Financial Education and the Saving Behavior of African-American and Hispanic Households

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OBJECTIVES AND POLICY RELEVANCE

Hispanic and African-American minorities are, and will continue to be, major factors in the U.S. economy. According to the latest U.S. Census Bureau estimates, Hispanics are already the largest minority group in the country. By the year 2050, they are projected to make up nearly one quarter of the U.S. population, a two-fold increase from their current size. African-Americans will remain the second largest minority group and are projected to increase to approximately 15% of the U.S. population in the coming years.

Because of their substantial and growing presence, their saving and investment behavior is cause for national concern. For example, these households are not only less likely to hold high-return assets, such as stocks and business equity, but they do not even hold basic assets, such as checking accounts. While several initiatives have been taken by the government and employers to reduce discrimination and foster savings and financial security, it is not clear how effective these programs are in reaching this segment of the population.

Though studies of the effects of financial education on saving and investment behavior have gained presence over recent years, few have focused on minority groups. The saving behavior of minorities is rather different than the rest of the population. As I argue in this proposal, information and planning costs can be particularly high among minorities and a major obstacle to accumulating wealth and investing in high-return assets. Understanding the saving and investment behavior of African-Americans and Hispanics is critically important for devising and implementing policies that can be effective in shaping the behavior of families where saving is most scarce.

PREVIOUS WORKS

Previous studies examining the financial position of households have highlighted the fact that the wealth holdings of African-Americans and Hispanics are very low (Hurst, Luoh and Stafford (1998)). Smith (1995) and Lusardi (1999, 2000) further emphasize that many African-Americans and Hispanics arrive at retirement with little wealth. Close to one quarter of African-Americans and Hispanics approach retirement with less than $1,000 in total net worth (excluding pensions and Social Security) and have nothing in financial net worth (which includes savings and checking accounts, CDs and other short-term securities, bonds, stocks, IRAs and other assets).

Other studies, which have examined portfolio choice or specific assets (such as housing, stocks, IRAs and 401(k)s) have further documented that African-Americans and Hispanics do not hold many of the assets commonly present in household portfolios. For example, Haliassos and Bertaut (1995) find that minorities are much less likely to hold stocks than White households, and this remains the case even after accounting for a large set of household and industry characteristics, income, and wealth. Similarly, Charles and Hurst (2002) find that African-Americans are much less likely to own a home or apply for a mortgage.

There are many reasons for this heterogeneity in wealth accumulation. For example, African-Americans and Hispanics often have low education, low income, and may have been hit by many negative shocks. African-Americans and Hispanics also have lower financial literacy than Whites (Hogarth and Hilgerth (2002)), which is correlated with poor saving and investment behavior (Hilgert, Hogarth and Beverly (2003) and Hogarth and Hilgerth (2002)). They may also display differences in preferences like, for

example, a high degree of impatience (Lawrance (1991)) or high risk-aversion (Barsky, Kimball, Juster and Shapiro (1997)). In addition, they may expect government programs to support them in the future or rely on a network of relatives and friends. Minorities may generally feel mistrust of investing in equity markets (Mabry (1999)), or perceive discrimination and self-select away from formal financial institutions where they feel discriminated (Swire (1995), Longhofer and Peters (2005)). They are also likely to face means-tested programs that discourage asset possession (Hubbard, Skinner and Zeldes (1995)).

This long but partial list of reasons why minorities do not save highlights the difficulties of studying this topic and the necessity of a rich data set to address this topic. In this project I propose yet another reason why African-Americans and Hispanics do not save. I argue that high information and learning costs prevent these families from accumulating wealth and securing a comfortable retirement. In other works (Lusardi (2000, 2003b)), I find that these costs are important for the general population and, particularly, for those with low levels of education (Lusardi (1999, 2002)). In this work, I concentrate on those groups where savings are most scarce. By reducing these costs, financial education programs may become an effective remedy for poor wealth accumulation and naïve portfolio choice.

As shown in much of the existing literature, measuring the effects of financial education on wealth and portfolio choice has proven to be a difficult task. The difficulty stems mostly from the fact that attending education programs is largely voluntary. It is therefore possible, perhaps likely, that those who attend seminars are more likely to have an interest in them because, for example, they have large wealth holdings. Thus, it may

be wealth that affects retirement seminars rather than the other way around. Similarly, attending retirement seminars could simply proxy for individual characteristics such as patience and diligence, which are also likely to affect wealth accumulation. Moreover, as reported by Bernheim and Garrett (2003), retirement education is often remedial and thus offered in firms where workers do very little savings. Thus, empirical studies may be bound to find a negative rather than a positive effect of retirement seminars. Very few data sets have enough information to allow researchers to sort these effects out. Consequently, empirical results about the effects of retirement seminars have been rather mixed.[2]

In my work, I use rich sources of data complemented by more recent information on minorities to study the saving behavior and portfolio choice of African-American and Hispanic households. In the following section, I provide a detailed overview of the data from the 1992 wave of the Health and Retirement Study (HRS) and the 2002 National Survey of Latinos (NSL), depicting the divergent financial behavior of African-Americans and Hispanics. I then examine the extent of this heterogeneity in basic financial practices by analyzing the effects of race, *ceteris paribus*, on checking account ownership. Finally, I analyze the effect of employer provided seminars on saving behavior and stock ownership among Whites and minorities.

[2] See among others, McCarthy and Turner (1996), Bernheim (1995, 1998), Bayer, Bernheim and Scholz (1996), Clark and Schieber (1998), Muller (2000); Clark and D'Ambrosio (2002), Clark, D'Ambrosio, McDermed and Sawant (2003), and Bernheim and Garrett (2003).

DATA AND DESCRIPTIVE RESULTS

In order to examine the effects of financial education on minority households, I require a dataset with descriptive demographic information and financial variables. I use data from the 1992 wave of the HRS to illustrate the financial position of households whose head is close to retirement when, according to the life-cycle model, households should have amassed the most wealth. Problems of adequate sample size combined with poor asset measurement have made research on the wealth position of minorities very difficult, especially when focusing on a limited age-span, such as pre-retirement years. Fortunately, the HRS oversamples African-Americans and Hispanics, offering a large and accurate set of data about these families. Specifically, this survey covers a sample of U.S. households whose respondents were born between 1931 and 1941 and provides detailed information on wealth and the retirement process with a focus on health, labor markets, and economic and psycho-social factors. Questions about wealth are asked to the financially knowledgeable person in the household.[3]

In constructing the sample from the HRS, I delete respondents who are younger than 40 or older than 65. While the sample includes households where one member is already partially or fully retired, the age range is such that households should be mostly at the peak or close to the peak of their wealth accumulation. I will consider only three racial groups: Whites, African-Americans and Hispanics and focus mostly on the latter two.[4]

[3] 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).

[4] The group which is deleted is rather small and includes Native Americans, Asians or Pacific Islanders, and other races.

Table 1 reports the distribution of total net worth across race. Net worth is defined as the sum of checking and savings accounts, certificates of deposits and Treasury bills, bonds, stocks, other financial assets, IRAs and Keoghs, housing equity, other real estate, business equity, vehicles and subtracting all debt. As shown in the table, differences in wealth holdings across racial groups are very large. For example, looking at medians, wealth holdings of Whites are four to five times larger than the wealth holdings of African-Americans and Hispanics. Similar patterns emerge when looking at means. Note that a quarter of African-Americans and a quarter of Hispanics have minuscule amounts of wealth. The scenario does not change when considering a different measure of wealth holdings that excludes home and other real estates, vehicles, and business equity. African-American and Hispanic households hold very little in terms of financial wealth (Lusardi (1999)).

One of the reasons why wealth differs so much across racial groups is that African-Americans and Hispanics display different educational attainment than Whites (Table 2). While a small proportion (1.5%) of Whites has an elementary education only, one third of Hispanics have an elementary education. Similarly, more than 50% of Hispanics and close to 40% of African-Americans do not have a high school degree, while only 15% of Whites do not have a high school degree. On the side of high education attainment, while more than 20% of Whites have a college degree or higher degree, only a small fraction (10%) of African-Americans and of Hispanics (6%) have college or higher degrees.

The importance of education should not be understated as many studies have shown there is a strong correlation between wealth and education, even after controlling

for permanent income and other demographic characteristics that can account for preferences or economic circumstances (Browning and Lusardi (1996)). It is still unclear why households whose head has high education accumulate much more than households whose head has low education. However, many studies show that more highly educated respondents are more likely to invest in high-return or tax-favored assets such as stocks or IRAs (Haliassos and Bertaut (1995), Vissing-Jorgenson (2002), Venti and Wise (2001)).

Table 3a reports the distribution of assets across education and race while Table 3b reports the distribution of net worth across education and race. Within each racial group, investment in financial assets (such as bonds, stocks, and IRAs) increases sharply with education. Note, however, that percentages are very different across racial groups. While 13% of Whites with less than high school education invest in stocks, only 2% of African-Americans and 2% of Hispanics with less than high school education invest in stocks.

Low education minorities are not only less likely to invest in high-return assets, but they do not even invest in basic financial assets, such as checking and savings accounts. A large majority of these families are "unbanked;" only 34% of Hispanics and 38% African-Americans with elementary education have a checking and saving account and the percentages increase little when we consider minorities with a high school degree. This suggests that these families may find difficulties not only in accumulating savings, but also in obtaining a loan to buy a house or start a business, as they do not have any relationships with banks or a track record of financial transactions.

The distribution of wealth across race and education confirms the strong correlation between wealth and education (Table 3b). Minorities with low education attainment have stunningly low amounts of wealth. As many as one quarter of African-Americans and Hispanics with less than high school education have simply no wealth. In every racial group, it is clear that education is a strong predictor for wealth. Wealth increases strongly as we move to higher education. However, even within high education groups, there are large differences in wealth holdings between Whites and African-Americans and Hispanics.

Why do African-Americans and Hispanics arrive close to retirement with so little wealth? There are several explanations for this pattern. For example, Lusardi, Cossa, and Krupka (2001) examine the wealth holding of a younger cohort of households from the National Longitudinal Survey of Youth. They find that African-Americans and Hispanics display little wealth holdings also when young. Thus, lack of savings may be a persistent feature of African-American and Hispanic patterns of wealth accumulation, perhaps brought on by persistent discriminatory pressures or the intergenerational transmission of financial practices (Keister (2004)). Not only do these families start with little savings, but they also shun away from high-return assets. Even though stock market prices increased sharply during the 1990s, many young African-American and Hispanic families did not benefit from the performance of the stock market; only 6-7% of young African-Americans and Hispanics hold stocks (Lusardi, Cossa and Krupka (2001)).

The data I have used so far refer to 1992 only and one may argue that a lot changed over the past decade. Throughout the 1990s, there was an explosion of products and programs for financial planning. At the turn of the century, unprecedented amounts

of wealth were created and destroyed during what is referred to as "the Internet Bubble." The government instituted several programs to foster financial education and employers increasingly offered retirement seminars to their workers. The Community Reinvestment Act (CRA) was also reinvigorated in the late 1990's to help markets better reach low-income minorities (Barr (2005)). After such an economically tumultuous period, it is not unreasonable to assume that the financial motivations and behavior of minorities may have changed.

To analyze the financial behavior of African-Americans and Hispanics in a more contemporary setting, I have considered data from the Pew Hispanic Center/Kaiser Family Foundation 2002 National Survey of Latinos (NSL-2002 for brevity). [5] This survey over-samples Hispanics and provides information on a host of issues including finances, employment, nationality, trust in government, religion, healthcare, values, education, and discrimination among Hispanics, African-Americans and Whites. A total of 4,213 respondents are interviewed, and, of these, 2,929 respondents are Hispanics, 1,008 are Whites and the rest are African-Americans. Statistical weights are provided in the dataset to correct for the oversampling of Hispanics and the relative undersampling of African-Americans and Whites. I start by considering the total sample and will later restrict to older respondents to be better able to compare results with the HRS.

When considering the total sample of respondents in the NSL-2002, which includes a large share of young people (younger than 40), I find that the educational attainment of Hispanics is still low. While only 3% of Whites and 4% of African-Americans have only an elementary education, close to 20% of Hispanics have elementary education only. Even in 2002, more than 43% of Hispanics have less than

[5] See information on this survey on-line at http://pewhispanic.org/reports/report.php?ReportID=15

high school education. Hispanics continue to earn substantially less than Whites. Interestingly, a very high proportion of Hispanics (11%) state they do not know how much is their income. Even though the proportion of Hispanics holding checking accounts is 64.8% in 2002, it is still much lower than the proportion of checking accounts held by Whites (94.7%) and also lower than the proportion of checking accounts held by African-Americans (76.2%). This is such a striking feature of this population that, in the next section, I will examine it in more detail. Most importantly, I study whether the lack of checking accounts can simply be explained by educational attainment and economic characteristics of African-Americans and Hispanics or there are also other explanations that are driving this behavior. This analysis will, in turn, inform the evaluation of the effects of financial education programs on savings and portfolio choice.

EMPIRICAL FACTS OF CHECKING ACCOUNT OWNERSHIP

Many minorities do not own a checking account. This is particularly troublesome because a checking account is widely considered as the most rudimentary form of financial market integration. As Hogarth, Anguelov and Lee (2004) wrote:

> *Conventional wisdom holds that having a bank account is a first step toward building a financial identity, which leads to further access to financial products and service and then to advances in family well-being, stability, and security, and finally to community security and economic development…[a checking account is] the basic transaction account for most U.S. families*.

Though I consider checking accounts as an indicator of a rudimentary level of financial literacy, there may be unobserved motivations for minorities not to own them. First,

minorities may not gain the same advantages as Whites from owning a checking account. For example, vendors may discriminate against checks from minorities, or minorities may be less likely to use features like online bill paying or direct deposit. Furthermore, banks may be difficult to get to, and therefore entail a higher cost of going to one, though Welborn (2002) finds that bank proximity is not a major determinant of owning a checking account. Moreover, Hogarth and O'Donnell (1999) find that a significant number of respondents (20%) who do not have checking account "do not like dealing with banks."

In this section, I consider the determinants of having checking accounts and examine whether, after accounting for preferences and economic circumstances, African-Americans and Hispanics are still less likely to own checking accounts than Whites. In Table 4, I report the estimates of probit regressions where I account for some basic demographic characteristics such as age, gender and marital status. Furthermore, I account for the education of the financial respondent and for the education of the family of origin (whether mother or father has high school education), to account for family background and the intergenerational transmission of financial practices. I also account for income, wealth and wealth squared, and whether the financial respondent is retired. In the first 2 columns of the table, I simply include dummies for being African-American and Hispanic. In the last two columns I account for the country of origin of Hispanic families. To proxy for the fact that households do not have accounts because they do not have easy access to banks, I have also constructed an indicator for the availability of banks across states (bank density hereafter).[6] I have interacted the number of banks per

[6] I have obtained authorization from the HRS to use state indicators, which are not available to the general public.

capita in the state with the number of banks per square kilometer in the state.[7] This indicator takes into account that some states are large but not highly populated. As expected, the indicator ranks highest for the District of Columbia, New Jersey, Connecticut and lowest for Alaska, Wyoming and Montana.

As reported in Table 4, education remains an important predictor for owning a checking account. Even after accounting for wealth and income, having high education attainment (high school) increases the probability of owning a checking account by 15 percentage points with respect to those with very low education attainment (elementary education). As mentioned before, more than half of Hispanics and many African-Americans have less than high school education and this can explains the low prevalence of checking accounts among this segment of the population. Not only does the education of financial respondent matter, but also the education of the family of origin is important. Having a mother or father with a high school degree increases the chances of having checking accounts by 2.8 percentage points. Income and net worth matter and the effect of net worth is non-linear. The results do not change when using a measure of financial wealth or a simple dummy for whether the household has $1500 or less in financial wealth (which corresponds roughly to the minimum amount of wealth necessary to avoid bank fees). Even though the variable measuring bank density is not significant, it affects the estimates of the dummy for being Hispanic.

Even after accounting for demographic characteristics, education, income and wealth, African-Americans and Hispanics are much less likely to have checking accounts than Whites. The dummies for African-Americans and Hispanics are not only highly

[7] The information about banks is taken from the Federal Deposit Insurance Corporation and the population statistics are from the 1990 Census.

significant, but they are also a powerful predictor for owning a checking account. This confirms the earlier finding of Caskey and Peterson (1994) using data from the 1980s and of Hogarth and Hilgert (2002) using data from the 1990s. Of course, it is not straightforward to interpret what this dummy really captures. One explanation for the low prevalence of checking accounts among African-Americans and Hispanics is ethnic/racial discrimination. For example, in their famous "Boston Fed Study," Munnel et al (1996) found evidence of discrimination in mortgage lending. Bostic (1996) revisited their results and found that the minorities most affected are those applicants on the margin of approval. Recently, the Federal Reserve released a study on the latest Home Mortgage Disclosure Act HMDA data, suggesting discrimination may still be prevalent in mortgage lending (Avery, Canner, and Cook (2005)). Furthermore, Blanchflower, Levine, and Zimmerman (1998) find evidence of discrimination extending to loans for minority-owned small businesses. Perception of this discrimination may, in turn, cause minorities to be distrustful of banks, which is important because lack of trust is a commonly reported reason why minorities, those with low education, and the poor choose not to hold bank accounts (Barr (2004)).

To further understand the reasons why so few minorities have checking accounts with the information available in the HRS, I consider the country of origin of Hispanics. As reported in Table 4, Hispanics can be divided into Mexicans, Puerto Ricans, Cubans, South and Central Americans, and other countries. Interestingly, both Mexicans and, in particular, South Americans are much less likely to have checking accounts than other families. Similarly, Hispanic respondents of foreign origin may be less familiar and confident on the working of U.S. financial markets and institutions. This finding points

to the fact that information and learning costs can be particular important for this group of the population. Moreover, it indicates that there may be significant heterogeneity within Hispanics, implying that "Hispanic" may be too broad of a term.

In order to examine the determinants of having a checking account in a more contemporary setting, I have constructed a similar set of variables in the NSL-2002 as those reported in Table 5a. Age, gender, marital status, regions, education, and retirement status closely match the variables in the HRS. Income is only reported in brackets in the 2002-NLS (plus a group of respondents who report they do not know their income) and I grouped the income variables into less than $30,000, between $30,000 and $50,000, and greater than $50,000. As a proxy for net worth, I use home ownership since this generally encompasses most of low income individuals' net worth. Finally, in the NLS-2002, I can distinguish whether Hispanics of different countries of origin were born abroad or in the US.

Looking at the estimates for the total sample in Table 5a, I find that, even after accounting for many demographic characteristics and proxies for income and wealth, African-Americans and Hispanics are still much less likely to hold checking accounts than Whites. African-Americans are 7 percentage points less likely to have checking accounts and Hispanics are 10 percentage points less likely to have checking accounts than Whites. Thus, race continues to be a strong predictor for having checking accounts even in 2002.

The persistence of racial inequality in checking account ownership may very well be attributable, at least in part, to discrimination which may present itself as racial animosity, statistical or perceived discrimination, or as a learned behavior from past

generations and childhood family conditions (Barr (2005), Swire (1995), Welborn (2002) and Keister (2004)). It is very difficult to disentangle the importance of all these factors, but there is some information about discrimination in the NLS-2002. Respondents are asked whether "in the past five years have you, a family member or a close friend experienced discrimination because of your racial or ethnic background?." This is a general question about discrimination which does not refer to bank lending only. The results are staggering. More than 50% of African-American respondents in the sample responded yes to the above question, while more than 32% of Hispanics responded affirmatively. The percentage for Whites was instead 16%. I have added a dummy in the regressions for those that reported they have experienced discrimination and found that the dummies for race remain negative and statistically significant indicating that they proxy for more than just experienced or perceived discrimination (Table 5a).[8]

Another important finding in Table 5a is that foreign-born respondents are less likely to have checking accounts than respondents born in the U.S., suggesting that familiarity with financial institutions in the U.S. may matter. The NSL-2002 provides information on primary language and trust in the US government, which I also include in my regressions in addition to dummies for living in rural areas or in suburban areas (where the density of banks should be lower). These variables do not change the values of the estimates of interest and, for brevity, these regressions are not reported.

To compare results with the HRS, in Table 5b, I exclude respondents younger than 40. The sample decreases substantially but I still have sizable fractions of Hispanics and Whites in the sample, while the number of African-Americans becomes very small.

[8] I have also interacted the dummy for discrimination with the dummies for African-Americans and Hispanics, but the interaction terms are not statistically significant. For brevity, estimates are not reported.

Even after a 10-year period, Hispanic households are still "unbanked" and much less likely than Whites to have checking accounts. Hispanics which are not born in the US, and especially those born in Mexico, are disproportionately less likely to have checking accounts. Thus, the road to assimilation is still a long one and many Hispanic do not yet fully access and utilize the banking system in the U.S.

The lack of participation to financial market is damaging insofar as it inhibits gaining experience in financial matters. This may result in and contribute to low levels of financial literacy and knowledge, which are correlated with poor financial behavior (Hilgert, Hogarth and Beverly (2003)). Hogarth, Anguelov and Lee (2004) and Caskey (2002) recommend financial education as a method to improve financial behavior for low-income and minority households. The HRS provides information on financial education and I now turn to examine the effects of these programs among different racial groups.

THE EFFECT OF FINANCIAL EDUCATION ON SAVINGS AND PORTOLIO CHOICE OF MINORITIES

1) SAVINGS

To remedy lack of savings among workers, many employers have started offering some form of financial education in the workplace. By improving financial literacy, seminars should reduce information costs and foster savings. While several studies have found a positive correlation between attending a retirement seminar and private wealth or contributions to pension funds, it is not clear what this correlation means (see Berheim and Garrett (2003) and the references therein).

The empirical strategy for estimating the effect of financial education is based on the following specification:

$$W_i/Y = \alpha_0 + \alpha_1 \textit{African-Americans}_i + \alpha_2 \textit{Hispanics}_i + \alpha_3 \textit{Fin Educ}_i + Z_i \beta + u_i$$

where W/Y is a measure of household wealth normalized by permanent income. *African-Americans* and *Hispanics* are dummies for race. The Z vector includes demographic characteristics. The controls are included to capture potential differences in preferences and economic circumstances across households and the hump-shaped profile of wealth over the life cycle. *Fin Educ* is a dummy for financial education as will be explained below. If financial literacy and planning costs matter, we expect this variable to have a positive effect on savings.

There are two innovative features for assessing the effects of financial education on savings using data from the HRS. First, I can account for a rich set of controls for wealth, which are not present in other data (*Z*). Second, I can look not only at wealth accumulation but also at pension wealth and portfolio choice (*W*). This is where lack of information and financial literacy is potentially more relevant and binding.

A criticism often raised in the empirical work on savings is that researchers use a very restrictive version of the life-cycle model and it becomes, perhaps, too easy to find evidence against the predictions of standard saving models. One of the advantages of using the HRS is that it provides a rich set of information on individual respondents. This allows researchers to examine many of the reasons for household behavior towards savings. I provide below the set of controls *(Z)* I will use in the empirical regressions, starting with the more original ones that are not present in other data sets:

A. Controls

a.1*)* *Expectations about the future*: Savings are inherently related to the future. Thus, it is critically important to account for expectations about the future. In the empirical regressions, I account for 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. Since these are two of the major components of total household total accumulation, leaving this information out may lead to regressions that have little explanatory power. I will also include the probability of living up to 75 since expected longevity is clearly a predictor for wealth. Other studies have shown that this variable well match the mortality tables. [9]

a.2) *Other motives to save*. Households may save not only to offset the decline in income at retirement but also to provide for the extended family or to leave bequests. I use the subjective expectations of giving major financial help to family members in the next 10 years to account for support of the extended family. In addition I account for the desire to leave a bequest by using the information on whether respondents are likely to leave a bequest to their children.

a.3) *Past economic circumstances*: In addition to future events, respondents in the HRS are asked to provide information on past economic circumstance such as past shocks. I account for these shocks by adding dummies for whether respondents have been unemployed in the past and whether they faced any episodes that made it difficult to meet financial needs. I also account for positive shocks and add a

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

dummy for whether respondents have received inheritances.[10] These positive and negative shocks are another important explanation for the wide differences in wealth holdings that we observe empirically.

a.4) *Pension wealth*: Using the HRS, it is possible to calculate pension wealth from the self-reported pension information.[11] Thus, in my work, I can rely on an extended measure of household resources when examining saving behavior.

a.5) *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 planning horizons (medium and long horizons corresponding to horizons of 5 years and horizons longer than 5 years) to proxy for the rate of time preference and/or individual heterogeneity. Demographic variables that are related to the rate of time preference, such as education, race, and country of origin, are also included in the empirical estimation (Lawrance (1991)).

a.6) *Permanent income.* To construct a measure of permanent income, I regress total household income on a set of demographics and firm characteristics. I use age and

[10] Since the focus is on saving behavior of minorities, I did not consider transfers from relatives or from insurance settlements as these transfers are rather rare among minorities.

[11] For a detailed explanation of the construction of the pension data, see Venti and Wise (2001).

age squared, sex, race, marital status, regions of residence, education and occupation dummies individually and interacted with age. I also use dummies for whether the respondent works in a small firm (fewer than 20 employees), whether the respondent belongs to a union, and whether he/she works part time. In addition, I use dummies for whether income will go up or down in the following year. [12]

a.7) *Checking accounts*. As I mentioned above, some households do not hold basic assets and do not participate to financial markets. I account for this important fact by adding a dummy for whether the family has checking accounts.

a.7) *Business ownership*. As my previous study shows, business owners are different than other households in both preferences and motives to save (Hurst and Lusardi (2004)). In the regressions, I always add a dummy for owning a business.

a.8) *Additional controls*. I have also added a variable for bank density across states and for whether the financial respondent is already retired.

B. Financial Education

b.1) Seminars offered by employers: The HRS reports information on whether respondents (or spouse) have ever attended a retirement seminar and asks who offered the seminar. I have defined a dummy that takes the value one if respondents have indicated they attended a seminar offered by the employer. This is the critical variable for my empirical work (*Fin Educ*).

Given that not every household reports the information described above, I have to perform additional exclusions on my sample. First, a few respondents do not report information on subjective future probabilities or pensions so I deleted these observations from the sample. Since the distribution of the ratio of savings to permanent income is so

[12] This is the specification used in Lusardi (2003b) and Lusardi (2004).

wide, I trim it and exclude the top and bottom 1%. I also exclude those business owners with large amount of business equity (business equity greater than $2,000,000). The total sample has 6,297 observations while the samples of African-Americans and Hispanics have 1,183 and 530 observations respectively. [13]

In the empirical work reported below, I consider the patterns of accumulation in the total sample and across racial groups to examine the major differences between African-American and Hispanic families and other families. Estimates are reported in Table 6.

There are several important results to discuss. First, even after accounting for a large set of economic and demographic characteristics and a large set of determinants of wealth, African-American and Hispanic families still hold less wealth than White families. In particular, African-Americans, hold much lower amounts of wealth than Whites, *ceteris paribus*. Thus, there are other reasons not accounted for in the model and the empirical specifications for why minorities save less than other families. Moreover, several of the variables that affect savings among Whites have little or no effect for African-Americans and Hispanics. For example, receiving inheritances has a strong effect on savings for White families but little or no effect on African-Americans and Hispanics, who are less likely to receive inheritances. Help in the other direction, i.e., expectations of giving major financial help to family members in the next 10 years, affects savings of the Whites but not savings of African-Americans and Hispanics. Having a checking account or owning a business has an effect in the total sample and among Whites, but the effect is particularly strong and large among African-Americans and Hispanics. Indeed,

[13] See also the data appendix for more detail on the final sample and some descriptive statistics of the variables used in the empirical work.

those minorities that do not have a checking account do not have much else (their total wealth is very low).

The effect of seminars is positive and statistically significant in the total sample and for White families only. To fully assess the effects of seminars, however, we need to rely on a different estimation strategy. If, as suggested by Bernheim and Garrett (2003), seminars are remedial and offered by firms where workers most need it, we should be more likely to find an affect at the bottom of the wealth distribution and among those with low education. Since low wealth and low education workers have usually very little wealth, it is hard to argue that the causality goes the other way.

In Table 7, I report quartile estimates and examine the effects of seminars across three quartiles of the wealth distribution. In Table 8, I report median estimates for low and high education groups.[14] For brevity, only the estimates of retirement seminars are reported. Consistent with the facts that retirement seminars are remedial, there is an effect of retirement seminars for African-Americans, but only in the first quartile of the wealth distribution. Given that the families at the bottom of the wealth distribution save so little, this is still a remarkable effect. Similarly, the effect of seminars is positive and significant among both Whites and African-Americans, but only for those with low education. The effect is not significant for Hispanics, but very few low education and low wealth Hispanics have ever attended a seminar. Note that, as reported in the Data Appendix, only 5% of Hispanics ever attended retirement seminars while 13% of Whites and 12% of African-Americans attended retirement seminars.

[14] Given that the sample of African-Americans and Hispanics is small, I cannot do quantile estimation among education group and I consider medians only.

Total net worth is a partial measure of accumulation because many families also have pension wealth. In Table 9, I report estimates in the total sample and across quartiles when considering an enlarged measure of wealth that includes, in addition to total net worth, the self-reported value of pensions. Similar to the findings of Lusardi (2003b), retirement seminars affect this measure of retirement wealth across the whole distribution. However, the effect is present only for Whites and African-Americans but not for Hispanics. These results overall confirm the previous findings, but should be used with caution. As reported by Gustman and Steinmeier (2004), workers do not seem well informed about their pensions. Only half of respondents with linked pension data to their employer correctly identify their pension plan (whether it is Defined Benefits, Defined Contributions or a mix of the two) and fewer than half identify, within one year, dates of eligibility for early and normal retirement benefits. Earlier papers had also suggested that workers are less than fully informed about their pensions (Mitchell (1988) and Gustman and Steinmeier (1989)). Information about Social Security seems also scanty. Only 43% of respondents in the HRS even ventured a guess about their expected Social Security benefits and many respondents knew little about the rules governing Social Security. Given these findings and the fact that Social Security wealth is highly illiquid and one cannot borrow against it, I have not considered a measure of total retirement savings that includes Social Security wealth in addition to pensions.

To put estimates in perspective, I have examined the effects of retirement seminars across other relevant determinants of wealth. For African-Americans in the first quartile of the net worth to permanent income ratio distribution, attending a seminar has as large an effect as having received inheritances, holding a checking account, or having

a long planning horizon. When looking at those with low education, seminars have a similar effect as having very good health or not having been unemployed in the past. Given the inherent difficulties or costs of changing these other variables, retirement seminars may represent a viable alternative to stimulate savings.

Other studies, such as Garman (1998) and the references therein, have argued that financial education increases workers' productivity and reduce absenteeism to deal with personal financial matters. The value to employers of these benefits of financial education is estimated at around $400, a figure easily above the costs of providing financial education to each worker. While these studies are often qualitative and based on small samples, they represent some further evidence in support of financial education programs.

2) PORTFOLIO CHOICE

Portfolio choice can reveal a great deal about household behavior, and it is here that we may be able to detect the effectiveness (or lack of effectiveness) of financial education. Even though stocks have outperformed bonds historically, only a relatively small fraction of households invest in stocks. In fact, an important puzzle is why so few households hold stocks.[15] Additionally, many household portfolios seem rather unsophisticated (Lusardi (1999)). If much effort has to be exerted to obtain information about complex investment assets, such as stocks, agents facing high costs or displaying little financial literacy will be less likely to invest in those assets.

[15] See the discussion in Haliassos and Bertaut (1995) and Vissing-Jorgensen (2002).

The dependent variable in my regressions is now a dummy variable 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.[16] Though not reported, I have accounted also for age, gender, marital status, number of children, and health status. In addition, I have added an indicator of bank density across states.

The estimates I obtain for the total sample are consistent with other work on stock ownership.[17] For example, households with higher wealth and permanent income are more likely to invest in stocks (Vissing-Jorgensen (2002)). As reported before, total net worth is often so small for many households that they are unlikely to invest it in stocks. Respondents with pensions are more likely to invest in stocks. Furthermore, respondents with pensions usually have to choose how to invest their pension assets, and studies such as Weisbenner (2002) suggest that this may also affect the allocation of their non-pension assets. Consistent with the estimates of Heaton and Lucas (2000), households who own a business and, thus, face high income risk are less likely to invest in stocks.

The most relevant result, however, is that even after controlling for many factors that can explain stock ownership, African-Americans and Hispanics are much less likely to invest in stocks than Whites. African-Americans are 13 percentage points less likely to hold stocks, while Hispanics are 10 percentage points less likely to hold stocks than Whites. This result could be indicative of many reasons, including pervasive mistrust

[16] The variables measuring planning horizons are now divided into medium or long horizon (5 years or longer) and short horizons (few years). The reference group is respondents with horizons of 1 year or less. I add these variables to be consistent with the existing work on portfolio choice (see, for example, Halissos and Bertaut (1995)).

[17] See Haliassos and Bertaut (1995), Heaton and Lucas (2000), and Vissing-Jorgensen (2002).

between minorities and equity markets. Moreover, financial education is only significant for Whites, being small and insignificant for African-Americans and Hispanics. Results remain the same when examining sub-groups of the population, i.e., those with lower wealth (lower than the median) and lower education (high school or less). So few low-wealth and low-education minorities hold stocks that almost no variable has explanatory power among these sub-groups.

When looking at the estimates within African-Americans and Hispanics only (Table 10, last 2 columns), I find that most of the conventional variables that can explain stock-ownership among Whites, such as education and risk aversion, have little or no predictive power among minorities. Notably, country of birth is a predictor for stock-ownership among minorities. Those born in the U.S. are 2-3 percentage points more likely to hold stocks. Overall, for minorities, permanent income, wealth and having a pension and a checking account are the most important predictors for stock-ownership.

DISCUSSION

The estimates above provide some, albeit limited, evidence that retirement seminars can have an effect in stimulating savings among groups of the population, specifically African-Americans, where savings are scarce. To fully evaluate these estimates, one should keep in mind at least three issues about the empirical work described above and the work on retirement seminars in general. First, no information is provided in the HRS about when the seminar was attended. If respondents attended the seminars recently, the effect may not have shown up in wealth yet. Second, no information is provided on the number or content of seminars. If respondents attended

one seminar only, we should not be surprised about finding small effects. One of the lessons we have learned from the literature on savings is that there is large heterogeneity in saving behavior. One session and "one-size-fits-all" education programs may do little to stimulate saving and may itself be a major disincentive to attend a financial education program. Third, the variable may be measured with error if respondents do not recall well what they did in the past. This also leads to a downward bias in the estimates.

There is also another important feature of the empirical work. Attending a retirement seminar is clearly a decision variable rather than an exogenous variable. There are two ways around the potential endogeneity of financial programs: perform instrument variables estimation or run randomized experiments. Lusardi (2003b) undertook the first strategy and used the densities of large firms across states as instrument for the availability (rather than the use) of seminars in addition to the age differences between respondents and their older siblings to proxy for planning costs. I found that the effect of seminars is larger than the estimates reported in Tables 6 and 9. The estimates reported above may again be considered a lower bound on the effects of seminars.[18] Another approach to evaluating the effects of financial education programs is to run experiments, where a randomly chosen group of participants is exposed to financial education and their behavior is then compared to an otherwise similar group which was not exposed to the program (control group). This is the approach taken by Duflo and Saez (2003). A random group of non-faculty employees at a large university were given financial incentives to participate to a benefit fair. Participation to pensions and pension contributions of this group were then compared to those who were not induced to participate. According to the

[18] This approach cannot be used in this paper because the samples of African-Americans and Hispanics are small and instruments do not have enough predictive power in the first stage regression.

authors (Duflo and Saez (2003 and 2004)), the effects of this program are mixed and overall pretty small. Attending the benefit fair induced more employees to participate to pensions but the increase in contributions was negligible.

These types of experiments have the same, perhaps even more severe, problems as the empirical estimates reported above. First, if financial illiteracy is widespread and individuals know very little about financial matters, attending a benefit fair is unlikely to affect behavior. Moreover, as mentioned previously, a one-time exposure to financial education may do little to affect savings. This is not because financial education is ineffective but because the "cure is not adequate for the disease."

To best evaluate the effects of seminars, we need a good understanding of the obstacles people face when planning for retirement. Designing financial programs and evaluating those programs is intimately intertwined with understanding the determinants of savings. This argument is particularly important for savings among African-Americans and Hispanics. These families exhibit distinctly different patterns of accumulation than White families. Given how resilient low savings are among these groups of the population (they save little both when young as well as when old), financial education programs should be designed for and targeted to these segments of the population. One feature that has emerged throughout the paper, when considering closely African-Americans and Hispanics, is that they neither invest in high-return assets nor hold basic assets such as checking accounts. This may reflect a basic lack of information and experience in the working of financial markets. Thus, for these families, financial education programs may more effective if they were better able to address very basic financial knowledge and needs.

CONCLUSIONS

This paper examines whether retirement seminars help explain the wide differences in retirement accumulation that we observe across older households and across race. The estimates presented in this paper show that seminars have some effect on savings, particularly for those at the bottom of the wealth distribution, and those with low education. However, only African-Americans are affected by financial education while the behavior of Hispanics seems largely unaffected by these programs. Financial education does not affect the portfolio choice of minorities, adding to the puzzle why so many African-Americans and Hispanics do not hold stocks or even basic assets such as checking accounts.

The behavior of minorities may be influenced by complex issues such as discrimination and cultural preference. Unfortunately, even though the HRS is rather rich in providing information and over-sampling minorities, it does not contain data that would allow me to control for such influences. Regardless, these findings suggest that education programs offered by the government or employers have to focus on basic financial planning strategies and, in the case of minorities, be more targeted to their specific needs. One finding that emerges throughout the paper is that the financial behavior of African-Americans and Hispanics is very different than the behavior of Whites. Thus, to be effective, financial education programs should be tailored to these groups of the population and address lack of financial knowledge and experience in dealing with financial markets. Moreover, while the provision of information and the reduction of planning costs could play an important role in improving the financial security of many U.S. households, it should be recalled that only a small number of

workers currently attends retirement seminars. Consequently, many remain untouched by employers' efforts to provide financial education. This fact represents an important topic for future research and policy intervention.

DATA APPENDIX

The data used in this paper are from the first wave of the Health and Retirement Study (HRS) in 1992. The HRS is a representative sample of individuals born in the year 1931-1941 (approximately 51-61 at interview), but African-Americans, Hispanics, and Floridians were over-sampled. The individual deemed most knowledgeable about the family's assets, debts, and retirement planning was asked questions on housing, wealth, and income.

An important 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 represent 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 do not report information on the variables used in the empirical estimation. I also deleted races other than Whites, African-Americans and Hispanics. Since the distribution of the ratio of total net worth to permanent income is so wide, I trim the distribution and exclude the top and bottom 1%. I also delete respondents with large amounts of business equity (2,000,000 or more). The following table reports simple statistics of the variables used in the empirical estimation.

Table A1: Descriptive Statistics

	Whites Mean (s.d.)	African-Americans Mean (s.d.)	Hispanics Mean (s.d.)
Net Worth/ permanent income	3.72 (4.09)	1.84 (2.88)	2.40 (3.56)
Net worth + pension / perm inc	5.33 (4.84)	3.25 (3.99)	3.26 (4.33)
Stock Ownership	0.34 (0.47)	0.09 (0.28)	0.07 (0.27)
Attended Retirement Seminars	0.13 (0.34)	0.12 (0.32)	0.05 (0.22)
Has checking account	0.89 (0.31)	0.58 (0.49)	0.50 (0.50)
Has a business	0.18 (0.38)	0.07 (0.25)	0.09 (0.29)
Permanent Income/1000	50.91 (20.9)	34.00 (20.8)	30.78 (18.2)
Age	55.43 (4.26)	55.13 (4.07)	54.80 (4.06)
Number of children	3.05 (1.91)	3.58 (2.54)	3.92 (2.68)
Married	0.71 (0.45)	0.44 (0.50)	0.64 (0.48)
Male	0.53 (0.50)	0.39 (0.49)	0.48 (0.50)
US born	0.96 (0.19)	0.95 (0.20)	0.50 (0.50)
Excellent health	0.26 (0.44)	0.12 (0.32)	0.18 (0.39)
Very good health	0.31 (0.46)	0.23 (0.42)	0.16 (0.37)
Good health	0.26 (0.44)	0.32 (0.46)	0.29 (0.45)
Past unemployment	0.30 (0.46)	0.29 (0.45)	0.39 (0.49)
Past shocks	0.34 (0.47)	0.27 (0.45)	0.29 (0.45)
Received inheritances	0.24 (0.43)	0.04 (0.21)	0.05 (0.22)
High risk aversion	0.63 (0.48)	0.66 (0.47)	0.58 (0.49)
Moderate risk aversion	0.13 (0.33)	0.11 (0.31)	0.09 (0.29)
Medium risk aversion	0.11 (0.31)	0.09 (0.29)	0.14 (0.35)
Expectations to live to 75	0.64 (0.29)	0.65 (0.32)	0.55 (0.34)
Expectations of house prices	0.46 (0.28)	0.56 (0.33)	0.58 (0.31)
Expectations about SS	0.61 (0.29)	0.52 (0.33)	0.53 (0.35)
Expectations to give finan. Help	0.39 (0.31)	0.43 (0.35)	0.42 (0.35)
Medium horizon	0.31 (0.46)	0.22 (0.41)	0.17 (0.37)
Long horizon	0.10 (0.29)	0.06 (0.24)	0.04 (0.19)
Parents are still alive	0.67 (0.47)	0.59 (0.49)	0.65 (0.48)
Expect to leave bequest	0.41 (0.49)	0.45 (0.50)	0.39 (0.49)
Has pension	0.43 (0.49)	0.38 (0.48)	0.27 (0.44)
Can rely on help from family	0.42 (0.49)	0.38 (0.48)	0.38 (0.48)
West region	0.19 (0.39)	0.10 (0.30)	0.42 (0.49)
Midwest region	0.27 (0.44)	0.20 (0.40)	0.06 (0.24)
Northeast region	0.22 (0.42)	0.22 (0.41)	0.14 (0.35)
# of observations	4,584	1,183	530

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Table 1
Distribution of Total Net Worth Across Race

Distribution	Whites	African-Americans	Hispanics
10^{th} percentile	6,200	-88	0
25^{th} percentile	45,942	100	850
Median	125,000	27,500	30,000
75^{th} percentile	274,900	82,000	94,000
90^{th} percentile	583,400	167,000	213,835
95^{th} percentile	1,009,000	271,000	347,500
Mean	275,271	81,470	103,191
(Std.dev.)	(565,713)	(243,423)	(410,946)
# obs	5,116	1,382	682

Note: This table reports the distribution of total net worth across race in the HRS. All figures are weighted using survey weights.

Table 2
Education Attainment Across Race

Education Level	Whites	African-Americans	Hispanics
Elementary	0.015	0.068	0.327
Less than High School	0.148	0.330	0.247
High School	0.398	0.307	0.213
Some College	0.211	0.183	0.150
College	0.125	0.057	0.040
More than College	0.101	0.053	0.022
# obs	5116	1382	682

Note: This table reports the proportion of respondents in each racial and education groups in the HRS. All figures are weighted using survey weights.

Table 3a
Asset Ownership Across Race and Education

	Whites			African-Americans			Hispanics		
	Less than HS	High School	More Than HS	Less than HS	High school	More than HS	Less than HS	High School	More than HS
Checking	0.70	0.90	0.94	0.38	0.59	0.77	0.34	0.58	0.77
CDs	0.15	0.31	0.35	0.06	0.14	0.22	0.02	0.15	0.18
Bonds	0.01	0.04	0.14	0.00	0.01	0.02	0.00	0.01	0.03
Stocks	0.13	0.28	0.49	0.02	0.07	0.19	0.02	0.09	0.22
IRAs	0.22	0.45	0.62	0.05	0.12	0.29	0.04	0.19	0.21
Business	0.13	0.17	0.25	0.02	0.05	0.14	0.05	0.05	0.19
Home	0.74	0.84	0.85	0.48	0.60	0.69	0.48	0.61	0.75
Real est.	0.18	0.23	0.34	0.06	0.11	0.22	0.07	0.16	0.21
# obs	855	2,056	2,205	571	429	382	401	145	136

Note: This table reports the percentages of asset ownership across race and education in the HRS. All figures are weighted using survey weighs.

Table3b
The Distribution of Total Net Worth Across Race and Education

	Whites			African-Americans			Hispanics		
	Less than HS	High School	More Than HS	Less than HS	High school	More than HS	Less than HS	High School	More than HS
10th perc.	0	8,000	22,200	-600	-125	0	0	0	3,000
25th perc	7,000	44,000	79,000	0	400	18,000	0	5,000	27,000
Median	51,300	109,500	190,000	5,000	30,000	66,000	14,600	41,800	85,500
75th perc.	129,000	214,900	390,500	41,800	81,300	140,500	56,000	107,000	194,025
90th perc.	291,500	408,950	830,000	89,000	164,500	273,900	142,000	213,835	350,000
95 perc	506,000	624,500	1,537,000	144,800	233,000	520,000	200,000	347,500	597,100
Mean	148,383	205257	386,041	43,569	76,452	137,960	52,258	91,740	252,270
(S. dev)	456,925	421542	684,224	224,218	211,538	285,799	127,118	162,330	836,100
# obs	855	2,056	2,205	571	429	382	401	145	136

Note: This table reports the distribution of total net worth across race and education in the HRS. All figures are weighted using survey weighs.

Table 4
Who Has Checking Accounts? Probit Regressions

	I		II	
	Coeff	**St. Err**	**Coeff**	**St Err**
Age	0.0038**	0.0010	0.0037**	0.0010
Male	-0.0124	0.0081	-0.0126	0.0081
Married	0.0470**	0.0112	0.0475**	0.0112
Less than High School	0.0811**	0.0107	0.0819**	0.0107
High school	0.1545**	0.0159	0.1554**	0.0160
Some College	0.1264**	0.0120	0.1267**	0.0121
College	0.1162**	0.0094	0.1164**	0.0095
More than College	0.1126**	0.0101	0.1129**	0.0101
Father or mother has high school education	0.0285**	0.0085	0.0284**	0.0086
Income/1000	0.0018**	0.0002	0.0018**	0.0002
Net worth/1000	0.0005**	0.00005	0.0005**	0.00005
Net worth squared/1000	-0.0002**	0.00003	-0.0002**	0.00003
Retired	0.0093	0.0130	0.0100	0.0130
African-Americans	-0.1450**	0.0152	-0.1447**	0.0152
Hispanics	-0.1463**	0.0201		
Mexicans			-0.1681**	0.0265
Puerto Ricans			-0.1278**	0.0490
Cubans			-0.1135**	0.0533
South Americans			-0.2163**	0.1002
Central Americans			-0.0025**	0.0552
Other Hispanics			-0.1585**	0.0556
Bank Density	-0.00002	0.0003	-0.00006	0.0003
Pseudo R^2	0.292		0.293	
# obs	7,053		7,053	

Note: This table reports probit estimates of the probabilities of holding checking accounts using data from the HRS. Marginal effects are reported. All figures we weighted using survey weights.

Table 5a
Who Has Checking Accounts? Evidence from the 2002 National Survey of Latinos

	Total Sample		Total Sample		Born in the US		Born Abroad	
	Coeff	**St. Err**	**Coeff**	**St. Err**	**Coeff**	**St. Err**	**Coeff**	**St. Err**
Age	0.0015**	0.0004	0.0015**	0.0004	0.0015**	0.0004	0.0016**	0.0004
Male	0.0096	0.0106	0.0095	0.0105	0.0089	0.0106	0.0101	0.0107
Married	0.0006	0.0116	0.0002	0.0115	-0.0063	0.0115	0.0023	0.0121
Less Than HS	0.0254	0.0131	0.0243	0.0132	0.0332**	0.0115	0.0245	0.0140
High School	0.0427**	0.0158	0.0422**	0.0157	0.0590**	0.0152	0.0430**	0.0162
GED	0.0348	0.0112	0.0343	0.0121	0.0399*	0.0095	0.0337	0.0138
Some College	0.0827**	0.0158	0.0819**	0.0156	0.0973**	0.0156	0.0827**	0.0156
College	0.0619**	0.0115	0.0610**	0.0156	0.0691**	0.0115	0.0631**	0.0112
More than College	0.0506**	0.0101	0.0496**	0.0101	0.0568**	0.0098	0.0522**	0.0098
Income $30K-$50K	0.0265**	0.0099	0.0267**	0.0098	0.0304**	0.0099	0.0269**	0.0100
Income > $50K	0.0645**	0.0129	0.0649**	0.0129	0.0732**	0.0125	0.0661**	0.0128
Income Don't Know	-0.0082	0.0196	-0.0072	0.0194	-0.0200	0.0228	-0.0134	0.0211
Home Owner	0.0347**	0.0135	0.0348**	0.0134	0.0424**	0.0135	0.0359**	0.0137
Retired	-0.0193	0.0266	-0.0213	0.0270	-0.0101	0.0245	-0.0217	0.0276
African-Americans	-0.0726**	0.0301	-0.0815**	0.0325	-0.0534**	0.0272	-0.0639**	0.0287
Hispanics	-0.1084**	0.0219	-0.1104**	0.0221				
Experienced discrim.			0.0193	0.0114				
Mexicans					-0.0538**	0.0200	-0.1331**	0.0343
Puerto Ricans					-0.0588**	0.0363	-0.1219**	0.0448
Cubans					-0.0526*	0.0384	-0.0533**	0.0256
South Americans					-0.0640	0.0632	-0.0287	0.0242
Central Americans					0.0084	0.0229	-0.1142**	0.0411
Other Hispanics					-0.0349	0.0466	-0.1246**	0.0485
Regional Dummies	Yes		Yes		Yes		Yes	
Pseudo R^2	0.3012		0.3037		0.2788		0.2954	
# obs	3,802		3,802		3,802		3,802	

Note: See text for detail.

Table 5b
Who Has Checking Accounts? Evidence from the 2002 National Survey of Latinos
(Age >=40)

	Total Sample		Total Sample		Born in US		Born Abroad	
	Coeff	**St. Err**	**Coeff**	**St. Err**	**Coeff**	**St. Err**	**Coeff**	**St. Err**
Age	0.0010*	0.0006	0.0011*	0.0006	0.0013**	0.0006	0.0011*	0.0006
Male	0.0095	0.0107	0.0095	0.0107	0.0102	0.0114	0.0094	0.0111
Married	0.0016	0.0124	0.0019	0.0126	-0.0032	0.0128	0.0019	0.0130
Less Than HS	0.0137	0.0135	0.0138	0.0135	0.0198	0.0124	0.0132	0.0149
High School	0.0319**	0.0151	0.0320**	0.0151	0.0442**	0.0158	0.0332**	0.0158
GED	0.0204	0.0131	0.0206	0.0131	0.0263	0.0106	0.0199	0.0155
Some College	0.0510**	0.0139	0.0510**	0.0139	0.0627**	0.0144	0.0521**	0.0141
College	0.0414**	0.0108	0.0414**	0.0108	0.0485**	0.0114	0.0432**	0.0108
More than College	0.0339**	0.0099	0.0338**	0.0099	0.0405**	0.0102	0.0357**	0.0098
Income $30K-$50K	0.0054	0.0121	0.0054	0.0121	0.0010	0.0121	0.0065	0.0124
Income > $50K	0.0361**	0.0130	0.0361**	0.0130	0.0468**	0.0136	0.0383**	0.0134
Income Don't Know	0.0059	0.0162	0.0062	0.0161	0.0012	0.0204	0.0046	0.0179
Home Owner	0.0304**	0.0171	0.0306**	0.0171	0.0379**	0.0182	0.0333**	0.0177
Retired	-0.0142	0.0179	-0.0146	0.0178	-0.0102	0.0182	-0.0151	0.0187
African-Americans	-0.0446*	0.0331	-0.0458*	0.0344	-0.0317*	0.0299	-0.0395*	0.0318
Hispanics	-0.1066**	0.0301	-0.1080**	0.0302				
Experienced discrim.			0.0046	0.0166				
Mexicans					-0.0559**	0.0302	-0.1256**	0.0504
Puerto Ricans					-0.0444	0.0559	-0.1014**	0.0552
Cubans					-0.0018	0.0397	-0.0272*	0.0209
South Americans					-0.2976**	0.1795	-0.0201	0.0152
Central Americans					-0.0058	0.0545	-0.1935**	0.0856
Other Hispanics							-0.1013**	0.0584
Regional Dummies	Yes		Yes		Yes		Yes	
Pseudo R^2	0.2817		0.2819		0.2554		0.2752	
# obs	1759		1759		1756		1,759	

Note: See text for detail.

Table 6
The Effects of Retirement Seminars on Savings: Estimates across Race

	Total Sample		Whites		African-Americ.		Hispanics	
	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err
Constant	-13.129	5.480	-20.78	6.663	23.146	9.48	8.901	17.443
Seminars	**0.314****	**0.140**	**0.395****	**0.165**	**-0.181**	**0.253**	**-0.562**	**0.678**
Race								
African-Americans	**-1.230****	**0.155**						
Hispanics	**-0.463****	**0.217**						
Pos./Neg. Shocks								
past unemployment	-0.594**	0.099	-0.609**	0.120	-0.331*	0.176	-0.583*	0.309
past shocks	-0.596**	0.095	-0.661**	0.115	-0.226	0.174	0.381	0.322
Received inheritances	0.795**	0.113	0.758**	0.127	0.229	0.373	1.178*	0.661
Risk Aversion								
high risk aversion	-0.171	0.134	-0.144	0.164	-0.524**	0.227	-0.065	0.390
Medium risk aversion	-0.221	0.173	-0.295	0.209	0.028	0.312	0.223	0.577
Moderate risk aversion	-0.422**	0.179	-0.486**	0.218	-0.786**	0.322	0.293	0.509
Subjective Expectations								
expect. live to 75	-0.037	0.164	0.115	0.205	-0.115	0.256	-0.100	0.462
expect. SS more gener.	0.141	0.149	0.122	0.185	0.269	0.237	-0.151	0.416
expect. house price up	-0.219	0.153	-0.201	0.189	-0.331	0.240	-0.218	0.466
exp. give help to fam.	0.284**	0.144	0.466**	0.178	-0.064	0.232	-0.381	0.424
Bequests and Help								
Bequests	1.824**	0.092	1.933**	0.111	1.042**	0.165	1.292**	0.310
parent alive	0.021	0.101	0.089	0.124	-0.061	0.170	-0.776**	0.322
can rely on help	0.070	0.091	0.160	0.109	-0.340**	0.161	-0.458	0.313
Planning Horizon								
Medium horizon	-0.192*	0.101	-0.268**	0.119	-0.208	0.194	-0.396	0.404
Long horizon	0.794**	0.160	0.875**	0.187	0.284	0.323	0.083	0.747
Income and pensions								
Permanent income	-0.032**	0.004	-0.038**	0.005	0.015*	0.009	-0.033*	0.018
Pensions	-0.395**	0.107	-0.428**	0.128	0.028	0.191	-0.426	0.372
Checking & business								
Has a checking account	1.349**	0.136	1.418**	0.181	1.126**	0.178	1.565**	0.340
Has a business	2.780**	0.128	2.790**	0.148	2.567**	0.321	3.138**	0.528
Bank Density	0.005	0.003	0.008	0.004	-0.009*	0.006	-0.007	0.015
# of observations	6,297		4,584		1,183		530	
Adjusted R^2	0.252		0.247		0.189		0.198	

Note: See text for detail.
* indicates statistical significance at the 10% level
** indicates statistical significance at the 5% level

Table 7

The Effects of Seminars on Savings: Quartile Estimates

	Total sample		1st quartile		Median		3rd quartile	
Seminars:	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err
Whites	0.395**	0.165	0.355**	0.069	0.552**	0.105	0.532**	0.223
African-Americans	-0.181	0.253	0.304**	0.074	0.113	0.080	-0.024	0.326
Hispanics	-0.562	0.678	0.207	0.230	-0.038	0.394	-0.265	0.245

Note: This table reports estimates of the effects of attending retirement seminars across quartiles of the distribution of total net worth.

Table 8

The Effects of Seminars on Savings: Estimates across Education Groups

Median Regressions

	Total sample		Low education		High education	
Seminars:	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err
Whites	0.395**	0.165	0.653**	0.170	0.272	0.174
African-Americans	-0.181	0.253	0.222*	0.131	-0.007	0.117
Hispanics	-0.562	0.678	0.296	0.452	-0.140	0.426

Note: This table reports median estimates of the effects of attending retirement seminars across education. Low education refers to high school or less, high education refers to more than high school.

Table 9

The Effects of Seminars on Total Net Worth + Pensions: Quartile Estimates

	Total sample		**1st quartile**		**Median**		**3rd quartile**	
Seminars:	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err
Whites	1.766**	0.192	1.253**	0.131	1.703**	0.213	2.441**	0.285
African Americans	0.719**	0.339	0.686**	0.112	1.305**	0.168	1.268**	0.367
Hispanics	0.511	0.830	0.211	0.141	0.183	0.380	0.397	0.345

Note: This table reports estimates of the effects of attending retirement seminars on the distribution of total net worth + pensions across race.

Table 10
The Effects of Seminars on Stock Ownership Across Race

	Total Sample		Whites		Afr-American		Hispanics	
	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err
Seminars	**0.092****	**0.019**	**0.103****	**0.023**	**0.021**	**0.016**	**-0.009**	**0.013**
Race								
African-Americans	**-0.135****	**0.018**						
Hispanics	**-0.106****	**0.026**						
Education								
High school	0.110**	0.021	0.125**	0.027	0.022	0.019	0.0009	0.017
Some college	0.191**	0.029	0.211**	0.035	0.041*	0.029	0.002	0.021
College or more	0.239**	0.039	0.283**	0.045	-0.004	0.026	-0.022	0.010
Country of birth								
US born	0.024	0.027	-0.019	0.039	0.029*	0.010	0.032**	0.016
Pos./Neg. Shocks								
past unemployment	-0.018	0.013	-0.024	0.017	-0.002	0.011	-0.0006	0.012
past shocks	-0.020	0.013	-0.024	0.016	-0.011	0.010	0.016	0.016
Given inheritances	0.097**	0.015	0.105**	0.018	0.036	0.031	0.022	0.034
Risk Aversion								
high risk aversion	-0.037**	0.018	-0.057**	0.023	0.004	0.015	0.018	0.018
med. risk aversion	-0.039*	0.021	-0.069**	0.027	0.074**	0.040	0.030	0.044
mod. risk aversion	0.003	0.024	-0.010	0.030	0.024	0.028	0.036	0.045
Subjective Expectations								
expect. live to 75	0.015	0.023	0.017	0.029	0.006	0.017	0.0007	0.019
expect. SS more gener.	0.016	0.020	0.027	0.026	-0.022	0.015	-0.014	0.018
Planning Horizon								
Short	0.038**	0.016	0.041**	0.020	0.009	0.013	0.004	0.014
Medium or long	0.081**	0.016	0.089**	0.020	0.012	0.014	0.021	0.022
Incom. pens & wealth								
Permanent income	0.0001	0.0007	-0.0005	0.0009	0.001**	0.0006	0.002**	0.0008
Pensions	0.042**	0.014	0.041**	0.018	0.034**	0.013	0.025*	0.018
Net worth/100,000	0.048**	0.003	0.055**	0.004	0.006**	0.003	0.010**	0.004
Checking & business								
Has a checking account	0.123**	0.017	0.141**	0.024	0.025**	0.012	0.027*	0.016
Has a business	-0.029*	0.016	-0.042**	0.020	0.020	0.022	0.007	0.020
Bank Density	0.0009**	0.0004	0.001*	0.0005	0.0006*	0.0003	-0.0004	0.0006
# of observations	6,297		4,584		1,183		530	
Pseudo R^2	0.213		0.176		0.277		0.335	

Note: See text for detail.
* indicates statistical significance at the 10% level
** indicates statistical significance at the 5% level