

## **Preparing for retirement: The importance of planning costs**

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The responsibility to save and contribute to a pension is increasingly left to the individual worker. For example, many firms have shifted from defined benefit to defined contribution pensions, where workers have to choose not only the amount of contributions, but also how to allocate their pension wealth. The current debate on the privatization of Social Security considers putting individuals in charge of allocating their Social Security wealth. There is little research, however, on the difficulties that people face in making decisions about pensions and savings and how they overcome the complexities of devising saving plans. Many employers, in particular large ones, have started offering financial education to workers. However, there is mixed evidence on the effectiveness of financial education in the workplace.

In this paper, I use data from the Health and Retirement Study (HRS) to examine workers' planning activity toward retirement. I first study the determinants of planning. I then examine whether employers' initiatives to reduce planning costs via retirement seminars have an effect on workers' savings. I find that retirement seminars stimulate savings, particularly for those at the bottom of the wealth distribution and those with low education.

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## **Planning and retirement savings**

Several researchers, such as Bernheim (1988), Yabokoski and Dickemper (1997), and Lusardi (2000), have documented that there exist many difficulties in making plans for retirement and that many workers do little or no planning for retirement. Perhaps as further evidence that planning costs exist and are important, employers have started offering retirement seminars to their workers. Previous studies, such as McCarthy and Turner (1996), Bayer, Bernheim and Scholz (1996), Bernheim and Garrett (2002), Clark and Schieber (1998), and Madrian and Shea (2001)), have looked at the effects of financial education in the workplace on private savings or contributions to pension funds. The empirical findings are still mixed. There is evidence of some effects of financial education, but the form of education seems to matter. For example, Bayer, Bernheim and Scholtz (1996) find that programs that rely on print media (newsletters, plan description, etc.) have generally no effects on participation or contributions to pensions. Furthermore, retirement seminars seem to affect only certain aspects of behavior, for example participation in pensions and the amount of contributions but not, for example, total savings (Bernheim and Garrett (2002), McCarthy and Turner (1996)). However, these and other similar studies suffer from severe data shortcomings. For example, they have often limited information about workers' characteristics and the characteristics of their pension plan. Most importantly, they have poor information about wealth.

In my work, I use data from the HRS to evaluate the effectiveness of retirement seminars. The HRS 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.

There are several advantages in using this data set. First, it focuses on a group of respondents who should be close to the peak of their retirement savings accumulation. Second, it provides very detailed and accurate information about wealth. Third, it provides a rich set of information about household characteristics that can be important to account for the wide heterogeneity in household behavior toward savings and retirement planning.

In previous works (Lusardi (1999, 2000)), I have examined wealth holdings close to retirement. I show that there are wide disparities in wealth, even among respondents of similar age and economic status. Furthermore, a large share of households gets close to retirement with little or no wealth. This is particularly the case for households with low education attainment.

One of the novelties of the HRS is to provide information on retirement planning. Respondents are asked to report how much they have thought about retirement, whether they have asked Social Security to calculate their retirement benefits, and whether they have ever attended a meeting on retirement and retirement planning organized by their or their spouse's employer. Planning matters for savings. Those who have not thought about retirement have much lower wealth holdings than those who thought about retirement (Lusardi (2000), and Ameriks, Caplin and Leahy (2002)).

What about other forms of planning, such as attending retirement seminars? To examine this question, I first consider the characteristics of those who attended retirement seminars. To construct simple statistics, I exclude respondents who are retired (partially or totally) and restrict to those households whose financial respondent (i.e., the respondent which provides information about wealth) is between the age of 50 and 61.

Respondents who are male, white, and married are more likely to have attended retirement seminars. Those who have high education (more than high school) or come from a family of high education are also more likely to have attended retirement seminars. Of course, this could result from the fact that these respondents are less likely to work in firms that offer such seminars. However, similar findings are obtained when considering other indicators for planning, such as whether they have thought about retirement and have asked Social Security to calculate their retirement benefits (see Lusardi (2000), and Lusardi (2002)). When considering other household characteristics that can proxy for patience and discipline, such as whether the respondent smokes or stopped smoking, drinks heavily, thinks he/she should cut down on drinking, does not exercise, and has talked to a doctor about health, one finds they correlate strongly with planning activities. Fundamentally, there is a lot of heterogeneity in individual behavior and it is important to account for it in the empirical work.

### **Empirical estimates**

There are several difficulties in evaluating the effects of retirement seminars on savings. First, there are many determinants of savings and it is often hard, if not impossible, to have accurate information about them. Second, attending retirement seminars could simply reflect some individual characteristics, such as being patient and diligent, which are also likely to affect wealth accumulation. Attending retirement seminar could be a proxy for attitudes towards saving rather than measuring the effects of providing information, improving financial literacy, and/or reducing planning costs. Third, if as reported by Bernheim and Garrett (2002), seminars are remedial, they are

offered to those who are more likely to need it. Therefore, it may be very hard to detect the effects of seminars in the data.

In my empirical work, I use the rich set of information in the HRS to account as much as possible for the heterogeneity present in household behavior. Furthermore and, more importantly, I consider the effects of retirement seminars throughout the wealth distribution. If financial education is remedial, I should find an effect at the lower quartiles of the wealth distribution. To further investigate this effect, I also consider regressions across education groups. It is those with low education that should be affected more strongly by retirement seminars.

I consider two measures of accumulation: financial and total net worth. Financial net worth is defined as the sum of checking and savings accounts, bonds, stocks, IRAs and Keoghs, and other assets minus short-term debt. Total net worth is obtained by adding housing equity, other real estate, business equity, and vehicles to financial net worth. In the empirical regressions, these measures are divided by permanent income.<sup>2</sup> Retirement seminar is proxied by a dummy for whether the respondent attended a retirement seminar offered by the employer. Among the set of explanatory variables in the regressions, I consider not only age and age squared to capture the hump-shaped profile of wealth holdings, but also some simple demographics, such as the total number of children, and the number of children still living at home, gender, race, country of birth, marital status, and education that can account for heterogeneity in tastes. I also include

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<sup>2</sup> To construct the final sample for the empirical estimation, I deleted those respondents that do not report information on the variables listed in the text. Since the distribution of the ratio of total and financial net worth to permanent income is so wide, I trim the distribution and exclude the top and bottom 1%. The total number of observations is 3,265. Permanent income is constructed by regressing total household income on a set of demographics, firm characteristics, occupation and education dummies and those dummies interacted with age, and subjective expectations of income changes in the future.

dummies for regions of residence and health status.<sup>3</sup> Permanent income is included among the regressors to account for non-homothetic 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 theoretical models of savings. There is a way to infer this information in the HRS, and therefore to account for variation in preferences when explaining household savings. 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. Additionally, data on smoking, drinking, caring about one's health, and exercising regularly can be used to proxy for the rate of time preference and household heterogeneity.

Savings is a stock and, to explain differences in accumulation, it is also important to account for past history. I use information on past unemployment and other episodes in the past that made it difficult to meet financial needs to account for negative shocks. I also account for positive shocks, such as receiving inheritances, money from insurance settlements, or money from relatives and friends.

Since the decision to save is inherently related to the future, it is also important to have information about what households expect for the future. In the HRS, respondents are asked to report the probabilities that home prices will increase more than the increase in the general price level, and that Social Security will become less generous in the future. This is very useful information as housing is one of the most important assets in the portfolios of households and Social Security is a critical source of support after

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<sup>3</sup> For brevity, the estimates of demographic variables are not reported in the tables.

retirement, particularly for low-income households. I also account for the probability of living up to 75.

There are other motives to save apart from providing for retirement. Households may save to leave a bequest to future generations, and I account for this motive by using information on the intentions of leaving bequests to heirs. I consider the possibility of receiving bequests in the future by using a dummy for whether at least one parent is alive, and I account for the probability of giving financial help to family members in the future. Additionally, I consider a precautionary saving motive and proxy for it using the variance of earnings risk, which is constructed using expectations about future job losses.<sup>4</sup> I also account for the fact that households accumulate little because they can rely on help from relatives and friends in case they run into severe financial difficulties in the future. Since seminars are potentially correlated with pension eligibility (Bernheim and Garrett (2002)), I also control for pensions.

I report the empirical estimates in Tables 1 and 2. The effect of seminars is positive and significant for the first quartile of total net worth. The effect dies out for higher quartiles of the distribution (Table 1). Similar results are found when considering financial net worth. Retirement seminars affect the first two quartiles of the wealth distribution (Table 2). This is consistent with the fact that retirement seminars are remedial. Thus, they affect those who save the least. To further investigate this effect, I also consider regressions across education groups. As mentioned before, there are very wide disparities across households with different education attainments. I consider the effect of retirement seminars in the whole sample and across wealth quartiles (Tables 3

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<sup>4</sup> See Lusardi (1998) for detail on the construction of this variable.

and 4).<sup>5</sup> Results are similar and again point to the fact that, since financial education is remedial, it affects mostly those at the bottom of the wealth distribution. The effect is important and sizable, particularly for those with low education (high school or less). As reported before, the accumulation of wealth is particularly low among households with low education.

The wide set of controls matter for the empirical regressions and for evaluating the significance as well as the economic relevance of retirement seminars. For example, if I account for a small set of demographics (age, gender, race, marital status, region, health status and education) and economic status (permanent income) only, I find that retirement seminars are significant in every regression (in the whole sample and across education groups). However, when adding variables proxying for impatience and attitudes towards saving (smoking, drinking, exercising, checking health), the bequest and precautionary saving motive, and subjective expectations about the future, the estimates for retirement seminars decrease and often lose their significance.

The importance of these variables can be seen in Tables 1 and 2. Estimates for smoking and drinking are negative and strongly significant, in particular for those with low education and for those at the lower quartiles of the wealth distribution. The bequest motive is also important in explaining accumulation, particularly for those with high education and for the richer households. Among the subjective expectations variables, a really important one is the probability that house prices will increase a lot in the future. The sign is negative and significant in most regressions. This is again consistent with the fact that households have relatively little in financial assets, while their wealth is mostly

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<sup>5</sup> For brevity, estimates for financial net worth across education groups are not reported but are available from the author upon request.

in their house. Those who expect an appreciation of their house in the future accumulate less. Conversely, those who report a high probability to give financial help to family member in the future tend to accumulate more wealth. Another notable result is that households that have pensions accumulate more rather than less wealth, showing that households who have much in retirement assets also have more in other forms of accumulation. These findings suggest that data sets that do not provide information to control for the large amount of heterogeneity present in savings data may lead to incorrect estimates of the effects of retirement seminars.

To better understand the effects of retirement seminars, it is important to examine not only wealth accumulation but also portfolio choice. For example, seminars may influence whether or not households invest in stocks. Similarly, it is important to examine not only private wealth, but also the accumulation and allocation of pension wealth. Some of this research is pursued in Lusardi (2002).

### **Concluding remarks**

In this paper, I examine whether retirement seminars play a role in explaining the wide differences in wealth that we observe among older households. I find that seminars are remedial and affect mostly those at the bottom of the wealth distribution and those with low education. My estimates suggest that retirement seminars are a potentially important vehicle to influence the accumulation of wealth. The provision of information and the reduction of planning costs can play a role in improving the financial security of many U.S. households.

## References

- Ameriks, John, Andrew Caplin and John Leahy. Wealth Accumulation and the Propensity to Plan. Mimeo, TIAA-CREF Institute, (2002).
- Bayer, Patrick, Douglas Bernheim, and J. Karl Scholz. The Effects of Financial Education in the Workplace: Evidence from a Survey of Employers. Cambridge, MA: National Bureau of Economic Research Working Paper n. 5655, (1996).
- Barsky, Robert, Miles Kimball, Thomas Juster and Matthew Shapiro. Preference Parameters and Behavioral Heterogeneity: An Experimental Approach in the Health and Retirement Study. *Quarterly Journal of Economics* 62 (1997): 537-579.
- Bernheim, Douglas. Financial Illiteracy, Education and Retirement Saving. In Olivia Mitchell and Sylvester Schieber, eds. *Living with Defined Contribution Pensions*. Philadelphia: Pension Research Council, (1998): 38-68.
- Bernheim Douglas and Daniel Garrett. The Effects of Financial Education in the Workplace: Evidence from a Survey of Households, forthcoming *Journal of Public Economics*, (2002).
- Clark, Robert and Sylvester Schieber. Factors Affecting Participation Rates and Contribution Levels in 401(k) Plans. In Olivia Mitchell and Sylvester Schieber, eds. *Living with Defined Contribution Pensions*, Philadelphia: Pension Research Council, (1998): 69-97.
- Lusardi, Annamaria. On the Importance of the Precautionary Saving Motive, *American Economic Review* 88 (May 1998): 449-453.
- Lusardi, Annamaria. Information, Expectations, and Savings for Retirement. In Henry Aaron, ed. *Behavioral Dimensions of Retirement Economics*. Washington, D.C.: Brookings Institution Press and Russell Sage Foundation, (1999): 81-115
- Lusardi, Annamaria. Explaining Why So Many Households Do Not Save. Working Paper, University of Chicago and Dartmouth College (2000).
- Lusardi, Annamaria. Planning and the Effectiveness of Retirement Seminars. Mimeo, Dartmouth College, (2002).
- Madrian, Brigitte and Dennis Shea. The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior, *Quarterly Journal of Economics* 65 (2001): 1149-1187.
- McCarthy, David and John Turner. Financial Sophistication, Saving and Risk Bearing. Mimeo, U.S. Department of Labor, (1996).

Yakoboski, Paul and Jennifer Dickemper. Increased Saving but Little Planning: Results of the 1997 Retirement Confidence Survey. *EBRI Issue Brief* 191, (November 1997).

**Table 1: Explaining household savings**

Total sample								
	Total Net worth							
	Total Sample		1 <sup>st</sup> quartile		Median		3 <sup>rd</sup> quartile	
	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err
constant	-2.044	6.148	-2.061	3.112	-4.044	5.454	-1.904	7.108
<b>seminars</b>	<b>0.149</b>	<b>0.133</b>	<b>0.308**</b>	<b>0.069</b>	<b>0.175</b>	<b>0.124</b>	<b>0.019</b>	<b>0.164</b>
excellent health	0.560**	0.164	0.304**	0.088	0.455**	0.149	0.907**	0.195
very good health	0.195	0.154	0.186**	0.081	0.291**	0.139	0.407**	0.181
good health	0.170	0.152	0.218**	0.078	0.264*	0.136	0.432**	0.177
permanent inc./1000	-0.033**	0.006	-0.002	0.003	-0.013**	0.006	-0.036**	0.008
past unemployment	-0.290**	0.096	-0.142*	0.050	-0.313**	0.088	-0.344**	0.117
past shocks	-0.522**	0.093	-0.293**	0.050	-0.392**	0.087	-0.571**	0.115
received inheritances	0.672**	0.112	0.293**	0.061	0.507**	0.106	0.813**	0.138
money from relatives	0.723**	0.158	0.359**	0.086	0.728**	0.150	0.794**	0.200
money from insurance	0.797**	0.208	0.561**	0.108	0.760**	0.198	0.641**	0.252
high risk aversion	0.009	0.139	0.124*	0.072	0.131	0.128	0.369**	0.165
medium risk aversion	0.106	0.173	0.140	0.092	0.166	0.161	0.421**	0.208
moderate risk aversion	-0.093	0.181	0.167*	0.095	0.231	0.168	0.103	0.218
variance of income	0.007	0.005	0.003	0.004	0.021**	0.005	0.026**	0.005
prob. live to 75	0.078	0.166	-0.128	0.088	0.036	0.153	-0.018	0.198
prob. SS less generous	-0.125	0.149	0.021	0.078	0.045	0.137	-0.139	0.184
prob. house price up	-0.452**	0.153	-0.236**	0.082	-0.447**	0.141	-0.489**	0.186
prob. give help to famil	0.359**	0.143	0.079	0.074	0.284**	0.132	0.551**	0.176
will leave bequests	1.115**	0.089	0.543**	0.047	0.877**	0.083	1.288**	0.110
can rely on help	0.008	0.088	0.084	0.046	0.135*	0.082	0.194*	0.109
parent alive	-0.142	0.102	0.034	0.053	0.023	0.095	-0.180	0.124
heavy smoker	-0.479**	0.119	-0.287**	0.065	-0.433**	0.112	-0.702**	0.146
heavy drinker	-0.324	0.203	-0.232**	0.110	-0.102	0.188	-0.094	0.238
no regular exercise	-0.268**	0.093	-0.176**	0.049	-0.219**	0.087	-0.286**	0.114
talk to doc about health	0.309**	0.106	0.084	0.056	0.157	0.099	0.460**	0.129
have pensions	0.174*	0.102	0.189**	0.054	0.186**	0.094	0.164	0.126
Adjusted/Pseudo R <sup>2</sup>	0.158		0.112		0.113		0.130	

Note: This table reports OLS and quantile regressions of total net worth over permanent income on the variables listed in the first column. Even though not reported, regressions include several demographic variables. Refer to the text for a complete list of the variables used in the estimation. The number of observations is 3,265.

\* indicates significance at the 10% level

\*\* indicates significance at the 5% level

**Table 2: Explaining household savings**

Total sample								
	Financial Net Worth							
	Total Sample		1 <sup>st</sup> quartile		Median		3 <sup>rd</sup> quartile	
	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err
constant	-0.274	3.000	-0.036	0.494	-0.958	1.753	2.216	3.575
<b>seminars</b>	<b>0.137**</b>	<b>0.065</b>	<b>0.088**</b>	<b>0.011</b>	<b>0.134**</b>	<b>0.040</b>	<b>0.103</b>	<b>0.086</b>
excellent health	0.144*	0.080	0.058**	0.013	0.071	0.048	0.146	0.102
very good health	0.091	0.075	0.076**	0.012	0.073	0.045	0.108	0.095
good health	0.069	0.074	0.048**	0.012	0.025	0.044	0.088	0.093
permanent inc./1000	-0.004	0.003	0.0008	0.0005	-0.0005	0.002	-0.001	0.004
past unemployment	-0.004	0.047	-0.023**	0.008	-0.027	0.028	-0.055	0.061
past shocks	-0.287**	0.045	-0.067**	0.008	-0.13**	0.028	-0.279**	0.059
received inheritances	0.248**	0.055	0.043**	0.009	0.254**	0.034	0.350**	0.072
money from relatives	0.229**	0.077	0.022	0.013	0.118**	0.049	0.301**	0.103
money from insurance	0.490**	0.101	0.089**	0.017	0.359**	0.063	0.570**	0.133
high risk aversion	-0.113*	0.068	0.007	0.011	0.004	0.041	0.021	0.087
medium risk aversion	-0.127	0.084	0.036**	0.014	0.020	0.052	0.042	0.109
moderate risk aversion	-0.186**	0.088	0.014	0.015	-0.019	0.054	-0.126	0.113
variance of income	0.003	0.003	0.003**	0.0007	0.008**	0.001	0.014**	0.003
prob. live to 75	0.022	0.081	-0.020	0.014	-0.029	0.049	0.042	0.103
prob. SS less generous	0.067	0.073	0.007	0.012	0.015	0.044	0.105	0.095
prob. house price up	-0.261**	0.075	-0.029**	0.013	-0.064	0.045	-0.280**	0.096
prob. give help to fam.	0.167**	0.070	0.031**	0.012	0.025	0.042	0.126	0.092
will leave bequests	0.312**	0.043	0.099**	0.007	0.203**	0.027	0.428**	0.057
can rely on help	0.031	0.043	0.027**	0.007	0.045*	0.026	0.053	0.056
parent alive	-0.068	0.050	0.011	0.008	-0.011	0.030	-0.004	0.064
heavy smoker	-0.179**	0.058	-0.038**	0.010	-0.09**	0.036	-0.190**	0.077
heavy drinker	-0.028	0.099	-0.002	0.017	-0.015	0.060	-0.015	0.127
no regular exercise	-0.091**	0.045	-0.022**	0.008	-0.06**	0.028	-0.099*	0.059
talk to doc about health	0.161**	0.052	0.016*	0.009	0.035	0.032	0.172**	0.067
have pensions	-0.029	0.050	0.0006	0.008	0.005	0.030	0.008	0.066
Adjusted/Pseudo R <sup>2</sup>	0.129		0.049		0.097		0.131	

Note: This table reports OLS and quantile regressions of financial net worth over permanent income on the variables listed in the first column. Even though not reported, regressions include several demographic variables. Refer to the text for a complete list of the variables used in the estimation. The number of observations is 3,265.

\* indicates significance at the 10% level

\*\* indicates significance at the 5% level

**Table 3: Explaining household savings**

Low education sample								
	Total Net worth							
	Total Sample		1 <sup>st</sup> quartile		Median		3 <sup>rd</sup> quartile	
	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err
constant	4.485	8.556	-1.939	3.418	0.915	5.813	0.632	14.238
<b>seminars</b>	<b>0.085</b>	<b>0.209</b>	<b>0.272**</b>	<b>0.089</b>	<b>0.134</b>	<b>0.146</b>	<b>0.131</b>	<b>0.373</b>
excellent health	0.561**	0.207	0.243**	0.094	0.464**	0.145	0.862**	0.373
very good health	0.233	0.190	0.203**	0.084	0.451**	0.131	0.355	0.338
good health	0.052	0.182	0.113	0.079	0.304**	0.125	0.271	0.321
permanent inc./1000	-0.038**	0.007	0.004	0.003	-0.012**	0.085	-0.038**	0.014
past unemployment	-0.225*	0.124	-0.109**	0.054	-0.269**	0.005	-0.275	0.224
past shocks	-0.452**	0.128	-0.270**	0.058	0.344**	0.091	-0.420*	0.231
received inheritances	0.895**	0.169	0.474**	0.075	0.658**	0.121	0.993**	0.310
money from relatives	0.736**	0.246	0.436**	0.113	0.825**	0.178	0.757*	0.450
money from insurance	0.994**	0.288	0.602**	0.129	0.971**	0.203	0.519	0.516
high risk aversion	0.022	0.202	0.192**	0.088	0.110	0.141	0.440	0.343
medium risk aversion	0.275	0.254	0.253**	0.111	0.337*	0.178	0.331	0.451
moderate risk aversion	-0.056	0.258	0.265**	0.114	0.053	0.182	0.059	0.449
variance of income	0.043**	0.017	0.031**	0.007	0.030**	0.012	0.062**	0.027
prob. live to 75	0.137	0.213	-0.116	0.095	0.049	0.149	-0.078	0.377
prob. SS less generous	-0.071	0.199	0.101	0.086	0.097	0.137	-0.047	0.355
prob. house price up	-0.568**	0.200	-0.277**	0.090	-0.537**	0.139	-0.425	0.357
prob. give help to fam.	0.107	0.191	0.059	0.082	0.255*	0.133	0.198	0.353
will leave bequests	1.118**	0.124	0.513**	0.055	0.860**	0.087	1.280**	0.226
can rely on help	-0.035	0.121	0.024	0.053	0.070	0.085	0.321	0.223
parent alive	0.006	0.134	0.035	0.059	0.175*	0.095	0.120	0.243
heavy smoker	-0.367**	0.151	-0.284**	0.070	-0.357**	0.108	-0.481*	0.277
heavy drinker	-0.422	0.276	-0.256**	0.125	-0.221	0.190	-0.269	0.460
no regular exercise	-0.227*	0.123	-0.091*	0.054	-0.165*	0.086	-0.271	0.224
talk to doc about health	0.183	0.137	0.073	0.061	0.063	0.096	0.247	0.250
have pensions	0.392**	0.130	0.269**	0.057	0.220**	0.091	0.397*	0.237
Adjusted/Pseudo R <sup>2</sup>	0.158		0.112		0.113		0.130	

Note: This table reports OLS and quantile regressions of total net worth over permanent income on the variables listed in the first column. Estimates refer to the sample of respondents with high school or lower education attainment. Even though not reported, regressions include several demographic variables. Refer to the text for a complete list of the variables used in the estimation. The number of observations is 1,860.

\* indicates significance at the 10% level

\*\* indicates significance at the 5% level

**Table 4: Explaining household savings**

High education sample								
	Total Net worth							
	Total Sample		1 <sup>st</sup> quartile		Median		3 <sup>rd</sup> quartile	
	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err	Coeff.	Std. err
constant	-8.398	8.803	-7.014	5.773	-9.750	5.595	-14.730	12.091
<b>seminars</b>	<b>0.196</b>	<b>0.175</b>	<b>0.297**</b>	<b>0.111</b>	<b>0.139</b>	<b>0.116</b>	<b>0.131</b>	<b>0.255</b>
excellent health	0.670**	0.292	0.386*	0.198	0.464**	0.193	0.936**	0.402
very good health	0.307	0.281	0.176	0.188	0.260	0.185	0.399	0.383
good health	0.457	0.285	0.302*	0.188	0.313*	0.187	0.544	0.387
permanent inc./1000	-0.009	0.006	-0.002	0.004	-0.005	0.004	-0.004	0.009
past unemployment	-0.355**	0.154	-0.198*	0.102	-0.365**	0.103	-0.447*	0.230
past shocks	-0.637**	0.137	-0.309**	0.092	-0.313**	0.092	-0.652**	0.200
received inheritances	0.436**	0.152	0.179*	0.103	0.285**	0.103	0.588**	0.222
money from relatives	0.640**	0.208	0.228*	0.139	0.709**	0.142	0.785**	0.316
money from insurance	0.679**	0.303	0.402**	0.203	0.352*	0.210	0.541	0.429
high risk aversion	-0.052	0.194	0.155	0.127	0.110	0.129	0.082	0.283
medium risk aversion	-0.099	0.238	0.141	0.161	0.118	0.160	0.241	0.349
moderate risk aversion	-0.201	0.256	0.096	0.169	0.411*	0.173	0.268	0.380
variance of income	0.001	0.006	0.002	0.002	0.008**	0.004	0.013**	0.006
prob. live to 75	-0.059	0.271	-0.161	0.185	-0.102	0.181	0.388	0.374
prob. SS less generous	-0.268	0.229	-0.047	0.149	0.042	0.154	-0.247	0.339
prob. house price up	-0.276	0.243	-0.133	0.166	-0.054	0.161	-0.825**	0.343
prob. give help to fam.	0.650**	0.217	0.100	0.143	0.241*	0.146	0.599*	0.309
will leave bequests	1.123**	0.129	0.572**	0.085	0.957**	0.087	1.188**	0.192
can rely on help	0.064	0.129	0.213**	0.087	0.221**	0.087	-0.007	0.187
parent alive	-0.340**	0.159	0.049	0.106	-0.144	0.108	-0.442*	0.228
heavy smoker	-0.648**	0.195	-0.364**	0.137	-0.598**	0.133	-0.880**	0.281
heavy drinker	-0.093	0.302	-0.012	0.206	0.112	0.202	0.0561	0.454
no regular exercise	-0.321**	0.144	-0.243**	0.097	-0.410**	0.098	-0.211	0.212
talk to doc about health	0.508**	0.171	0.136	0.117	0.308**	0.116	0.669**	0.245
have pensions	-0.320*	0.169	0.139	0.114	0.038	0.113	-0.586**	0.254
Adjusted/Pseudo R <sup>2</sup>	0.164		0.107		0.110		0.145	

Note: This table reports OLS and quantile regressions of total net worth over permanent income on the variables listed in the first column. Estimates refer to the sample of respondents with more than high school education. Even though not reported, regressions include several demographic variables. Refer to the text for a complete list of the variables used in the estimation. The number of observations is 1,401.

\* indicates significance at the 10% level

\*\* indicates significance at the 5% level