

Social security: Who wants private accounts?

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Abstract

Preference for partial privatization of social security is explored using a 2004 sample of 7,565 young baby boomers. Two-thirds of the sample would choose partial privatization. Although a greater proportion of higher-income, wealthier, and more educated respondents preferred private accounts, multivariate analysis reveals that intelligence has a stronger effect than socio-economic variables. An average of 43% would be invested in equities, but a surprising 35% would be invested in government bonds. Men and those with higher intelligence are more likely to prefer equities, whereas women prefer corporate bonds and the less educated, Blacks, and respondents with children preferred government bonds. © 2008 Academy of Financial Services. All rights reserved.

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1. Introduction

Interest in the diversion of social security taxes into private accounts has increased in recent years because of demographic shifts that threaten the solvency of a pay-as-you-go system, concern over government spending of social security surplus taxes, and increased household personal responsibility for retirement and participation in financial markets (Social Security Administration, 2001). The impact of partial privatization of social security on the financial services industry is potentially enormous. Goolsbee (2004) estimates that if 2/3 of recipients divert 20% of social security taxes into private accounts, these accounts would grow to over \$2 trillion by 2030 and result in fees to the financial services industry whose

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net present value equals \$960 billion.¹ Extant literature on social security privatization is rich in analysis of the relative merits of privatization; however, few studies have explored household demand for private accounts.

This study uses a data set rich in demographic characteristics to provide a thorough analysis of demand for social security privatization among a large sample of households nearing the peak earning years of their life cycle. This study also analyzes portfolio composition preferences within these accounts, providing the first estimate of possible shifts in demand for financial instruments that may occur after privatization. We also explore theory related to demand for control of financial assets and provide insight into the previously established relation between cognitive ability and investment choice.

2. Literature review

2.1. A Brief history of social security privatization

In December of 1995, a subcommittee of the 1994 through 1996 Advisory Council on Social Security considered the merits of various proposals to divert a portion of FICA tax to personal savings accounts, similar to systems in Sweden, Chile, and the United Kingdom in which government directed private accounts are used to buy retirement annuities (Social Security Administration, 1996).² A number of bills proposing the establishment of some form of private Social Security accounts were introduced by legislators in the U.S. Congress in 1998 and 1999 following analyses of the feasibility of privatization by the Clinton administration and the Department of the Treasury. In 2001, the Bush administration established the Commission to Strengthen Social Security, a 16-member bipartisan group charged with creating “specific recommendations to preserve Social Security for seniors while building wealth for younger Americans” (www.csss.gov). In December 2001 the Commission concluded that Americans would be better off if given the choice to save a portion of their Social Security taxes in private accounts that could be invested in financial instruments with a higher expected investment return (Social Security Administration, 2001). In his 2005 State of the Union address, President Bush proposed that individuals be able to invest up to 20% of their Social Security taxes into private accounts where they would be given some autonomy over investment choice. Before the Fall 2006 Congressional elections, President Bush stated that Social Security privatization would be a priority during his final two years in office (Elsibai, 2006).

2.2. Support for privatization

Surveys have found mixed public support for Social Security privatization (Zogby, Bonacci, Bruce, Daley and Wittman, 2003, Devroye, 2003). A review of surveys conducted mainly by news organizations between 1996 and 2002 found that the percentage of Americans supporting some form of privatization varies inversely with how prominently the possibility of investment risk is characterized in the question (Zogby et al., 2003). Support

for privatization in these surveys is consistently highest among respondents between the ages of 30 and 49, and lowest among those over 65.

Two multivariate analyses of European and American respondents show that support for privatization is highest among the young and the rich. A survey conducted in France, Germany, Italy, and Spain found statistically significant predictors of opposition to pension reform among the old, women, political liberals, and those who lived in poor regions (and Italians), whereas reform was supported by the rich, males, the young, and those who believed the current system was in crisis (Boeri, Boersch-Supan and Tabellini, 2002). In a 2001 survey of 1,203 Americans, income, education, and being a Republican were all significantly and positively associated with support for private accounts within Social Security (Devroye, 2003).

Neither Devroye (2003) nor Boeri et al. (2002) explore the theoretical predictors of variation in support of Social Security privatization. The diversion of taxes from the current Social Security system, with its unique scheme of redistribution in paying out retirement benefits, into a private account will likely have an unequal impact on households based on their income, wealth, household composition/marital status, and expected longevity. Using data from the Survey of Income and Program Participation (SIPP) to estimate lifetime income patterns, Feldstein and Liebman (2002) find the main beneficiaries of private accounts versus traditional Social Security will be singles (vs. married couples), younger households, Whites (vs. Blacks and Hispanics), the less educated (due partly to the greater longevity of the college-educated, who benefit from the current Social Security rules), men (again because of reduced longevity), and those with higher incomes. Other characteristics that may be related to longevity include behaviors such as smoking, which would likewise lead to higher expected return from private accounts than from traditional Social Security.

Lower-income households rely more on Social Security to replace pre-retirement income, with as many as a third of households receiving 90% of their income from Social Security (Social Security Administration, 2004). Women receive a higher return on Social Security benefits from the current model because of greater longevity and lower Social Security contributions (Social Security Administration, 2005). Social Security also currently provides a progressive benefit system, where higher-income households pay a greater share of Social Security contributions but only slightly higher retirement income benefits. It is expected that those in higher incomes will perceive greater benefit from retaining savings in a private account to avoid the loss of expected return from the redistributive formula of conventional Social Security, and that lower-income households will avoid private accounts to maintain their higher expected return on Social Security. Higher-income households also rely less on Social Security income to supplement post-retirement consumption, and can afford to accept greater investment risk in private Social Security accounts (Congressional Budget Office, 2001). A Monte Carlo analysis of expected performance in partially privatized social security accounts suggests that both expected investment performance and the possibility of failure of a privatized model are high (Tucker, 2002). Investment of Social Security taxes in a variable annuity is also expected to provide a higher internal rate of return than conventional Social Security investment for those in higher income categories than for those with lower and middle earnings (Bosworth and Burtless, 2000).

2.3. *Demand for private accounts*

Preference for private accounts may not be entirely a function of expected internal rates of return among demographic groups. The investment in time needed to accurately compare the expected benefits from investment in a private account versus traditional Social Security is staggering. The complexity of the comparison would baffle the vast majority of Americans, the authors included.

Households who choose to invest in a private Social Security account assume they will be responsible for controlling investment within the account and for monitoring account status. This decision to control a portion of retirement assets rather than relying on the government to invest Social Security assets on their behalf may be modeled as a comparison of expected benefit from private account investment versus the expected costs. Because respondents in this study can choose between risk-free government bonds and riskier asset classes (stocks or corporate bonds) within their private account, we assume the privatization choice is independent of the potential for variation in expected investment performance (i.e., risk aversion).

The investment in financial information is comparable to the investment in information for search (Stigler, 1961). The individual expects that by investing an additional hour in searching for investment information she will gain some knowledge that will provide an expected gain in future consumption. Information search will continue until the expected benefit from the last hour of search is equal to the expected gain in lifetime consumption. Characteristics related to the cost and to the expected benefit from an additional hour of search will affect the likelihood of collecting investment information.

By choosing to invest in a private account, individuals burden themselves with the process of choosing an appropriate investment portfolio, as well as having to decide whether the private account system is preferable to traditional Social Security. Deaves, Veit, Bhandari and Cheney (2007) find that reading investment-related newspapers, magazines and books and taking related academic courses are positive predictors of pension plan investment and 403b plan participation. Survey respondents who currently have little human capital from prior investment in financial knowledge will likely avoid having to make an additional investment to manage a private account, particularly if they have less money to invest. Respondents who have taken university courses in investments, who already maintain an investment portfolio in a separate account, or who have the cognitive ability to efficiently process financial information to effectively construct and maintain a portfolio will anticipate a lower expected cost of privatization.

2.4. *Demand for asset classes*

All else equal, households with greater human capital and net worth will be better able to accept financial risk within private accounts than households with lower human capital and wealth, or who will rely more heavily on Social Security to supplement retirement income. A household with less wealth and a concave utility function will see a greater relative loss in utility from a decline in investment return than a household with greater wealth.

Other household characteristics that may be predictors of asset allocation include gender, race, and education. Portfolios of single women are less risky than the portfolio holdings of single men (Sunden and Surette, 1998). When women are asked to define their risk attitude, they report a greater aversion to financial risk than men (Barsky Kimball, Juster and Shapiro, 1997). Women also appear to be less (over)confident than men in their investing abilities (Barber and Odean, 2001). Black and Hispanic households hold less wealth in investment assets than Whites, even when income and wealth are controlled (Choudury, 2001). Chiteji and Stafford (1999) find that Blacks are significantly less likely to own stock than other races.

Baker and Nofsinger (2002) find that experience, educational attainment and social interaction are predictors of greater risk tolerance among individuals. Yao, Hanna and Montalto (2002) find that educational attainment, income, long term saving horizon and willingness to take risks are predictors of a greater share of investment assets.

Like many previous studies, Hariharan, Chapman and Domian (2000) find a strong relation between years of education and likelihood of stock investment, perhaps because of the quality of education as a proxy for human capital (that increases ability to withstand investment volatility). On the other hand, the presence of non-financial assets, such as human capital, can mitigate the level of risk in optimized portfolios of households (Kyrychenko, 2008). Households with lower human capital may benefit from holding a larger proportion of risky assets in their portfolio to compensate for the loss of return because of lower human capital.

2.5. Cognitive ability and private accounts

There is evidence that IQ measured in the NLSY correlates strongly with a number of myopic behaviors, including participation in financial markets (Benjamin, Brown and Shapiro, 2006). The authors conclude that this correlation is a function of an established relation between IQ and impatience, which theoretically impacts willingness to invest in financial instruments that exhibit excess short-run volatility (Barberis, Huang and Thaler, 2003). Jacobs-Lawson and Hershey (2005) find that knowledge of retirement planning, future orientation and risk tolerance are predictors of retirement savings. Financial practitioners with higher cognitive ability are more rational in their intertemporal financial decision making ability (Nofsinger and Varma, 2007). Cutler, Grange, Hampton, Cutler, Langdon and Ryan (2005) find that SAT scores are a positive predictor of success in passing a test to become a certified financial planner.

If cognitive ability is primarily related to myopia, it will have little impact (independent of income and wealth) on the preference for investment in a private account that allows investment in risky or risk-free assets. Because private accounts may be assumed to be tax sheltered (although this is not explicitly stated in this survey), the choice of government bonds as a preferred investment vehicle within private accounts can be seen as a proxy for ineffective decision-making.

It is also possible that cognitive ability reduces the cost of investment search. Garbarino and Edell (1997) find that when the choice of a product requires more cognitive effort, consumers are more inclined to view that product negatively. Consumers with lower cognitive skill were willing to pay more for a product that required less cognitive effort. It

can be assumed that if respondents see the management of a private investment account as a complex task, they will be inclined to avoid it. Experience, familiarity and motivation may also reduce cognitive effort of investment search. In a survey of high school seniors, Mandell and Klein (2007) find that after controlling for other socio-economic and demographic characteristics the ability to synthesize financial information among high school students increases with higher parental educational attainment, being White, aspired educational attainment, higher expected income and who have previously participated in a stock market game. This finding is also consistent with past studies that suggest the lack of financial literacy among adults and youth impedes their ability to make good financial choices (Chen and Volpe, 1998; Volpe, Chen and Liu, 2006). Worthington (2006) finds that financial literacy is positively associated with educational attainment, income and age, and that men tend to have a higher financial literacy than women.

3. Data and methods

3.1. Sample

This study uses the 2004 sample of the National Longitudinal Survey of Youth, a panel study of young adults who were between the ages of 14 and 22 in 1979 (NLSY, 2004). The 2004 NLSY is the only survey that contains individuals' preferences for privatized Social Security retirement accounts, and is rich in demographic, social and economic characteristics of households. In the 2004 survey, 52.68% of the respondents were women and 47.32% of the respondents were men, and their ages ranged from 39 to 47.³ The initial 1979 survey was administered to about 10,000 respondents, and the level of respondent retention has been close to 90%. The majority of data are collected through a face-to-face interview; however, some questions contain information gathered using telephone interviews and other methods. The NLSY survey includes a general sample and supplemental samples for Blacks, Hispanics, and low income Whites. These data have been validated in a number of past studies (Haurin, Henderschott and Wachter, 1996).

Limitations of this data set are some attrition over time leading to possible sample selection bias, and the oversampling of minorities. The NLSY data also identifies just the respondent and not the head of households, unlike the Survey of Consumer Finances, which may lead to some bias if the respondent is not the primary financial decision-maker (Haurin et al., 1996).

3.2. Methods

The purpose of this study is to assess the predictors of preference for Social Security private accounts, and to assess asset allocation preference from among those respondents who would choose privatization. We hypothesize that characteristics that will yield a higher relative benefit from private accounts will be associated with a greater preference for privatization. We also hypothesize that characteristics that imply greater benefit or lower cost from search for investment information will increase preference for private accounts.

In our analyses of asset allocation preference, we hypothesize that characteristics associated with greater risk aversion in prior literature will be positive predictors of stocks choice, and will be negatively related to choice of government and corporate bonds. Greater income, wealth, and human capital (proxied through education) are also assumed to increase preference for equity investment within private accounts.

The question that will be used as the dependent variable in our analysis of preference for private accounts is:

Suppose that you have to make the following choice: First, you could stay in the current Social Security program, where the government promises you a benefit based on your earnings. Or second, you could put part of your Social Security taxes (say, 20%) into a personal retirement account where you decide how to invest that money. If you take this second choice, the Social Security benefit that you are currently promised will be reduced by 20% because you will be putting that part of your Social Security taxes into your personal retirement account. But at retirement, you will also get whatever money is in your personal account, which will depend on the investments you make. Which would you choose—to stay in the current Social Security program or to replace part of your Social Security with a personal retirement account?

Respondents could choose the following:

1. Stay in the current social security program
2. Replace part of social security with a personal retirement account
3. Undecided
4. It would depend

Of the households responding to the question, 5,014 (66%) of respondents said that they would replace part of Social Security with a personal retirement account. Of the remaining respondents, 31% would stay with the current Social Security program, 3% were undecided, and 22 respondents said “it would depend.” These percentages are similar to results from a large July 2002 survey that found that 68% of respondents supported and 29% opposed private accounts (Zogby et al., 2003).

To illustrate differences in preference for private accounts, we compare frequencies of households responding “2” (replace) to households responding “1” (stay with Social Security). Households that responded either “3” or “4” were deleted from the analyses in this study.

To estimate demand for a privatization, we construct a logistic regression. Households that preferred to substitute a personal retirement account for Social Security were coded as 1, whereas those who chose to stay in the current Social Security program were coded as 0. Control variables are drawn from prior literature:

$$\begin{aligned} \text{Privatization} = & \beta_0 + \beta_1 * \text{Age} + \beta_2 * \text{Race} + \beta_3 * \text{Sex} + \beta_4 * \text{Education} + \beta_5 * \text{Income} \\ & + \beta_6 * \text{Physical health/myopia} + \beta_7 * \text{Family composition} + \beta_8 * \text{Wealth} \\ & + \beta_9 * \text{Region} + \beta_{10} * \text{Intelligence} + \beta_{12} * \text{Own Investment Assets} \end{aligned}$$

Age: NLSY respondents range between 39 and 47 years of age in the 2004 survey, so rather than including age as a linear variable we separate age into four two-year categories.

Race: Respondents self-assess race as Black, White, Asian, or Hispanic.

Education: Because of the hypothesized non-linear relation between education and human capital, education is split into categories based on years of schooling. Those with fewer than 12 years are coded as less than high school, those with 12 years of education are coded as high school, those with greater than 12 and less than 16 years of education are coded as some college, those with 16 years of education are coded as college, and those with more than 16 years of education are coded as graduate school.

Income: Income is coded into quintiles.

Physical health/myopia: A respondent is categorized as a smoker if in any NLSY survey they indicated that they were currently smoking. Those who exercise vigorously three or more times a week are coded as engaging in frequent exercise. If a respondent indicated that they often use nutrition labels when shopping for foods, they are coded as a nutrition label user.

Family composition: Respondents who are currently married are coded as married, and respondents who have one or more children currently living within their household are coded as having children.

Wealth: Wealth is coded into quartiles.

Region: Region is measured in the NLSY as North, North Central, South, and West. Since the NLSY does not measure political affiliation, we are able to partially proxy conservatism through region.

Intelligence: NLSY participants completed the Armed Services Vocational Aptitude Battery in 1980, which is transformed into an intelligence percentile using the Armed Forces Qualifying Test. The test is roughly equivalent to an IQ test, and correlates strongly with other tests of cognitive ability (Glaeser & Mare, 2001). Intelligence is coded into quintiles.

Own investment assets: A respondent is coded as owning investment assets if they hold any assets in stocks, bonds, or mutual funds.

Estimation of asset allocation preference is also modeled as a logistic regression using the same control variables as the private account estimation model. Households who did not prefer private accounts were also asked this question; however, 12% (941) respondents who were asked the question simply replied that they did not know what allocation they would choose and are purged from the regression analysis. For each asset allocation question, respondents are asked the following:

Now, suppose that you are required to have a personal retirement account paid for by part of your Social Security taxes. You have to decide how to invest the money that's in your personal account. You are allowed to invest your account money in one or more of three choices: the stock market, bonds issued by private companies, or U.S. federal government bonds. You will be allowed to change your investment choices several times each year at no cost. What percentage of your personal retirement account money would you put into each type of investment?

Respondents who would place the majority of personal retirement account assets in stocks were coded as preferring stocks, and households who would place between 0% and 50% of assets in stocks were coded as 0. Likewise, households who would place a majority in government bonds were coded as preferring bonds and households that would invest a majority in private bonds were coded as preferring private bonds.

4. Results

4.1. Frequencies

Descriptive results (Table 1) indicate that two-thirds of the respondents, and 68.8% of the weighted sample, preferred private retirement accounts. The greatest support was among those with the most financial resources, human capital, and a higher IQ. More than three of every four college graduates prefer private accounts compared to just over a half of those with less than a high school education. As education increases, so does support for private accounts. Respondents with IQ in the top two quintiles show a greater preference for private retirement accounts (more than 70%) than those in the lower quintiles, and the relation is likewise monotonic. Respondents who may be seen as less myopic, or who will have greater expected longevity, also show a preference for private accounts. A greater percentage of non-smokers (68%), exercisers (70%), and those who use nutrition labels (70%) prefer private accounts. Approximately 80% of respondents in the highest quartile of wealth, in the highest quintile of income, and who own investment assets show a preference for private accounts, compared to fewer than 60% of those in the lowest wealth and income categories.

A larger proportion (67%) of respondents younger than 45 prefer privatization than those between 45 and 47 (64%). A larger proportion of those in the North Central and West regions (68%) prefer private accounts than those in the South and North East (65%). Among racial groups, a little over 70% of the White and Asian respondents show preference for private retirement compared to approximately 62% of Blacks and Hispanics. A larger proportion of men (68%) prefer private retirement accounts than women (65%). Married respondents and respondents with children show a greater preference for private accounts (nearly 70%) than respondents with other family compositions (approximately 60%).

4.2. Preference for private accounts

According to logistic analysis results on preference for a private account (Table 2), the strongest predictors of privatization preference likelihood are intelligence, income, net worth, and investment asset ownership. Respondents in the highest IQ quintile are 101% more likely to prefer private retirement accounts than respondents in the lowest quintile, and respondents in the next highest (fourth) IQ quintile are 79% more likely to prefer private accounts. Respondents with the highest net worth are 98% more likely to prefer private retirement accounts than those with the least wealth, and those in the highest income quintiles are 40% and 47% more likely than those in the bottom quintile to prefer private accounts. Investment asset owners are also 48% more likely to prefer private accounts.

Table 1 Proportions choosing private accounts

Variable	Do not favor privatization	Favor privatization	Percent favoring privatization
Sample	2,551	5,014	66% ^a
Income			
Lowest Quintile	670	811	55%
Quintile 2	585	931	61%
Quintile 3	526	1,007	66%
Quintile 4	435	1,079	71%
Highest quintile	335	1,186	78%
Wealth			
Lowest quintile	387	633	62%
Quintile 2	358	671	65%
Quintile 3	302	712	70%
Quintile 4	277	733	73%
Highest quintile	205	874	81%
Own fin. assets	256	1,076	81%
Education			
< High school	398	536	57%
High school	1,135	2,028	64%
Some college	600	1,134	66%
College	194	550	74%
Graduate school	130	357	73%
IQ			
Lowest quintile	677	792	54%
Quintile 2	536	873	62%
Quintile 3	479	974	67%
Quintile 4	415	1,046	72%
Highest quintile	317	1,139	78%
Race			
White	951	2,355	69%
Black	837	1,402	63%
Asian	16	46	74%
Hispanic	375	595	61%
Age			
39–40	453	940	67%
41–42	682	1,455	68%
43–44	671	1,355	67%
45–47	740	1,257	63%
Sex			
Male	1,197	2,429	67%
Female	1,353	2,577	66%
Region			
North East	490	997	67%
North Central	587	1,310	69%
South	996	1,782	64%
West	438	940	68%
Time preference			
Use nutr. labels	1,020	2,398	70%
Don't use labels	1,531	2,616	63%
Smoker	1,514	2,792	65%
Non-smoker	1,037	2,222	68%
Frequent exercise	1,192	2,703	69%
Infrequent exercise	1,359	2,311	63%

continued

Table 1 Proportions choosing private accounts (continued)

Variable	Do not favor privatization	Favor privatization	Percent favoring privatization
Family composition			
Married	1,327	2,863	68%
Unmarried	1,224	2,151	64%
Children	1,913	3,520	65%
No children	638	1,494	70%

^aNote. U.S. population weighted proportion is 68.8%.

Human capital and health/myopia-related variables are relatively weak predictors of preference for private accounts, with the exception of those who exercise regularly. Compared to those who did not graduate from high school, the independent effect of educational attainment had no statistically significant impact on private account preference. Nutrition label users are significantly less likely to prefer private accounts, consistent with greater expected longevity; however, those who exercise regularly are 21% more likely to prefer private accounts, consistent with stronger preference for investment assets among those who are more forward thinking.

Among demographic characteristics, age, race, region, marital status, and the presence of children are all significant predictors of private account preference. Older households in the survey are 27% less likely to prefer private accounts than respondents in the 39 to 40-age category. Black households are 23% more likely to prefer investing in privatized retirement accounts than the Whites, and respondents living in the West are 24% more likely to prefer investing in private accounts than respondents from Northern states. Among family composition variables, being married decreases likelihood of preferring private accounts (by 14%), and having children increases the likelihood (by 21%). There is no statistically significant independent relation between gender and preference for privatization.

4.3. Preference for stock investment

Likelihood that respondents would invest a majority of private social security account funds in equities is presented in Table 3. Like preference for private accounts, the highest IQ quintile is the strongest predictor (44% more likely than lowest IQ) of preference for investment in equities within these accounts. Unlike preference for private accounts, gender is a strong and statistically significant predictor of equity preference. Men are 21% more likely than women to prefer equity investment.

Other statistically significant predictors of equity investment within private accounts are race, region, health/myopia variables, and marital status. Neither income nor wealth are significant predictors of equity investment. Respondents living in Western states are more likely to invest in equities, whereas married respondents are less likely. Blacks are 13% less likely than Whites to invest a majority of private account assets in stock. Respondents who read nutrition labels are 3.4% more likely to invest in stocks than those who did not read nutrition labels, and those that smoke are 10% more likely than non-smokers to put the majority of their investment in stocks.

Table 2 Prefer privatized social security

Independent variable	Parameter estimate	Odds ratio
Income		
Quintile 2	0.1718*	18%
Quintile 3	0.1786**	20%
Quintile 4	0.3242***	40%
Highest quintile	0.3912***	47%
Wealth		
Quintile 2	0.1894**	20%
Quintile 3	0.3316***	39%
Quintile 4	0.3943***	48%
Highest quintile	0.6842***	98%
Own fin. assets	0.3928***	48%
Education		
High school	0.1158	11%
Some college	-0.0515	-5%
College	0.0394	3%
Graduate school	-0.0997	-9%
IQ		
Quintile 2	0.2294**	26%
Quintile 3	0.4013***	49%
Quintile 4	0.5812***	79%
Highest quintile	0.7443***	101%
Race		
Black	0.1776**	19%
Asian	0.1820	21%
Hispanic	-0.1260	-11%
Age (39–40 reference category)		
41–42	0.0642	6%
43–44	0.0316	3%
45–47	-0.2372***	-22%
Sex		
Male	0.0228	2%
Region (North East reference category)		
North Central	0.1426	14%
South	0.1214	13%
West	0.2238**	25%
Time preference		
Use nutr. labels	0.1488***	16%
Smoker	0.0748	7%
Frequent exercise	0.1789***	19%
Family composition		
Married	0.0813	10%
Children	0.2195***	25%
<i>N</i> = 5735		
Pseudo <i>R</i> ² = 0.1827		

Note. * = 10% level of significance, ** = 5% level of significance, *** = 1% level of significance.

4.4. Preference for government bond investment

Likelihood of investment in government bonds within private accounts (Table 4) shows a strong inverse influence of cognitive ability, education and investment asset ownership on demand for a stable, tax-advantaged instrument within a tax-sheltered account. Respondents

Table 3 Majority of private account invested in stocks

Independent variables	Parameter estimate	Odds ratio
Income		
Quintile 2	0.2139**	24%
Quintile 3	0.2001*	22%
Quintile 4	0.2504**	28%
Highest quintile	0.3596***	43%
Wealth		
Quintile 2	0.0331	3%
Quintile 3	0.1136	12%
Quintile 4	0.3573***	43%
Highest quintile	0.4511***	57%
Education		
High school	0.3066**	36%
Some college	0.3359**	40%
College	0.4223**	53%
Graduate school	0.4061**	50%
IQ		
Quintile 2	0.1158	12%
Quintile 3	0.1133	12%
Quintile 4	0.1560	17%
Highest quintile	0.3077**	36%
Race		
Black	-0.4378***	-35%
Asian	0.4858	62%
Hispanic	-0.1478	-14%
Age (39–40 reference category)		
41–42	0.0662	7%
43–44	-0.0346	-3%
45–47	-0.0743	-7%
Sex		
Male	0.1748*	19%
Region (North East reference category)		
North Central	0.0556	6%
South	-0.0017	0%
West	-0.0738	-7%
Time preference		
Use nutr. labels	-0.0216	-2%
Smoker	0.0643	12%
Frequent exercise	-0.0407	-4%
Family composition		
Married	-0.0861	-9%
Children	-0.1589*	-16%
<i>N</i> = 3978		
Pseudo R^2 = 0.1470		

Note. * = 10% level of significance, ** = 5% level of significance, *** = 1% level of significance.

in the highest IQ quintile are 23% less likely to place a majority of their social security investments in government bonds than respondents in the lowest quintile. Respondents in the middle IQ quintile are 33% more likely to invest in government bonds than those in the lowest quintile, and those in the second quintile are 24% more likely than those in the

Table 4 Majority of private account invested in bonds

Independent variables	Parameter estimates	Odds ratio
Income		
Quintile 2	0.0700	–7%
Quintile 3	–0.0323	3%
Quintile 4	0.0337	–3%
Highest quintile	–0.1377	13%
Wealth		
Quintile 2	0.12071	–13%
Quintile 3	0.0057	–1%
Quintile 4	0.1637	–18%
Highest quintile	–0.0363	4%
Education		
High school	0.2994*	35%
Some college	0.1794	20%
College	0.0390	4%
Graduate school	–0.2457	–22%
IQ		
Quintile 2	0.0117	1%
Quintile 3	–0.0291	–3%
Quintile 4	–0.0055	–1%
Highest quintile	0.0501	5%
Race		
Black	–0.5399***	–42%
Hispanic	–0.4118***	–38%
Asian	0.3091	36%
Age (39–40 reference category)		
41–42	0.0774	8%
43–44	0.0877	9%
45–47	0.1187	13%
Sex		
Male	–0.3002***	–26%
Region (North East reference category)		
North Central	0.1231	13%
South	–0.0554	–5%
West	0.0361	4%
Time preference		
Use nutr. labels	–0.0159	–2%
Smoker	–0.0488	–5%
Frequent exercise	0.0011	0%
Family composition		
Married	–0.013	–1%
Children	0.0307	3%
<i>N</i> = 3280		
Pseudo <i>R</i> ² = 0.1194		

Note. * = 10% level of significance, ** = 5% level of significance, *** = 1% level of significance.

lowest IQ quintile to prefer government bonds. Respondents with a college degree are 32% less likely than respondents with less than a high school education to prefer government bond investment.

Respondents that smoke are 15% more likely than non-smokers to put majority of their investment in bonds. Black respondents are 26% more likely to prefer investing in govern-

ment bonds than Whites. Among different regions, respondents from the North Central United States are 31% less likely and those in the South are 22.9% less likely to invest in government bonds than respondents in the North. Presence of children is associated with a 30% greater likelihood of government bonds investment, and men are 13% more likely than women to invest in government bonds.

4.5. *Preference for corporate bond investment*

There are few control variables that significantly affect the likelihood of investing a majority of private account funds in corporate bonds (Table 5). The single strongest predictor is race. Black respondents are 43% less likely than Whites to invest in corporate bonds. Men are also less willing (24%) to invest their private accounts in corporate bonds. The only other group that shows a preference for corporate bond investment are respondents in the further (upper-middle class) income category, who are 46% more likely than those in the bottom quintile to invest their private accounts in corporate bonds.

5. Conclusion

This study modeled preference for social security private accounts from a data set rich in detailed demographic characteristics. Results from this study are consistent with prior studies of preference for privatization of government pensions that found a positive relation between acceptance and financial resources (Boeri et al., 2002, Devroye, 2003). Unlike these studies, we find that education and gender are not significant predictors of preference for private accounts. While fewer Black households support privatization, Blacks are more likely to prefer private accounts in a multivariate analysis.

The strongest predictor of preference for privatization is intelligence; stronger than income, current financial asset ownership, education, or wealth. This surprising result adds to the emerging literature on cognitive ability and investment decision-making by providing evidence that intelligence enables both the willingness to value future utility and the willingness to make choices that require greater investment information search. Among proxies of myopia, nutrition label use and smoking are weakly associated with preference for private accounts. Frequent exercise is statistically significant, but its relative effect is dwarfed by even the difference between the middle and lowest IQ quintile. It is apparent that while IQ and myopia are related, the explanation for such a strong preference to control investment assets among those with the greatest cognitive ability may lie within information economic theory. The cost of investing in complex financial instruments is far lower (in both psychic and time costs) for those with greater cognitive abilities.

This study also modeled willingness to invest a majority of privatized social security assets in equities, government bonds, or corporate bonds. Like Benjamin et al., (2006), we find that a high IQ is also the single strongest predictor of a preference for equity investment. Although this is consistent with the empirical results of Benjamin et al., the theoretical hypothesis that myopia is the path through which IQ influences portfolio choice is not supported.

Table 5 Majority of private account invested in government bonds

Independent variables	Parameter estimate	Odds ratio
Income		
Quintile 2	0.1906	21%
Quintile 3	0.2035	11%
Quintile 4	-0.0150	-1%
Highest quintile	-0.1482	-14%
Wealth		
Quintile 2	-0.1468	-14%
Quintile 3	-0.14853	14%
Quintile 4	-0.2392*	-21%
Highest quintile	-0.4448***	-36%
Education		
High school	0.1981	21%
Some college	0.0215	1.2%
College	-0.2195	-20%
Graduate school	-0.4814**	-39%
IQ		
Quintile 2	0.1797	19%
Quintile 3	0.0121	1%
Quintile 4	-0.0972	-10%
Highest quintile	-0.2731	-23%
Race		
Black	0.2555***	30%
Hispanic	-0.0733	-9%
Asian	-0.0393	-3%
Age (39–40 reference category)		
41–42	-0.0117	-2%
43–44	0.0764	7%
45–47	0.1939	21%
Sex		
Male	-0.2766***	-24%
Region (North East reference category)		
North Central	-0.1804	-17%
South	-0.1564	-13%
West	0.1370	14%
Time preference		
Use nutr. labels	-0.0553	-6%
Smoker	0.1381	15%
Frequent exercise	-0.0645	-7%
Family composition		
Married	-0.0524	-2%
Children	-0.0554	-6%
<i>N</i> = 3737		
Pseudo R^2 = 0.1279		

Note. * = 10% level of significance, ** = 5% level of significance, *** = 1% level of significance.

Myopia proxies exercise and nutrition label use are insignificant or weakly significant, and smoking is significant in the opposite direction. This provides further evidence that effective portfolio choice may be related to ability to digest complex financial information, which may help justify some government paternalism for those who are less able to handle the responsibility.

Investment in government bonds within a privatized social security account may also be seen as a proxy for inability to process complex financial information (or for cultural mistrust of financial markets). Because government bond returns are not subject to state income taxation, their expected yield will be lower than a comparable corporate bond with a very low default risk. Although this is not explicitly stated in the survey, highest IQ, college educated, and respondents who already own investment assets were significantly less likely to choose a government bond portfolio. Income and wealth were not significantly associated with preference for government bonds. Interestingly, upper-middle income respondents were significantly more likely to prefer corporate bond investments, investing in a highly taxed investment through a sheltered account. Black households were much more likely than Whites to invest in government bonds, and far less likely to invest in corporate bonds. Either this allocation choice reflects a mistrust of corporate debt investment or a need for additional financial education in tax-efficient portfolio allocation.

Results indicate that public support for privatized social security accounts is strong among the group of young baby boomers surveyed in the NLSY. Given the support of privatization by two of three respondents in this study, it is likely that privatization will continue to be seen as a viable policy option. Results from this study provide evidence that those with greater income and wealth will be more likely to choose private accounts if they become optional, and the impact on financial markets is potentially immense. It should also be noted that reliance on a traditional social security annuity may involve a certain amount of perceived risk relative to social security funds held in a private account. The President's Commission to Strengthen Social Security (2001) stated that social security would likely experience insolvency even with optimistic wage growth rate projections. Preference for private accounts may be seen both as a preference for investment autonomy and a lack of confidence that the traditional annuity would exist in its current form in 20 to 25 years among this sample of young baby boomers.

This study also provides evidence that if private accounts are optional, those who are most vulnerable to making investment mistakes will be the least likely to establish a private account. This may provide some solace to those who fear widespread manipulation of the inexperienced by financial services professionals who stand to profit from private account investments. It also appears that despite the complexity in predicting expected return from investment in traditional social security versus private accounts, those respondents who experts predict will gain the most from privatization are most likely to choose a private account.

Notes

1. Assuming fees of 80 basis points for assets under management.
2. The subcommittee voted 6 to 5 against recommending privatization, with two abstentions.
3. One respondent listed as 27 years old, and another listed as 48 are purged.

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