

# Do U.S. Households Perceive Their Retirement Preparedness

## ‘Rationally’?<sup>1</sup>

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### Abstract

This study examines a divergence between objective and subjective assessment for retirement resources and its adequacy. Based on objective/subjective consistency, four groups are identified by analyzing U.S. households with a full-time worker age 35 to 70 in the 2010 Survey of Consumer Finances (SCF) dataset, Optimists, Pessimists, Adequate Realists, and Inadequate Realists about the adequacy or inadequacy of retirement. Only 42% of working households are adequately prepared for retirement based on an objective measurement, while 47% rated their future retirement income adequate. About 53% of households have consistency between subjective and objective adequacy. We utilize a multinomial logistic regression to test factors related to being in one of the groups. Among households with inadequate resources (optimists versus inadequate realists), age and education are related to the likelihood of being realistic households. Moreover, households with delayed expected retirement age are less likely to be optimists.

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### Introduction

Choi, Laibson, and Madrian (2004) noted that over the last 20 years, defined benefit pension plans have been steadily being replaced with defined-contribution pension plans so that workers are more responsible for their own retirement savings. Therefore, it is important that workers have accurate assessments of their financial status in the retirement planning process. Comparing objective assessments of projected retirement adequacy to individual worker assessments of future retirement adequacy would provide insights into potential problems. Analysis of factors related to discrepancies between objective and subjective assessments could provide a better focus for financial education.

The main purpose of this study is to assess the consistency between objective and subjective projected retirement adequacy. We identify four groups based on objective/subjective consistency by analyzing households with a full-time worker in the 2010 Survey of Consumer

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Finances (SCF) dataset. We use a multinomial logistic regression to analyze factors related to being over-optimistic, over-pessimistic, or being realistic about the adequacy or inadequacy of retirement.<sup>2</sup>

## **Methodology**

### ***Data & Sample Selection***

We use the 2010 Survey of Consumer Finances (SCF) dataset, a cross-sectional dataset sponsored by the Federal Reserve Board. Our analytic sample is composed of households with a head and/or spouse who is age 35 to 70, similar to previous retirement studies such as Yuh, Montalto and Hanna (1998) and Chen (2007). Another selection rule is either a head or spouse/partner currently working full-time because we are interested in the projected retirement preparedness of future retirees. For the purpose of this study, we assumed an expected retirement age of 70 for households who answered ‘never retire from full-time job’. The total sample size of the 2010 SCF dataset is 6,482, and 2,636 (40.7%) of households meet our sample criteria.

### ***The Dependent Variable***

#### ***Objective Measurement - Projection for Retirement Adequacy***

Our calculation of resources during retirement follows the retirement income stage method reported by Chen (2007) and Kim, Hanna, and Chen (2013). The projected retirement income includes a withdrawal from accumulated retirement assets, and disposable retirement income including social security benefits, defined benefit pensions, and part-time wages. To determine the adequacy of retirement resources, we estimate benchmark replacement ratios derived from the 2010 Consumer Expenditure Survey published by the Bureau of Labor Statistics (U. S. Department of Labor, 2012). We use the normal household income of the household, and in the corresponding published income category in the BLS, we set the benchmark ratio as the ratio of average annual expenditure divided by average pre-tax income in that BLS category. If the projected retirement replacement ratio is equal to or greater than the benchmark replacement ratio, this household would have adequate retirement resources to sustain retirement needs.

#### ***Subjective Measurement – Perception for Retirement***

The SCF has a variable for the respondent’s perception of the adequacy of retirement income, with five levels – totally inadequate, inadequate, enough to maintain living standards, satisfactory, and very satisfactory. For the purpose of this study, the subjective measurement is a dichotomous indicator of households’ perception of having an adequate retirement with value equal to 1 if the value of indicator is 3, 4, or 5 (adequate), otherwise the value is 0 (inadequate).

#### ***Categories for the Dependent Variable***

The dependent variable has four nominal categories of objective/perceived retirement adequacy: realists having adequate resources (Adequate Realists), realists having inadequate resources (Inadequate Realists), households having only subjective adequacy (Optimists), and households having only objective adequacy (Pessimists).

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<sup>2</sup> We have deleted the literature review and some other sections from this version of the paper, but the reference list includes all items we referred to in developing this paper. The full paper is available from Kyoung Tae Kim, kim.1970@osu.edu

### ***Independent Variables***

Demographic variables, economic status variables, and financial attitude variables are used as independent variables. The demographic variables contain age, education, marital status, racial/ethnic characteristics, and employment status measured as categorical variables. Age is classified using five categories: 25-34, 35-44, 45-54, 55-64 and 65-70. Educational attainment is measured by four dummy variables: Less than high school, high school graduate, some college, and bachelor degree or more. Marital status is measured by using four categories: married couple, female or male, single household and partner. Racial/ethnic group is categorized by four dummy variables: white, black, Hispanic, and Asia/other. Employment status is measured with binary variables: employed and self-employed. And, the economic status variables include normal income and retirement planning variables. To capture the possible nonlinearity of the relationship, household income is transformed into the natural log of normal income.

Retirement variables consist of having a defined benefit pension, having a defined contribution pension, and expected retirement age. The expected retirement age includes four categories based on eligible age of social security: before 62, between 62 and 65, over 65, and 'never retire'. Lastly, the financial attitude variables include spending behavior, saving for retirement, and the respondent's risk tolerance. The spending behavior includes three categories: reported spending is greater than income (deficit), spending is equal to income, and spending is less than income (surplus). Households who answered retirement as savings goal are coded as a dichotomous variable, 'saving for retirement'. The level of risk tolerance is measured as four dummy variables for no risk, average, above, and substantial risk.

### ***Analysis***

In order to test the effect of our selected explanatory variables on the likelihood of being four nominal categories of objective/perceived retirement adequacy, a multinomial logistic regression model is employed for the multivariate analysis. Lindamood, Hanna, and Bi (2007) noted that Repeated-Imputation Inference (RII) provides an estimate of variances more closely representing the true variances than estimates obtained by only one imputation. However, previous SCF studies reported that the RII method cannot be easily applied to a multinomial logit model (Hogarth, Anguelov & Lee, 2004; Kyrychenko & Shum, 2009). To compensate for not using averaging the SCF imputations rather than RII technique, we use a more stringent significance level ( $P < 0.03$ ) because the RII technique generally results in a slightly higher p-value than the averaging method (Lindamood, et al., 2007).

### **Descriptive Analyses**

Table 1 indicates the proportion of U.S. households in four categories of objective/perceived retirement adequacy. Only 42% of working households are adequately prepared for retirement based on an objective measure, while 47% rated their future retirement income adequate. About 53% of households have consistency between subjective and objective adequacy. About 21% of households are "adequate realists" and have both subjective and objective adequacy. Pessimists (objective adequacy but subjective inadequacy) comprise 21% of households, while 26% are optimists (subjective adequacy but objective inadequacy).

### ***Household Characteristics by Four Categories of Objective/Perceived Retirement Adequacy***

Table 2 shows patterns of selected household characteristics by four categories of objective/perceived retirement adequacy. The rate of consistency between perceived and objective adequacy increases with age and with education. However, the rate of consistency between perceived and objective inadequacy decreases with age and with education. Inappropriate optimism does not vary much by age, but generally decrease with education.

The proportion of adequate realists is higher for married households (22%) than for single females (15%), and households in partner relationships (6%). Married households have the lowest rate of inadequate realists (29%) compared to single males (36%), single females (37%), and partner households (37%). The proportion of optimists for single females (30%) is higher than for single males (25%) and partner households (21%). Partner households have the highest rate of being pessimists (23%).

Whites have the highest proportion of adequate realists and pessimists, while Hispanics have the highest rate of inadequate realists and optimists. For households having defined benefit (DB) or defined contribution (DC) plans, the rate of adequate realists are higher than for those not having the DB or DC plan. On the other hand, the proportion of inadequate realists is the highest for households having neither the DB nor DC plan. The proportion of optimists is higher for salaried workers than for self-employed households. However, the rate of pessimists is higher for salaried workers than for self-employed households. The SCF question about retirement timing is based on expected retirement age. The rate of optimists is highest for expected retirement age before 62. Among households who answered 'never retire', inadequate realists are highest (45%), while adequate realists are lowest (13%).

### **Multivariate Analyses**

The result of the multinomial logistic regression shows the effects of independent variables on the likelihood of four categories of objective/perceived retirement adequacy explained in the methodology section. To investigate characteristics of each group, we conducted six comparisons of the likelihood of households using two reference categories: inadequate realists (Table 3), and optimists (Table 4). Demographic, economic status, retirement planning, and financial attitudinal variables are considered as important determinants to dependent variables in the multivariate analysis.

#### ***Adequate Realists versus Inadequate Realists***

The first column of Table 3 presents the multinomial logistic regression results of the likelihood of being adequate realists versus inadequate realists. Among demographic variables, the head of household's age is statistically significant in explaining categories between adequate realists and inadequate realists. For example, households aged 55-64 and 65-70 are more likely to be adequate realists, while households aged 25-34 are less likely to be adequate realists, compared to households aged 35 to 44. Households with higher normal income and defined benefit or defined contribution plans have a higher likelihood of having adequate retirement than those not having these plans. Households with a surplus are more likely to be adequate for retirement than those who spend more than their income. Lastly, households willing to take average or above-average risks are more likely to be adequate realists than those unwilling to take any risk.

### ***Optimists versus Inadequate Realists***

The second column of Table 3 presents the multinomial logistic regression results of the likelihood of being optimists versus inadequate realists. They have different perceptions of retirement, even though both groups do not have inadequate resources. Households in the age range of 55-64 and 65-70 are more likely to be optimists than those aged 35-44. Compared to households with less than a high school diploma, households with a bachelors or higher degree are less likely to be optimists over inadequate realists. Blacks are more likely to be optimists than Whites. Households who expect a delayed retirement after age 65 have a higher likelihood of being inadequate realists than households with expected retirement of age 62. Those with defined benefit or defined contribution plans are more likely to be optimists than similar households not having DB or DC plans. Spending behavior has a positive effect on the likelihood of being optimists. For example, households who spend less than or equal to income are more likely to be optimists than those with a deficit. Lastly, households willing to take average or above-average risks are more likely to be optimists than those unwilling to take any risk.

### ***Pessimists versus Inadequate Realists***

The third column of Table 3 presents the multinomial logistic regression results of the likelihood of being pessimists versus inadequate realists. Households aged 25-34 are less likely to be pessimists than those aged 35-44. Education, marital status, race, and employment status are not statistically significant. Households who expected their retirement ages between 62 and 65, and expected to 'never retire' are more likely to be pessimists over inadequate realists. Moreover, households having defined contribution plans are more likely to be pessimists than similar households not having retirement plans. Lastly, households willing to take above-average risks are more likely to be pessimists than those unwilling to take any risk.

### ***Adequate Realists versus Optimists***

The first column of Table 4 presents the multinomial logistic regression results of the likelihood of being adequate realists versus optimists. Educational attainment has a positive effect on the likelihood of being adequate realists over optimists. Compared to salary workers, self-employed households are less likely to be adequate realists. The likelihood of being adequate realists increases with normal income. And, households who own defined benefit pensions have a higher likelihood of being adequate realists than each reference category. Other variables are not statistically significant in this regression model.

### ***Pessimists versus Optimists***

The third column of Table 4 presents the multinomial logistic regression results of the likelihood of being adequate realists versus optimists. These households have inconsistent results between objective and subjective assessment for retirement adequacy. Compared to households aged 35-44, relatively older households aged 65-70 are more likely to be pessimists. As level of education increases, the likelihood of being pessimists increases. Black and Hispanic households are less likely to be pessimists than Whites. Self-employed households are more likely to be pessimists, compared to salary workers. The delayed expected retirement ages have a positive effect on the likelihood of being pessimists over optimists. Households who spend equal to or less than their income were less likely to be pessimists than those with a deficit. Having retirement plans, retirement purpose, and risk tolerance are not statistically significant.

## Discussion

The primary goal of this study is to analyze the deviation between a household's objective, and subjective assessment for retirement adequacy. Four different types of households are categorized by two assessments: Adequate Realists, Inadequate Realists, Optimists and Pessimists. For a more detailed discussion, we focus on two sub-categorizations: (1) consistency between objective and subjective projected retirement adequacy, and (2) adequate retirement resources projected by the retirement income stage method (Chen, 2007; Kim et al., 2013).

Among households with inconsistent assessments, we analyze optimists compared with inadequate realists who have inadequate retirement resources. We found that age has a significant association with the likelihood of being optimists over inadequate realists. For example, older groups aged 55-70 are more likely to be optimists than those aged 35-44. This result is consistent with previous research which showed that the capability of individuals to make major financial decisions peak at the age of 53, and declines dramatically at higher ages (Agarwal, Driscoll, Gabaix & Laibson, 2009). For retirement planning variables, households who expect that they will retire after 65, or never retire, are less likely to be optimists than those with expected retirement age before 62. In other words, optimists may plan to retire at a relatively earlier age because of their optimism for retirement adequacy. Therefore, Optimists need to consider an alternative way (e.g., using a financial planner) to improve their retirement assessments.

Focusing on households who have consistency between subjective and objective adequacy, we analyzed Adequate Realists compared with Inadequate Realists. Compared to households with heads aged 35 to 44, households aged 55-70 are more likely to be adequate realists, while those aged 25-34 were less likely to be adequate realists. This result is partially consistent with the Life Cycle Saving (LCS) Model (Modigliani & Brumberg, 1954). Young households are expected to have negative saving since they typically have relatively low earnings, and incur other higher expenses such as education and housing. Households in the middle period of the life cycle begin to save their money for retirement and pay their debts. Households who spend less than their income are more likely to be adequate realists than those with a deficit. This spending behavior can be specified as the problem of whether people use commitment mechanisms that could control their savings behavior and enhance the likelihood of saving (Laibson, 1997; Thaler & Shefrin, 1981). In order to improve the level of retirement adequacy, households spending more than their income need to have commitment devices for retirement savings such as IRAs and 401(k) plans.

Education plays an important role in household's assessment to retirement adequacy. Our descriptive results shown in Table 2 indicate that households with higher education have a higher proportion of consistency between perceived and objective adequacy. Among households with inadequate retirement resources, the more educated households are less likely to be optimists who have an inconsistent assessment. Furthermore, educational attainment has a positive effect on the likelihood to have an adequate retirement. Compared to optimists, the more educated are more likely to be adequate households including adequate realists and pessimists. Though educational attainment is only used as a proxy for an individual's cognitive ability in this study, we confirmed that education has a positive effect on the consistent retirement assessment of households. Martin and Finke (2012) found that use of a comprehensive financial advisor for

retirement planning has a statistically positive impact on retirement wealth accumulation. They also suggested that households with behavioral biases or financially unsophisticated would have a greater benefit of using a financial intermediary for retirement planning. Future studies could investigate the role of financial planning services, and its value on objective and subjective retirement assessment.

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**Table 1 - Perception versus Objective Retirement Adequacy of U.S Households, 2010 SCF**

	<u>Objective Measurement</u> <sup>b</sup>		Total
	Adequate Retirement	Inadequate Retirement	
<u>Subjective Measurement</u> <sup>a</sup>			
Perceived Adequate retirement	20.7% (Adequate Realists)	26.4% (Optimists)	47.1%
Perceived Inadequate retirement	21.1% (Pessimists)	31.8% (Inadequate Realists)	52.9%
Total	41.8%	58.2%	100%

<sup>a</sup> For the purpose of this study, we recoded the perceived retirement adequacy variable as a binary category. When the response is coded 1 or 2 (totally inadequate and inadequate), it is defined as having a perception of an inadequate retirement. If the response has 3, 4, or 5, perceived adequacy coded as having a perception of an adequate retirement.

<sup>b</sup> See the method section.

**Table 2 - Percent Distribution of Perception/Objective Retirement Adequacy Status by Selected Household Characteristics, 2010 SCF.**

Variable	All households	Adequate Realists	Inadequate Realists	Optimists	Pessimists
<b>Age of household head</b>					
25 - 34	1.5	2.6	64.2	25.5	7.7
35 - 44	35.0	18.2	36.5	24.6	20.7
45 - 54	37.6	19.2	31.0	27.5	22.3
55 - 64	22.0	24.4	26.3	27.4	21.9
65 - 70	3.9	43.3	16.5	26.4	13.8
<b>Marital status</b>					
Married	63.0	22.4	28.9	26.1	22.6
Single male	11.8	21.2	36.2	25.3	17.3
Single female	19.0	15.0	37.4	29.8	17.8
Partner	6.2	19.4	36.7	20.8	23.1
<b>Education of household head</b>					
Less than high school	8.3	8.2	41.5	38.5	11.8
High school graduate	28.6	16.4	35.1	28.5	20.0
Some college	17.9	17.6	31.4	29.2	21.8
Bachelor degree or more	45.2	26.9	28.3	21.7	23.1
<b>Racial-ethnic category</b>					
White	69.6	21.4	30.3	23.9	24.4
Black	12.7	21.2	34.5	31.7	12.6
Hispanic	12.8	17.0	37.6	33.5	11.9
Asian or others	4.9	18.4	31.8	29.4	20.4

Variable	All households	Adequate Realists	Inadequate Realists	Optimists	Pessimists
Employment status					
Salary worker	89.2	20.7	31.5	27.7	20.1
Self-employment	10.8	20.9	34.8	15.1	29.2
Expected retirement age					
Retirement age < 62	21.4	22.3	29.5	33.2	15.0
62 ≤ Retirement age ≤ 65	37.0	22.8	28.5	27.7	21.0
Retirement age > 65	22.7	22.4	28.7	24.9	24.0
Never Retire	18.9	12.6	44.9	17.9	24.6
Have defined benefit (DB) plan	16.4	36.0	18.7	25.7	19.6
Do not have DB	83.6	17.7	34.4	26.5	21.4
Have defined contribution (DC) plan	50.4	26.3	22.7	27.5	23.5
Do not have DC	49.6	14.9	41.2	25.3	18.6
Spending behavior					
Spending > Income	15.0	14.4	43.7	20.7	21.2
Spending = Income	28.6	15.0	37.9	28.6	18.5
Spending < Income	56.4	25.2	25.6	26.8	22.4
Have retirement purpose	58.6	23.9	26.2	26.1	23.8
Do not have retirement purpose	41.4	16.2	39.8	26.8	17.2
Risk tolerance					
No risk	37.9	13.6	41.0	27.5	17.9
Average risk	42.0	25.8	27.2	25.5	21.5

Variable	All households	Adequate Realists	Inadequate Realists	Optimists	Pessimists
Above average risk	17.4	23.6	23.9	25.5	27.0
Substantial risk	2.7	21.7	26.7	29.8	21.8

Note: Restrictions are described in the Methods Section, and include head or spouse/partner being 35 or older, but no more than 70, and head and/or the spouse being in the labor force.

**Table 3 - Multinomial Logit Regression Result based on the 2010 SCF (reference category: Inadequate Realists)**

Variable	Adequate Realists versus Inadequate Realists		Optimists vs. Inadequate Realists		Pessimists vs. Inadequate Realists	
	Odds ratio	P-value	Odds ratio	P-value	Odds ratio	P-value
Demographic variables: Age, Education, Marital status, Race/ethnic, Employment status						
Age of household head (reference category: age 35 to 44)						
25 - 34	0.066	0.0100	0.495	0.1184	0.213	0.0133
45 - 54	1.117	0.4581	1.246	0.1022	1.041	0.7698
55 - 64	1.730	0.0015	1.498	0.0144	1.126	0.4713
65 - 70	7.758	<.0001	4.191	0.0001	1.760	0.1177
Education of household head (reference category: less than high school)						
High school	1.399	0.2866	0.697	0.0964	1.405	0.2348
Some college	1.212	0.5603	0.643	0.0620	1.509	0.1683
Bachelor degree or more	1.606	0.1343	0.526	0.0050	1.259	0.4267
Marital status (reference category: married)						
Single male	1.199	0.3326	0.809	0.2516	0.864	0.4370
Single female	0.809	0.2596	1.062	0.7029	1.063	0.7230
Partner	1.072	0.7995	0.867	0.5649	1.120	0.6434
Racial-ethnic category (reference category: white)						
Black	1.541	0.0337	1.475	0.0286	0.764	0.2121
Hispanic	1.543	0.0488	1.404	0.0673	0.793	0.2941
Asian or others	0.981	0.9463	1.355	0.2297	0.736	0.2746
Self-employment (reference: salary worker)	1.030	0.8663	0.669	0.0313	1.401	0.0340

Variable	Adequate Realists versus Inadequate Realists		Optimists vs. Inadequate Realists		Pessimists vs. Inadequate Realists	
	Odds ratio	P-value	Odds ratio	P-value	Odds ratio	P-value
Economic variables: Income, Retirement age, Retirement plan						
Log of Income	1.377	<.0001	0.986	0.8321	1.662	<.0001
Expected retirement age (reference category: before 62)						
62 ≤ Retirement age ≤ 65	1.126	0.4777	0.842	0.2650	1.337	0.0840
Retirement age > 65	0.925	0.6775	0.667	0.0228	1.334	0.1144
Never retire	0.714	0.1026	0.449	<.0001	1.602	0.0093
Have defined benefit (DB) plan (reference category: No)	1.972	<.0001	1.607	0.0038	1.422	0.0368
Have defined contribution (DC) plan (reference category: No)	3.060	<.0001	1.679	0.0002	1.488	0.0053
Financial attitudinal variable: Spending behavior, Retirement Purpose, Risk tolerance						
Spending behavior (reference category: Spending > Income)						
Spending = Income	1.330	0.1796	1.551	0.0172	0.977	0.8995
Spending < Income	2.028	0.0002	2.043	<.0001	1.263	0.1646
Have retirement purpose (reference category: No)	1.172	0.2302	1.110	0.4011	1.184	0.1754
Risk tolerance (reference category: Take no risk)						
Average risk	1.879	<.0001	1.391	0.0179	1.284	0.0839
Above average risk	2.077	0.0002	1.732	0.0029	1.922	0.0003
Substantial risk	1.551	0.1813	1.264	0.4748	1.175	0.6034

<sup>a</sup> Unweighted analysis of 2010 SCF dataset, average of five implicates.

**Table 4 - Multinomial Logit Regression Result based on the 2010 SCF (reference category: Optimists)**

Variable	Adequate Realists versus Optimists		Inadequate Realists versus Optimists		Pessimists versus Optimists	
	Odds ratio	P-value	Odds ratio	P-value	Odds ratio	P-value
Demographic variables: Age, Education, Marital status, Race/ethnic, Employment status						
Age of household head (reference category: age 35 to 44)						
25 - 34	0.134	0.0624	2.018	0.1184	0.430	0.2197
45 - 54	0.896	0.4744	0.802	0.1022	0.836	0.2223
55 - 64	1.155	0.4112	0.668	0.0144	0.752	0.0996
65 - 70	1.851	0.0465	0.239	0.0001	0.420	0.0081
Education of household head (reference category: less than high school)						
High school	2.008	0.0263	1.435	0.0964	2.017	0.0175
Some college	1.884	0.0544	1.554	0.0620	2.345	0.0057
Bachelor degree or more	3.051	0.0004	1.900	0.0050	2.392	0.0037
Marital status (reference category: married)						
Single male	1.483	0.0469	1.237	0.2516	1.069	0.7446
Single female	0.762	0.1519	0.942	0.7029	1.001	0.9948
Partner	1.235	0.4631	1.153	0.5649	1.291	0.3478
Racial-ethnic category (reference category: white)						
Black	1.044	0.8288	0.678	0.0286	0.518	0.0027
Hispanic	1.099	0.6704	0.712	0.0673	0.565	0.0130
Asian or others	0.724	0.2605	0.738	0.2297	0.543	0.0331
Self-employment (reference: salary worker)	1.541	0.0270	1.496	0.0313	2.095	<.0001



Variable	Adequate Realists versus Optimists		Inadequate Realists versus Optimists		Pessimists versus Optimists	
	Odds ratio	P-value	Odds ratio	P-value	Odds ratio	P-value
Economic variables: Income, Retirement age, Retirement plan						
Log of Income	1.396	<.0001	1.014	0.8321	1.685	<.0001
Expected retirement age (reference category: before 62)						
62 ≤ Retirement age ≤ 65	1.337	0.0732	1.188	0.2650	1.588	0.0055
Retirement age > 65	1.387	0.0857	1.500	0.0228	2.001	0.0002
Never retire	1.588	0.0363	2.225	<.0001	3.605	<.0001
Have defined benefit (DB) plan (reference category: No)	1.822	0.0002	0.596	0.0038	0.886	0.4969
Have defined contribution (DC) plan (reference category: No)	1.226	0.1299	0.622	0.0002	0.884	0.3519
Financial attitudinal variable: Spending behavior, Retirement Purpose, Risk tolerance						
Spending behavior (reference category: Spending > Income)						
Spending = Income	0.858	0.5039	0.645	0.0172	0.630	0.0284
Spending < Income	0.993	0.9718	0.489	<.0001	0.618	0.0123
Have retirement purpose (reference category: No)	1.056	0.6898	0.901	0.4011	1.066	0.6271
Risk tolerance (reference category: Take no risk)						
Average risk	1.351	0.0590	0.719	0.0179	0.923	0.6024
Above average risk	1.199	0.3527	0.577	0.0029	1.110	0.5777
Substantial risk	1.227	0.5564	0.791	0.4748	0.929	0.8300

<sup>a</sup> Unweighted analysis of 2010 SCF dataset, average of five implicates.