets).[23] To increase the predictive power, I have used additional information about siblings, such as whether siblings are female, have a house and whether they work. Additional demographic information about siblings (whether they are married, have children, etc.) has been used to perform checks and sensitivity analysis using different sets of instruments. The instruments appear to be valid; the test of over-identifying restrictions is not rejected (see last row of Table 6). Even though this test may have low power, it reports additional evidence in favor of the chosen specification and the set of instruments.

I perform the empirical estimation using two measures of savings: total net worth and financial net worth. In the latter I exclude housing equity (and other real estates), since it is not clear that the investment in housing is to support consumption at retirement. I also exclude vehicles, and business equity. In Table 6, I report the results of regressing total and financial net

[23] See Staiger and Stock (1997) and Bound, Jaeger and Baker (1995).

worth over permanent income[24] on a large set of explanatory variables and the indicator for lack of retirement planning (the dummy for not thinking about retirement is used in columns 2 and 3, the index for retirement planning is used in columns 4 and 5).[25]

Among the set of explanatory variables, I consider not only age and age squared to capture the hump-shaped profile of wealth holdings, but also some simple demographics, such as the total number of children, and the number of children still living at home, gender, race, country of birth, marital status, and education that can account for heterogeneity in tastes. I also include dummies for regions of residence.[26] Permanent income is included among the regressors to account for non-homothetic preferences. I also account for health status, past shocks, preferences (risk aversion and impatience) and expectations about the future using the variables that I explained in the previous section. Additionally, I account for both Social Security and pension wealth (these variables, as the left-hand side variable, are divided by permanent income).

As emphasized in Browning and Lusardi (1996), there are other motives to save apart from providing for retirement. Households may save to leave a bequest to future generations, and I account for this motive by using information on the intentions of leaving bequests to heirs. Additionally, I consider a precautionary saving motive and proxy for it using the subjective variance of earnings risk. I also account for the fact that households accumulate little because they can rely on help from relatives and friends in case they run into severe financial difficulties in the future. As mentioned before, I consider the possibility of receiving bequests in the future by using a dummy for whether at least one parent is alive, and I also account for the probability of giving financial help to family members in the future.

Many of these variables play a role in explaining household savings. Households whose head has a high education have higher savings. Married couples have high savings, while

[24]Permanent income is constructed by regressing total household income on a set of demographics, firm characteristics, occupation and education dummies and those dummies interacted with age, and subjective expectations of income changes in the future.

[25]See the description of the final sample in the data appendix.

[26]For brevity, the estimates of these demographic variables are not reported, but are briefly discussed in the text.

children have a depressing effect on wealth. Households who experienced negative shocks in the past end up having lower wealth, while receiving inheritances or other transfers leads to higher savings. Households with a bequest motive accumulate more, while those who are impatient accumulate less. An interesting result from the regression is that households who have a large pension accumulate more rather than less wealth,[27] showing that households who have much in retirement assets also have more in other forms of accumulation.

The most important result is that households who do not plan for retirement end up having much lower savings than households who have thought (a little or a lot) about retirement. The dummy for lack of planning is negative and statistically significant. The index for planning shows a similar effect. Respondents who have taken steps toward retirement planning accumulate more wealth. Thus, planning continues to have an effect, even after accounting for many of the variables that can explain savings. The estimates indicate very large effects. Respondents that do not plan have approximately 100% less savings than respondents that have done some planning. Even though the estimates are not very precise and may suffer from the problem of having weak instruments, they show that lack of planning for retirement is an important determinant of the low wealth holdings of many American households.

4.2 Robustness and Sensitivity Checks

I have performed several checks on the empirical specification and the chosen instruments. First, I have considered different measures of accumulation. I have experimented with using a measure of financial net worth that includes other real estate, and I have examined the effects of including and excluding business equity. Results do not change and I always obtain that planning has a significant effect on every chosen measure of accumulation.

Second, I have experimented with different sets of instruments. I have used as instruments only the age difference between the oldest sibling and the respondent and some characteristics of the siblings (gender, marital status, whether they have children, etc). One potential concern of the previous instrument set is that parents may compensate the children in worse financial conditions by leaving larger bequests. While there is little evidence that bequests

[27]Similar results are reported by Gustman and Steinmeier (1999), who use the HRS pension data from the Pension Provider data set.

are split unequally, it is worth investigating whether results change when the financial condition of siblings is not included in the set of instruments.

I have also excluded the information about the parents. One could argue that health shocks create a drain of resources and could proxy for reduced inheritances. There is not enough information in the HRS to disentangle whether parents were covered by insurance and whether they have a bequest motive. Additionally, it is well known that health and wealth are highly correlated, and some of this correlation may simply be due to unobserved differences in time preference: those who invest in health also save for the future. Healthy parents are also the ones most likely to place a high value on the future and to save at an above average rate. This tendency to save could have been passed down to children, along with attitudes about health. Hence, parental health may affect savings directly. While my instruments (being in a hospital or nursing home before dying) may capture more than general health, they may still suffer from the above mentioned problem. Thus, I have experimented with different sets of instruments that include and exclude the information about parents. I should note, however, that the over-identification test does not indicate that the instruments used in Table 7 are invalid.

The set of instruments has less predictive power than the one used before. However, estimates do not change considerably, even though they are statistically significant only at the 10% level. I have also included among the regressors additional indicators for family resources, such as the education of the family of origin. Results are not affected. Additionally, I have used as an index of retirement planning the answers to how much respondents have thought about retirement. Thus, I do not consider attending retirement seminars and asking the SS to calculate retirement benefits. Results do not change substantially.[28]

4.3 Household Portfolio Choice

Portfolio choice can reveal a great deal about household behavior, and it is here that we may be able to differentiate clearly among different models of behavior. It is well known that even though returns on stocks have outperformed bonds, only a relatively small fraction of households invest in stocks. In fact, an important and unresolved puzzle is why so few

[28]For brevity, estimates are not reported but are available from the author upon request.

households hold stocks.[29] Additionally, as mentioned before, many household portfolios seem rather unsophisticated. Similar evidence is provided when looking at how individuals choose to invest their retirement assets in defined contribution plans. Benartzi and Thaler (2001) find evidence of very naive diversification strategies. Many participants in defined contribution saving plans simply divide their contributions evenly across the funds offered by the plan. If, as mentioned before, much effort has to be exerted to obtain information about complex investment assets, such as stocks, agents facing high costs will be less likely to invest in those assets.

The dependent variable in the regressions is now a dummy for whether households hold stocks. As for the previous regressions on household savings, I have considered a large set of controls that can proxy for both household resources and preferences that can explain stock-ownership. In these regressions, rather than considering a measure of total pension wealth, I distinguish among those who have defined contributions, defined benefits, and other types of pensions. Respondents with defined contributions can usually choose how to invest their pension assets, and this may also affect the allocation of their non-pension assets. Since many transaction costs can be fixed, I also control for other gross financial assets (i.e., total financial assets minus the amount invested in stocks), and financial assets squared. As reported before, financial wealth holdings are so small for many households that it is unlikely they invest these amounts in stocks.

As before, I use the age difference between respondents and older siblings and dummies for the financial status of siblings and health status of parents to capture the costs of planning and the potentials for learning. Unfortunately, there is no information in the HRS on the portfolios of siblings or of parents. Chiteji and Stafford (1999) report evidence that the holdings of stocks among certain groups of the population, such as African Americans, is strongly influenced by whether their family of origin held stocks. I will proxy for the potential learning from the family of origin by using information on whether the financial condition of parents is good or poor. It is very hard to find high predictive power for the instruments given the large set

[29]See, among others, Haliassos and Bertaut (1995).

of controls used in the regression. To increase the predictive power, in particular for the index of retirement planning, I added a dummy for whether respondents work in a small firm. The lower degree of interaction and the decreased possibilities of undertaking retirement activities (such as attending retirement seminars) should increase the costs of planning. The instrument set seems valid. The test of over-identifying restrictions is not rejected (see last row of Table 7).

A parsimonious specification for stock ownership is reported in Table 7. Even though not reported, in addition to the variables listed in Table 7, I have accounted for age, gender, race, country of birth, marital status, number of children, education, and region of residence. The estimates I obtain are consistent with other work on stock-ownership.[30] For example, households with high education and permanent income are more likely to invest in stocks. Blacks are much less likely to invest in stocks. Respondents reporting excellent or good health are more likely to invest in stocks. The ones with defined contribution pensions are more likely to invest in stocks. Gross financial assets also affects stock ownership.

The most relevant result, however, is that even after controlling for many factors that can explain stock ownership, lack of planning is a strong determinant of portfolio choice. Both the dummy for the lack of planning and the index for retirement activities indicate that households who plan for retirement are more likely to hold stocks in their portfolios than households who did little or no planning.

These results are consistent with the evidence provided in Munnell, Sunden and Taylor (2001) concerning participation and contribution to 401(k) plans. They report that a short planning horizon is the most important variable in explaining the participation decision. Planning horizons also affect the amounts workers contribute to the plan; a short planning horizon reduces the contribution rate by roughly 1 percentage point. I plan to expand my research in this direction and examine whether and how planning costs affect holding and investment in retirement assets, such as IRAs and Keogh plans.

5. The Consequences of Planning: Evidence from Retirees

The previous estimates show that, even accounting for many determinants of savings,

[30] See Haliassos and Bertaut (1995) and Heaton and Lucas (2000).

individuals that do not plan end up accumulating less wealth than individuals who plan for retirement. This could be the result of low saving rates as well as different portfolio choices. Does this fact have consequences? While planning is found to affect private wealth and portfolio choice, it could well be that household who do not plan still manage a comfortable retirement, for example because there are variables I have not controlled for (help from children, other sources of support, etc.), or because it is hard to measure pension and Social Security accurately, or because the specification of preferences is not accurate.[31]

However, as mentioned before, there is much evidence that consumption falls sharply at retirement, and much more than can be rationalized by explanations consistent with traditional models of saving. Most importantly, Bernheim, Skinner, and Weinberg (1997) show that the drop in consumption is much sharper for the households which arrive at retirement with little wealth. As the authors report: "our results appear to suggest that on average individuals who arrive at retirement with few resources experience a "surprise"—they take stock of their finances only to discover that their resources are insufficient to maintain their accustomed standards of living, e.g. because pension income is less than expected, or because they recognize that savings will go less far than they had hoped."

There is some information in the HRS to assess the experience of households whose respondent is already (partially or fully) retired. Those respondents are also asked how much they had thought about retirement. As for the sample of non-retired respondents, a large proportion of these respondents had not thought about retirement (520 out of 1172 observations report that they had hardly thought about retirement).

Respondents are also asked to rate their retirement experience in two independent questions. In one question, they are asked to report how retirement has turned out to be and in a second question they are asked to compare retirement years to the years just before they retire (Tables 8a, b).

A simple classification across different answer modes shows that a large proportion of the respondents who have not thought about retirement (43%) rate retirement as not at all

[31]See Börsch-Supan and Stahl (1991) for an alternative characterization of preferences.

satisfying. At the other extreme, a large majority of respondents who have thought a lot about retirement (68%) rate retirement as very satisfying.

The other indicator reports similar findings. More than 54% of respondents who have not thought about retirement have rated the retirement years not as good as the years before retirement, while a much smaller fraction of respondents have rated retirement not as good if they have thought (a little or a lot) about retirement. This evidence is only suggestive, but it is again consistent with the evidence on the low amount of accumulation for non-planners provided in the previous sections. These households may indeed be likely to experience a negative "surprise" after retirement.

6. Discussion

How can we rationalize the findings reported above? A suggestion to take away from the empirical analysis is that it is too simplistic to assume that there are no costs of planning. Those costs exist and they may even be sizable for some households, for example, those with little financial literacy. In addition, not only search costs should be considered when modeling saving decisions (for example, the time spent collecting information or "calling around"), but also the psychological costs of dealing with unpleasant events.

One important question then become: How large have these costs to be to prevent so many individuals to plan for retirement? A model taken from the literature in psychology provides some challenging predictions. For agents that display hyperbolic discounting, even small costs that have to be paid immediately lead to wide regions of inaction: agents postpone actions that imply immediate costs.

As reported in much work, research on both animal and human behavior has led psychologists to posit that discount rates are not exponential, as assumed in many traditional models of saving, but rather they are hyperbolic.[32] These time preferences are associated with decreasing impatience over time. Hyperbolic agents display a relatively high degree of patience when choosing rewards to be accrued in the distant future, but are very impatient if the rewards are to be obtained in the nearby future.

[32] See the review of hyperbolic discounting in Ainslie (1992).

A useful guiding framework is the one described by O'Donoghue and Rabin (1999b).[33] As in their models, I consider for convenience quasi-hyperbolic preference
but I model explicitly the costs of planning that consumers face. Given my empirical findings, I assume there are costs in setting up a saving plan and these costs are of two types: search costs and psychological costs. Individuals have to exert effort to collect information about returns on different investment opportunities. In addition, individuals have to exert effort to overcome the pain of dealing with an unpleasant task. One can think of these costs as simply additive or, alternatively, assume that psychological costs make search costs more burdensome. The effort of setting up a saving plan is assumed to affect the interest rate that individuals can obtain on their savings (for example, because investing in stocks gives a higher expected return).

The optimization model becomes as follows:

$$U_t = v(C_t) - P(e_t) + b\sum_{i=1}^{T-t} d^i \left[v(C_{t+i}) - P(e_{t+i})\right]$$

subject to the following budget constraint:

$$A_{t+1} = (1 + r(e_t))A_t + Y_t - C_t$$

where T indicates maximum life-time, C is consumption, Y is income, A is savings and r the interest rate. Planning increases the interest rate obtained on savings but at the same time is a burden and decreases utility (P indicates the loss in utility which is a function of the effort "e" of planning). In this set up, individuals choose the optimal amount of effort by equating the costs of planning to the benefits of planning. Agents that face relatively low costs will exert high effort and obtain high returns. Additionally, for some preference specifications, these high returns lead households to save more (i.e., the substitution effect is greater than the income effect). If these conditions persist over-time (costs always remain high for certain groups of individuals), individuals with low planning costs end up accumulating higher amounts of wealth than individuals who have the same characteristics but face higher costs of planning.

It is important to highlight the differences in this model with respect to traditional models of saving. It is obvious that planning costs inhibit behavior even in traditional models. However, what is different here with respect to those models is that even small costs can have a big effect

[33] See, also, Akerlof (1991), Laibson (1997), and O'Donoghue and Rabin (1999a, 1999b).

on behavior, while costs have to be really large, for example, to prevent a life-cycle consumer to keep assets in low return securities. In this alternative model, consumers discount the immediate future at a high rate, and this high rate combined with a cost that has to be paid immediately gives rise to much inaction. In fact, contrary to the predictions of traditional models, some actions may never be taken; consumers may continue to procrastinate indefinitely and never put any effort into planning. This may be particularly relevant for behavior such as saving and portfolio choice. There are usually no deadlines or specific periods when decisions have to be made. Decisions can be made every day, but since one needs to put time and effort into it, decisions can be substantially delayed and perhaps never taken.

This model has two desirable features. First, it can rationalize why even small costs can create substantial delays in making decisions on important matters such as saving for retirement. Second, it explains another important empirical finding, i.e., the fact that people that do not plan end up having low wealth at retirement.[34]

While this framework is very promising, there are perhaps other, and even simpler, explanations. Empirical results from the macroeconomic literature on consumption has led some researchers to assume that there are two types of agents in the economy: a first type that behaves according to the predictions of the classical life- cycle-permanent income model, and a second type called "rule of thumb" consumers, that simply consume according to their current income. Empirically, the fraction of "rule of thumb" consumers in the economy has been estimated to range from 20 to 50%.[35]

One could assume that these two groups are not exogenous, but agents switch from one group to the other depending on the amount of "learning" acquired about retirement. For example, many (perhaps young consumers) start out as "rule of thumb" consumers. However, as they witness shocks to older siblings (who go through retirement) or to parents, they switch to the other group. While crude, this scheme is consistent with the fact that we do not see much

[34]If saving decisions were purely random, non-planners could end up with higher rather than lower wealth holdings than planners.

[35]See Campbell and Mankiw (1990) for the evidence on macro data and Lusardi (1996) for the evidence on micro data. See, also, the review of this work in Browning and Lusardi (1996).

saving until age 50 or so, which is also the time when older siblings start to retire and parents are more likely to experience health problems.[36]

7. Concluding Remarks

In this paper, I examine the wealth holdings of households whose head is close to retirement. Contrary to the predictions of many traditional models of saving, I find that a large share of households have not thought about retirement or made any plans for retirement. Lack of planning results in low wealth holdings and in portfolios that are less likely to contain high return assets, such as stocks.

Much research is needed to determine the reasons why households do not plan for retirement, and whether the provision of information, for example, on Social Security and pension benefits, can play a role in affecting household decision making and, ultimately, the financial security of many American households.

[36]There are, of course, alternative explanations for this finding. An important one is related to buffer-stock models of saving. People are prudent but also impatient and, on average, they hold little amounts of wealth until late in the life cycle. This model, however, does not explain why so many people do not plan, even when close to retirement, when uncertainty should be resolved. Additionally, it does not explain why planning is influenced by the experience of siblings and parents.

Data Appendix

The data used in this paper is from the first wave of the Health and Retirement Study (HRS). The HRS is a representative sample of individuals born in the year 1931-1941 (approximately 51-61 at interview), but blacks, Hispanics, and Floridians were oversampled. The individual deemed most knowledegeable about the family's assets, debts, and retirement planning was asked questions on housing, wealth, and income.

One distinctive feature of the HRS is the attention paid to expectations about future events. Economic models of household behavior almost always include a significant role for these variables, but not much information is provided in many commonly used data sets. The HRS includes a battery of questions about subjective probabilities concerning health, longevity, home prices, changes in Social Security, and some macroeconomic variables such as inflation and recessions. A second innovation of the HRS is the use of bracketing or unfolding techniques to reduce the size of the missing data problem in the measurement of financial variables. It is well known that missing data represents a major problem in survey measurements of household wealth. In the HRS respondents who reported they did not know or refused to provide an estimate of the size of a net worth component were asked to report the value in a set of brackets. Smith (1995) and Juster and Smith (1997) report an evaluation of these techniques and a detailed description of their advantages in improving the accuracy of information about household wealth.

To construct the final sample, I deleted the respondents who are partially or fully retired at the time of the interview. I also deleted the respondents that do not report information on the variables used in the empirical estimation. The self-employed are not asked many of the questions about subjective future probabilities and they are deleted from the sample. Since the distribution of the ratio of total and financial net worth to permanent income is so wide, I trim the distribution and exclude the top and bottom 1%. The number of observations in my final sample 3,265. The following table reports simple statistics of the variables used in the empirical estimation.

Descriptive statistics of the final sample		
Variables	mean	(std.dev.)
Financial net worth/permanent income	.687	(1.211)
Total net worth/ permanent income	2.411	(2.548)
Stock ownership	.261	(.439)
Have not thought about retirement	.237	(.425)
Index of retirement activities	2.759	(1.638)
Age	54.40	(3.857)
# of children	3.105	(2.020)
# of children at home	.838	(1.032)
Male	.501	(.500)
White	.722	(.448)
Black	.180	(.384)
U.S. born	.918	(.274)
Married	.658	(.474)
Divorced	.175	(.380)
Widowed	.083	(.275)
Separated	.035	(.184)
Northeast region	.188	(.391)
Midwest region	.249	(.433)
West region	.152	(.359)
High school	.383	(.486)
Some college	.210	(.408)
College	.119	(.324)
More than college	.099	(.299)
Excellent health	.257	(.437)
Very good health	.322	(.467)
Good health	.290	(.454)
Past unemployment	.365	(.481)
Past shocks	.319	(.466)
Received inheritances	.180	(.384)
Received money from relatives	.073	(.260)
Received money from insurance settlements	.053	(.224)
High risk aversion	.654	(.476)
Moderate risk aversion	.123	(.329)
Medium risk aversion	.106	(.308)
Permanent income /1000	50.410	(20.980)
Probability to live to 75	.660	(.278)
Probability that SS will be less generous	.599	(.295)
Probability that house prices will go up	.485	(.292)

Prob to give major financial help to family	.417	(.312)

Descriptive statistics of the final sample (cont.)		
Smoker	.267	(.443)
Heavy drinker	.049	(.216)
No regular exercise	.432	(.495)
Talks to doctors about health	.783	(.412)
Bequest	.428	(.495)
Parents still alive	.685	(.464)
Variance of income	1.85	(7.155)
Can rely on help from relatives & friends	.421	(.494)
Never retire completely	0.099	(.299)
Pension wealth/permanent income	1.702	(2.435)
Social Security wealth/permanent income	2.662	(2.267)
# of observations	3,265	

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Table 1: The distribution of household wealth				
Percentile	Liquid Net Worth	IRAs & Keoghs	Housing Equity	Total Net Worth
5	-6,000	0	0	0
25	0	0	0	27,980
50	6,000	0	42,000	96,000
75	36,000	15,000	85,000	222,200
90	110,000	45,000	150,000	475,000
95	199,500	75,000	200,000	785,000
Mean (Std. Dev.)	46,171 (178,654)	16,492 (49,754)	61,613 (100,646)	227,483 (521,467)

Note: This table reports the distribution of total net worth and its components across households whose head is 50-61 years old and not fully or partially retired. The total number of observations is 5,292. All figures are weighted using survey weights.

	Table 2a: How do you make decisions about saving and investment?		
Sources	Total sample	Low educ.	High educ.
Call around	0.25	0.22	0.30
Relatives/friends	0.21	0.21	0.21
Financial planners/brokers	0.28	0.14	0.45
Accountants	0.07	0.02	0.14
Lawyers	0.03	0.02	0.04
Magazines/newspapers	0.27	0.21	0.35
Material in the mail	0.11	0.08	0.15
N. of observations	798	284	514

Note: This table reports the fraction of households who use the sources of information listed in the first column. Fractions are reported in the total sample of older respondents (50-61 years old) and across high and low education groups. The data is from the 1995 Survey of Consumer Finances and all figures are weighted using survey weights.

	Table 2b: Some unpleasant facts about retirement			
	The prospect of illness & disability	Not doing anything productive	Being bored	Missing people at work
worry a lot	0.23	0.12	0.09	0.07
worry somewhat	0.29	0.17	0.16	0.23
worry a little	0.26	0.19	0.17	0.29
worry not at all	0.22	0.52	0.58	0.41

Note: This table reports the fraction of households according to how they rated the unpleasant facts about retirement listed in the first row. The data is from the HRS and all figures are weighted using survey weights.

Table 3: Who thinks about retirement?					
	How much have you thought about retirement?				
	A Lot	Some	Little	Hardly at All	Total Sample
N. of observations	1,331	1,039	681	1,438	4,489
Characteristics					
Less than high school	0.20	0.13	0.22	0.32	0.22
High school	0.38	0.35	0.37	0.37	0.37
More than high school	0.42	0.52	0.40	0.31	0.41
Family has high education	0.45	0.53	0.46	0.40	0.45
Married	0.64	0.68	0.61	0.53	0.61
N. of siblings older than 62	0.23	0.28	0.22	0.19	0.23
Ability to think quickly	2.29	2.20	2.25	2.42	2.30
Memory	12.9	13.8	12.9	12.6	13.1
Analogy	6.32	7.00	6.40	5.80	6.35

Note: This table reports the characteristics of respondents across different responses to the question: "How much have you thought about retirement?" All figures are weighted using survey weights.

Table 4: Thinking about retirement and total net worth					
Percentile	How much have you thought about retirement?				Will never retire completely
	A lot	Some	A little	Hardly at all	
5	0	2,010	-120	-500	-3,700
25	41,300	50,500	28,500	8,800	17,575
50	116,200	128,000	92,000	60,000	95,700
75	241,000	266,800	208,000	147,000	259,000
90	437,000	474,500	485,700	346,500	745,000
95	636,500	752,000	1,009,000	613,350	1,335,000
Mean (Std. Dev.)	224,252 (504,987)	239,298 (422,639)	245,304 (638,957)	165,367 (448,924)	289,960 (630,551)
N. of obs	1,331	1,039	681	1,438	629

Note: This table reports the distribution of total net worth across different responses to the question: "How much have you thought about retirement?" In the last column, it reports the distribution of wealth for respondents who plan to never retire completely. All figures are weighted using survey weights.

Table 5: The effects of older siblings and parents on lack of planning				
	1	2	3	4
constant	0.2385 (0.0089)	0.2390 (0.0090)	0.2502 (0.0104)	0.3084 (0.0186)
age difference between the oldest sibling and the respondent	-0.0131 (0.0062)	-0.0108 (0.0064)	-0.0111 (0.0064)	-0.0122 (0.0064)
age difference squared	0.0004 (0.0003)	0.0004 (0.0003)	0.0004 (0.0003)	0.0005 (0.0003)
number of older siblings	0.0234 (0.0100)	0.0314 (0.0109)	0.0300 (0.0109)	0.0289 (0.0108)
older siblings have worse financial situation than respondent		-0.0398 (0.0191)	-0.0387 (0.0191)	-0.0383 (0.0190)
older siblings have better financial situation than respondent		-0.0168 (0.0168)	-0.0143 (0.0168)	-0.0140 (0.0167)
past shocks			-0.0333 (0.0160)	-0.0325 (0.0160)
parents lived in nursing homes before dying				-0.0624 (0.0174)
parents had an illness lasting 3 month or more before dying				-0.0507 (0.0194)
R^2	0.002	0.003	0.005	0.012

Note: This tables reports the regressions of lack of planning for retirement on the variables listed in the first column. The dependent variable is a dummy variable, which equals one when respondents report they have hardly thought about retirement.

Table 6 : Explaining household savings								
	Lack of planning dummy				Planning index			
	Total Net Worth		Financial Wealth		Total Net Worth		Financial Wealth	
	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err
constant	1.9407	6.5397	2.5168	3.3177	-2.5367	6.4063	-0.2231	3.2651
planning	**-2.3044**	**1.1005**	**-1.4086**	**0.5583**	**0.9018**	**0.4241**	**0.5584**	**0.2161**
excellent health	0.5644	0.1820	0.1862	0.0923	0.6246	0.1961	0.2244	0.0999
very good health	0.1592	0.1616	0.0808	0.0820	0.2513	0.1715	0.1379	0.0870
good health	0.1689	0.1620	0.0992	0.0822	0.2483	0.1787	0.1490	0.0911
permanent inc./1000	-0.0275	0.0074	-0.0103	0.0038	-0.0341	0.0093	-0.0144	0.0047
past unemployment	-0.1081	0.1030	0.0036	0.0523	-0.1500	0.1070	-0.0223	0.0546
past shocks	-0.5783	0.1113	-0.3149	0.0565	-0.5906	0.1159	-0.3232	0.0591
received inheritances	0.5708	0.1278	0.2061	0.0648	0.5132	0.1386	0.1701	0.0706
money from relatives	0.5673	0.1840	0.1812	0.0934	0.4626	0.2049	0.1156	0.1044
money from insurance	1.0065	0.2216	0.5459	0.1124	1.0610	0.2289	0.5796	0.1166
high risk aversion	0.0441	0.1540	-0.0779	0.0781	0.0550	0.1590	-0.0704	0.0810
medium risk aversion	0.0687	0.1881	-0.1126	0.0954	0.0584	0.1934	-0.1192	0.0985
moderate risk aversion	0.1140	0.2142	-0.0501	0.1087	0.1733	0.2310	-0.0119	0.1177
variance of income	0.0032	0.0062	0.0030	0.0032	0.0031	0.0064	0.0029	0.0033
prob. live to 75	0.2201	0.1910	0.0749	0.0969	0.1705	0.1874	0.0454	0.0955
prob. SS more gener.	-0.0846	0.1594	0.0221	0.0809	-0.1583	0.1707	-0.0238	0.0870
prob. house price up	-0.0898	0.1681	-0.1082	0.0853	-0.1190	0.1695	-0.1256	0.0864
prob. give help to fam.	0.0866	0.1534	0.0220	0.0778	0.0669	0.1583	0.0096	0.0807
bequests	0.9879	0.0980	0.2772	0.0497	0.9437	0.1063	0.2495	0.0542
can rely on help	-0.0108	0.0963	0.0104	0.0489	0.0021	0.0979	0.0181	0.0499
parent alive	-0.1351	0.1090	-0.0609	0.0553	-0.1772	0.1137	-0.0870	0.0580
smoker	-0.2991	0.1107	-0.0914	0.0561	-0.3059	0.1127	-0.0952	0.0574
heavy drinker	-0.2607	0.2234	-0.0589	0.1133	-0.3499	0.2414	-0.1150	0.1230
no regular exercise	-0.1356	0.1016	-0.0414	0.0516	-0.0917	0.1096	-0.0140	0.0559
talk to doc about health	0.1595	0.1283	0.0790	0.0651	0.1021	0.1443	0.0424	0.0735
pension/ perm income	0.0729	0.0305	0.0117	0.0155	0.0323	0.0463	-0.0138	0.0236
SS wealth/perm inc.	0.0803	0.0234	0.0118	0.0119	0.0802	0.0240	0.0118	0.0122
Adjusted R^2	0.0700		0.0100		0.0210		0.0009	
p value of overid. test	0.232		0.909		0.299		0.953	

Note: This table reports instrumental variables regressions of total and financial net worth over permanent income on the variables listed in the first column. Even though not reported, regressions include several demographic variables. Refer to the text for a complete list of the variables and a list of the instruments used in the estimation. Two indicators of planning are used in the estimation: a dummy variable, which equals one if respondents have hardly thought about retirement and an index for planning.

Table 7: Planning and stock ownership								
	Lack of planning dummy				Planning index			
	Coeff.	Std. err	Coeff.	Std. err	Coeff	Std. err	Coeff.	Std. err
constant	0.4537	0.2361	0.3757	0.2324	0.0674	0.1360	0.0291	0.1333
planning	**-0.4577**	**0.1845**	**-0.4111**	**0.1900**	**0.0812**	**0.0403**	**0.0715**	**0.0452**
excellent health	0.0906	0.0309	0.0886	0.0307	0.0846	0.0295	0.0828	0.0300
very good health	0.0861	0.0269	0.0854	0.0264	0.0837	0.0255	0.0832	0.0252
good health	0.0529	0.0268	0.0521	0.0265	0.0479	0.0253	0.0474	0.0253
past unemployment	-0.0157	0.0174	-0.0147	0.0169	-0.0175	0.0166	-0.0177	0.0161
past shocks	-0.0258	0.0183	-0.0232	0.0185	-0.0140	0.0162	-0.0129	0.0165
inheritances	0.0666	0.0211	0.0686	0.0208	0.0727	0.0199	0.0742	0.0196
high risk aversion	0.0039	0.0257	0.0028	0.0261	-0.0237	0.0236	-0.0206	0.0230
medium risk avers.	-0.0054	0.0312	-0.0066	0.0307	-0.0256	0.0309	-0.0239	0.0302
moderate risk avers.	0.0334	0.0356	0.0269	0.0361	-0.0047	0.0307	-0.0063	0.0304
permanent inc/1000	0.0027	0.0012	0.0026	0.0012	0.0023	0.0013	0.0023	0.0013
prob. live to 75	0.0095	0.0306	0.0077	0.0302	-0.0078	0.0278	-0.0074	0.0276
prob. give fin. help.	0.0028	0.0025	0.0026	0.0025	0.0037	0.0024	0.0035	0.0024
bequests	0.0377	0.0161	0.0343	0.0158	0.0363	0.0155	0.0332	0.0152
variance of income	0.0017	0.0011	0.0014	0.0011	0.0015	0.0010	0.0013	0.0010
parents are alive	-0.0019	0.0181	-0.0014	0.0178	-0.0081	0.0174	-0.0065	0.0172
smoker	-0.0221	0.0181	-0.0192	0.0177	-0.0156	0.0181	-0.0138	0.0180
heavy drinker	-0.0071	0.0363	-0.0070	0.0359	-0.0043	0.0344	-0.0048	0.0345
no regular exercise	-0.0097	0.0168	-0.0110	0.0165	-0.0100	0.0161	-0.0115	0.0159
talk doc about health	0.0112	0.0225	0.0144	0.0217	0.0226	0.0202	0.0257	0.0196
gross fin. wealth	0.0022	0.0004	0.0022	0.0004	0.0020	0.0005	0.0020	0.0005
fin. wealth sq./1000	-0.0041	0.0012	-0.0041	0.0012	-0.0040	0.0013	-0.0041	0.0013
def. benef./perm. inc			-0.0059	0.0052			-0.0077	0.0071
def. contr./perm. inc.			0.0456	0.0095			0.0444	0.0095
other pens./perm. inc			0.0043	0.0096			0.0087	0.0088
Adjusted R^2	0.0350		0.0730		0.1310		0.1520	
p value of overid test	0.4960		0.3940		0.2600		0.2010	

Note: This table reports instrumental variables regressions of stock ownership on the variables listed in the first column. Even though not reported, regressions include many demographic variables. Refer to the text for a complete list of the variables and a list of the instruments used in the estimation. Two indicators of planning are used in the estimation: a dummy variable which equals one if respondents have hardly thought about retirement and an index for planning.

Table 8a: Retirement and planning				
How has your retirement turned out to be?	How much have you thought about retirement?			
	A lot	Some	A little	Hardly at all
Very satisfying	0.68	0.50	0.35	0.22
Moderately satisfying	0.28	0.41	0.46	0.35
Not at all satisfying	0.04	0.09	0.19	0.43
N. of observations	343	217	92	520

Table 8b: Retirement and planning				
How is your retirement compared to the years just before you retired?	How much have you thought about retirement?			
	A lot	Some	A little	Hardly at all
Better	0.57	0.44	0.35	0.18
About the same	0.22	0.31	0.36	0.24
Not as good	0.11	0.15	0.22	0.54
Retired less than 1 year ago	0.10	0.10	0.07	0.04
N. of observations	343	217	92	520

Note: These tables report the fraction of respondents according to how they have rated retirement and how much they have thought about retirement.