

Retirement, Recessions and Older Small Business Owners

by

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Executive Summary

Retirement planning is fraught with uncertainty including preparing for future health needs, longevity, taxes, and inflation. This planning is further complicated in recessions, when short-term financial needs might trump longer-term savings, and particularly in the last recession when different types of assets (e.g. housing) were impacted more by the economic downturn. This report examines how older small business owners prepare for retirement and how they fare financially during recessions compared to their wage and salary counterparts. We use a publicly available panel data set to examine the retirement savings decisions of self-employed and non-self-employed individuals nearing retirement age with particular emphasis on the role of economic downturns.

We examine specific elements of retirement wealth, preparation, and financial literacy for self-employed relative to wage and salary workers. Previous research suggests that small businesses (fewer than 10 employees) are less likely to offer pension plans and that business owners have low rates of retirement account ownership and contributions (Dushi, Iams, and Lichtenstein 2011; Lichtenstein 2010). Additionally, we assess whether recent recessions impacted the retirement preparation of business owners to a greater or lesser degree than non-business owning households. Finally, we explore several possible causes for differences in retirement preparation between older small business owning households and their non-business owning household counterparts, including their degree of financial literacy.

Given our focus on older Americans, we utilize the Health and Retirement Study (HRS), a longitudinal, nationally representative dataset of the US population of individuals over age 50 that includes a rich set of data on labor force status and history, income, assets, pension plans and other health and psychosocial measures collected biennially from 1992 to 2010. We use several methods to address whether small business owners save differently for retirement and how recessions affect their behavior. First, we present a comprehensive set of summary statistics in which we compare business owners and non-business owners as well as examining trends over time, with particular attention to recessionary time periods. Next, we use repeated cross-section regression techniques to assess whether self-employment experience (either currently or in the past, i.e., over the 1992 to 2010 HRS sample period) affects savings behavior. This approach allows us to test whether differences remain after controlling for other factors that may influence savings and retirement behavior. Finally, we compare regression results across time in order to investigate the extent to which the impact of self-employment experience varies over the business cycle, including the recessionary years 2001 and 2009.

Our results suggest that the self-employed are significantly less likely to have an employer provided pension (including basic pension or retirement plans and 401(k)s), consistent with the literature. However, some of this difference is offset as the self-employed have significantly greater amounts in IRA/Keogh savings vehicles. We find that the probability of having a pension and the value of IRA/Keogh accounts are largely stable during recessionary years. The results also suggest that the self-employed invest similarly to their wage and salary counterparts when covered by private plans over which they have some control over portfolio allocation. In other words, self-employed individuals do not seem to be more likely to choose equi-

ties over bonds as compared to non-self-employed individuals. This might seem counter to the general notion that small business owners are risk-takers, but is consistent with recent research. The finding that older self-employed behave similarly to their wage and salary counterparts and that there is stability in behavior through recessionary periods suggests that older self-employed and non-self-employed households have similar retirement preparation concerns and needs.

One area where the older self-employed are significantly different is in their level of financial knowledge. The self-employed are generally more informed about concepts such as inflation, interest calculations, and general financial literacy than their non-self-employed counterparts. In some models, these differences are quite small and not statistically significant, but still suggestive. While these findings are not surprising if we think that self-employed individuals, especially when they are older, are more likely to be exposed to this knowledge through the day-to-day tasks associated with running a business, more years of data are needed to understand fully the causal path and to determine whether this increased financial knowledge translates into better retirement preparation.

These findings add support in favor of small business assistance programs as a way for individuals to gain valuable financial skills. More research is certainly needed, but by this line of reasoning, it is possible that facilitating small business ownership could lead to greater retirement preparation and greater retirement income security.

In general our research indicates that the self-employed over age 50 expect to retire at older ages and have larger balances in their retirement savings accounts than their wage and salary counterparts. While these characteristics might make it easier for these older self-employed to weather recessionary financial storms, our analysis does not reveal key differences in outcome variables during recessionary years. That is, we find that older self-employed differ from their wage and salary counterparts in important ways including financial literacy, but these differences are not exacerbated or lessened during recessionary periods. A key area for further research is a closer examination of wealth portfolio allocations over time to see if the increased levels of financial literacy among the self-employed lead to fewer financial losses during recessions or different rates of financial recovery following a recession.

Introduction

Small businesses are vital to economic prosperity and evidence suggests that they create jobs during recessions (Headd 2010). There is also evidence that poor job market prospects may result in more individuals sorting into small business ownership (Blanchflower and Oswald 1998; Manser and Picot 1999), which suggests that recessions may push individuals into self-employment or small business ownership¹. For older populations nearing retirement, the effect of recessions on delaying retirement has been well established (Gustman, Steinmeier, and Tatabai 2010). Recent research also suggests that older Americans are more likely to enter self-employment during recessions perhaps because of limited opportunities in the wage and salary sector (Biehl, Gurley-Calvez, and Hill 2010). However, little is known about how small business owners prepare for retirement and how they fare during recessions compared to their wage and salary counterparts. We use a publicly available panel data set to examine the retirement savings decisions of self-employed and non-self-employed individuals nearing retirement age with particular emphasis on the role of economic downturns.

Several studies have found that small business owners accumulate more wealth than their non-business owning counterparts (Gentry and Hubbard 2004; Zissimopoulos and Karoly 2009; Gurley-Calvez 2010). In this study, we examine specific elements of retirement wealth, preparation, and financial literacy for self-employed (used interchangeably with the term “small business owners”) over age 50 relative to their wage and salary worker counterparts. Previous research suggests that small businesses (10 or fewer employees) are less likely to offer pension plans and that business owners have low rates of retirement account ownership and contributions (Dushi, Iams, and Lichtenstein 2011; Lichtenstein 2010). Additionally, we assess whether recent recessions impacted the retirement preparation of older business owning households to a greater or lesser degree than older non-business owning households. Finally, we explore several possible causes for differences in retirement preparation between small business owners and other households, including their degree of financial literacy.

The relative share of aggregate income for U.S. retirees from private pensions has increased from about 10 percent in 1962 to about 20 percent in 2004 (SSA 2006). Although Social Security constituted the largest share of aggregate income over the same time period (from 32 percent in 1962 to 37 percent in 2004), the role of private pensions for retirees will play a larger role in the future as the fraction of retirement income from Social Security will decrease (McGill et al. 2005; Leimer 2007).

Our research provides important insights into the absolute level of retirement preparedness of older small business owners and whether recessions affect the self-employed to a greater or lesser degree than their non self-employed counterparts. The pension landscape in the U.S. has evolved dramatically over the last three decades both with changes to generosity, prevalence, and types of private pension plans available to workers and also with increased concerns that many retirees may be increasingly dependent on Social Security’s Old-Age, Survivors and Disability Insurance (OASDI). Private pensions have evolved from defined benefit plans, where a

¹ We use the term self-employed and small business owner interchangeably in this report.

retiree receives a guaranteed benefit determined by a formula, to defined contribution plans where a retiree's benefit depends both on contributions (employee, employer, or both) and market performance of the invested funds (e.g., 401(k)s in the research that follows). In addition to private pensions and Social Security, retirees might participate in savings plans such as an IRA, which could be made with pre-tax (traditional) or post-tax (Roth) income. Thus, understanding whether self-employment helps individuals better prepare for retirement has significant implications for their overall retirement income security and the adequacy of their private pension benefits and savings to augment their Social Security benefits.²

Furthermore, understanding whether self-employment and small business ownership of individuals over age 50 influence these individuals' ability to weather recessionary periods with respect to their retirement planning will inform policymakers as well. If the retirement savings of older small business owners are affected to a greater degree than wage and salary workers during recessions, there might be a need for policy interventions to address retirement savings, otherwise the sector may become less attractive compared to holding a wage and salary job. Conversely, if older small business owners are able to maintain retirement savings to a greater degree than wage and salary worker during recessions, possibly by adjusting work hours or effort, then the results would suggest that self-employed retirees are less dependent on the public sector to offset negative economic shocks. By further exploring a variety of factors that might lead to differences in retirement preparation, we provide suggestions for policy directions most likely to affect the behavior of small business owners and their non-business owning counterparts.

Given our focus on older Americans, we utilize the Health and Retirement Study (HRS), a longitudinal, nationally representative dataset of the US population of individuals over age 50 that includes a rich set of data on labor force status and history including self-employment status, income, assets, pension plans and other health and psychosocial measures collected biennially from 1992 to 2010.³ New cohorts are added overtime to ensure that the survey remains nationally representative of individuals over age 50. We use several methods to address whether older small business owners save differently for retirement from their wage and salary worker counterparts and how recessions affect their behavior. First, we present a comprehensive set of summary statistics in which we compare business owners and non-business owners over age

² For wage and salary workers, employees and employers pay an equal portion of the Federal Insurance Contributions Act (FICA) payroll tax. The self-employed pay both the employer and the employee portion of the Self-Employment Contributions Act (SECA) payroll tax. Both the FICA and SECA taxes fund the OSADI and Medicare programs. Beginning in 1990 payroll tax rates were 15.3 percent, although changes in 2010 temporarily reduced rates and the reduction was greater for wage and salary workers than the self-employed. The SECA tax is adjusted to level the amounts paid by self-employed persons in comparison to regular employees.

³ The HRS initially sampled individuals age 51 to 61 in 1992 re-interviewing them every 2 years. Each 6 years thereafter (1998, 2004, 2010), new cohorts have been such that the sample is a nationally representative population of individuals age 51 and older. The HRS is a multistage probability sample with oversamples of African Americans, Hispanics, and Floridians, The overall response rate was approximately 82 percent in 1992, but has increased to around 89% in subsequent waves.

50 as well as examining trends over time, with particular attention to recessionary time periods. Next, we use repeated cross-section regression techniques to assess whether self-employment experience (either currently or in the past) affects savings behavior of this older cohort. This approach allows us to test whether differences remain after controlling for other factors that may influence savings and retirement behavior. Finally, we compare regression results across time in order to investigate the extent to which the impact of self-employment experience varies over the business cycle.

In the remainder of the paper we review the related literature and provide a theoretical framework, discuss the database, and detail our estimation methods. Following a discussion of our main results, we conclude our report with a brief discussion of some potential policy implications of our work.

Literature and Theoretical Framework

It is not immediately obvious why one might expect older small business owners to exhibit different patterns of preparation for retirement than their wage and salary counterparts. In this section, we lay out the various mechanisms through which such a difference might arise.

Financial literacy: The act of establishing a small business exposes an entrepreneur to a broader spectrum of the financial marketplace and thus may equip her with more information in the area of financial literacy. In a similar vein, evidence suggests that individuals in occupations with exposure to more financial content (such as bankers, economists or high level executives) have greater financial knowledge than those who work in occupations with less daily exposure to financial content (such as nurses, teachers, or truck drivers) (Helppie, Kapinos, and Willis 2010). This “spillover” from daily exposure to financial concepts in certain occupations (or industries) may also result for small business owners who manage their business’ finances, make capital and financial investment decisions, etc. While it is unclear whether this exposure will result in better long term financial and retirement planning or savings behavior, self-employed individuals do seem to have greater financial sophistication on average (Helppie, Kapinos, and Willis 2010).

Retirement savings: On one hand, establishing a small business requires the prior accumulation of at least some amount of wealth, and it is well known that those with greater access to wealth or windfall financial gains are more likely to become self-employed (Evans and Jovanovic 1989; Evans and Leighton 1989; Holtz-Eakin, Joulfaian, and Rosen 1994; Dunn and Holtz-Eakin 1995 and 2000; Fairlie 1999; Bruce, Holtz-Eakin, and Quinn 2000; Fairlie and Krashinsky 2006; Zissimopoulos and Karoly 2007; and Zissimopoulos, Karoly, and Gu 2010). This could be an indication that entrepreneurs are likely to save more for retirement than wage workers, primarily because they must save more in general.

On the other hand, entrepreneurs often must rely on a significant portion of their own personal wealth to establish their small business. Entrepreneurs frequently rely on readily-accessible forms of debt, including credit card debt, for the purposes of getting their new ventures off the ground (Scott III 2009). This could result in small business owners having lower amounts of re-

retirement savings than wage workers. On a similar note, many wage employees are able to save for retirement through employer-provided retirement savings vehicles such as 401(k) and 403(b) plans. Such instruments are automatically made available to many workers, especially in larger firms, and thus may result in relatively higher amounts of retirement savings among wage workers (Dushi, Iams, and Lichtenstein 2011). Similar savings vehicles exist for the self-employed (e.g., IRAs, SEPs and Keogh plans), but the entrepreneur must make the effort to establish those accounts through banks and other financial service providers. Given the recent finding that retirement savings decisions among wage workers are often driven by default options (e.g., on average, workers save more when they are defaulted into savings plans as many do not complete the necessary enrollment steps if they must opt in and many keep the default contribution rates on DC plans), it is reasonable to expect that the self-employed might have lower retirement savings levels given that their default is to not have such an account (e.g. Madrian and Shea 2001; Choi et al. 2003; Thaler and Sunstein 2003; Carroll et al. 2009). In other words, the self-employed have to “opt in” if they want to establish a retirement savings plan. However, the lack of a default savings plan does not necessarily mean lower overall savings. Gustman and Steinmeier (1998) find the amount that the self-employed lack in pension savings is offset by investments in their businesses and real estate assets.

Beliefs and attitudes about the Social Security system might also impact the relative retirement preparation behavior of wage workers and the self-employed. Until the early 1980s, the self-employed enjoyed relatively lower payroll (Self Employed Contributions Act, SECA) tax rates than wage workers (Federal Insurance Contributions Act, FICA). They might have mistakenly assumed that Social Security benefits would be commensurately lower for their earlier working years, and could have increased retirement savings in response. By the same token, the self-employed may be more likely to notice their SECA taxes given that they must compute them on their tax returns, while FICA taxes are automatically calculated and withheld by employers on behalf of wage employees. This possibility of differential salience of payroll taxes for wage workers and self-employed workers, and the extent to which that might translate into differential savings behavior and financial literacy, has not yet been explored in the academic literature.

Investment Behavior and Portfolio Choice: Given that entrepreneurs must devote considerable portions of their wealth to their small business, it is possible that they might exhibit more conservative retirement savings in an effort to provide some balance against their entrepreneurial risk (Gentry and Hubbard 2004). On the other hand, recent research has suggested that entrepreneurs are no more risk-loving than wage workers when it comes to choosing what portion of their portfolio to place relatively risky stock investments (Gurley-Calvez 2010).

On a related note, Social Security wealth may vary systematically between wage workers and the self-employed given the differential payroll tax rates (prior to 1984) and earnings histories across these two diverse categories of workers. Differences in payroll tax rates prior to 1984 might have led to disparities in expected benefits from Social Security and have resulted in different savings patterns and portfolio allocation strategies between wage workers and the self-employed. In essence, those with greater annuitized wealth in Social Security and defined benefit plans might save less in individual retirement accounts like 401(k)s and IRAs. Again, these are empirical questions that have not been adequately explored in the academic literature.

Employment Flexibility: Many entrepreneurs become self-employed in order to have more control over their work life. Advantages may include being able to work more hours across fewer days each week, being able to take longer breaks from work, and simply being able to work fewer hours than under traditional wage employment arrangements (Gurley-Calvez, Biehl, and Harper 2009a). Similarly, the self-employed are often able to work longer into their life cycles, given the relative absence of financially lucrative employer-provided pension benefits, buyout programs, and the like. (An interesting side benefit of this is that the self-employed might be able to pay into the Social Security system over a longer period of time and draw greater benefits over a shorter period of time, and placing less of a burden on the program and ensuring they do not outlive their assets.)

It is feasible that the greater control that small business owners have over their work hours and employment life cycle might translate into different patterns of preparation for retirement. If they intend to work longer in life, they might save less for retirement during their work years. Alternatively, lower retirement savings might just arise out of a choice to work fewer hours over a similar period of time, thereby generating less income out of which to save for retirement and other purposes.

Recessionary Impacts: All of the above possibilities might result in entrepreneurs being either more or less prepared for the wealth and income effects of economic recession. First, if entrepreneurs are more financially literate, they may be better protected financially in times of recession because they know they need to be prepared for economic swings. Their broader exposure to the financial marketplace might also provide them with better access to skills, advice, programs, or other resources that may prove especially beneficial during recessions.

Our data cover two recessionary periods, the “dot-com” recession of the early 2000s and the “Great Recession” of the late 2000s. The Great Recession of December 2007 to June 2009 was longer and characterized by higher rates of unemployment and a decline in gross domestic product (GDP) that was 17 times greater than the 2001 recession. The Great Recession was also characterized by significant drops in housing values, a key source of wealth for most households. Further, Lusardi and Mitchell (2007) find that current retirees are relying more on housing equity than previous generations to fund their retirement. Gustman, Steinmeier and Tabatabai (2010) estimate that at the median, home equity accounts for about 22 percent of retirement savings second only to Social Security at 40 percent and greater than the 20 percent in pensions and retirement savings accounts.

Using Survey of Consumer Finances (SCF) data collected for the same households in 2007 and again in 2009, Bricker et al. (2011) estimate that median primary residence asset values fell about \$18,700 (11.5 percent) over the two-year period. Median business equity decreased by \$5,200 (23.9 percent) and median stock assets decreased by about \$800 (22.7 percent). Although the percentages are larger for stocks and business equity, the median wealth impacts were far greater for housing. Bricker et al. (2011) estimate that about 60 percent of households experienced a decline in wealth from 2007 to 2009. Further, Duygan-Bump, Levkov, and Montoriol-Garriga (2010) find that reductions in the availability of small business financing significantly increased the number of unemployed during the Great Recession.

Given the differences in the two recessions, we conduct our analysis separately by year to identify whether the recessions have different effects. In both cases, we examine the differences in wealth and financial characteristics between self-employed and non-self-employed households and assess whether these differences are greater, lesser, or the same in recessionary periods.⁴

Depending on their relative levels of retirement savings, small business owners might be either more or less prepared for recession than wage and salary workers. If they have saved more than wage and salary workers, they may be able to spend out of that savings during economic downturns. Alternatively, if they have saved less than wage workers, they may be susceptible to early business closure or other negative outcomes. If small business owners are less likely to finance current consumption and/or business operations via debt that is attached to their homes (e.g., home equity loans), then they may be better prepared for recessions that have particularly strong impacts on housing markets. Along these lines, Hurst and Lusardi (2004) find that households in areas where housing values appreciated rapidly were no more likely to start a business, suggesting that the availability of home equity might not be a major decision factor in financing business ventures and that the housing bubble may not have had a differential impact on business ownership.

It is not difficult to imagine the manner in which differential investment behavior and portfolio choice could impact small business owners' ability to weather economic recessions. If their retirement (or other) savings portfolios are more heavily invested in safer assets, their wealth fluctuations are likely to be smaller during recessionary periods. Alternatively, if entrepreneurs tend to invest in riskier assets such as equities, they may experience relatively higher volatility during recessions.

Finally, the relatively greater flexibility associated with work patterns among the self-employed may translate into greater ability to adjust to changing economic conditions. As one example, a small business owner can possibly scale back operations when demand for their product or service slows, while wage employees may be subject to layoffs or other downsizing efforts and may thus simply lose their jobs.

Data and Methods

As mentioned above, we use HRS data from 1992-2010 for this analysis. These data are collected every two years and include new cohorts added every six years. Several prior studies have used the HRS data to investigate self-employment among older Americans (over age 50), including Bruce, Holtz-Eakin, and Quinn (2000), Zissimopoulos and Karoly (2007), Zissimopoulos, Karoly, and Gu (2009), and Biehl, Gurley-Calvez, and Hill (2010). The wealth of information

⁴ HRS data are collected every two years and the 2010 survey includes financial information from the previous year (2009) and reflects financial information from the end of the Great Recession. Survey data collected in 2002 reflect 2001 financial information. Thus, we define the 2010 and 2002 survey responses as recessionary.

within the HRS regarding current and prior jobs allows us to construct a variety of indicators of current and previous self-employment experience.

Following much of the previous literature, our first measure of self-employment experience is simply the standard dichotomous measure of current self-employment status (columns 1-3 of Table 1). We further separate the currently-self-employed into full-time and part-time self-employment, where those working fewer than 30 hours per week are considered to be part-time (columns 4-6 of Table 1). Next, we construct a “mostly self-employed” measure that relies on the detailed job history data in the HRS. Specifically, we calculate an older worker’s self-employment tenure over all previous jobs for which data are provided⁵ (previous jobs including jobs held before the individual turned 50), and compare that to the worker’s total job tenure (current and previous jobs) regardless of current self-employment status. If the self-employment tenure is at least half of the total tenure, then that worker is assumed to have been “mostly self-employed” during his or her working years (columns 7-9 of Table 1). Our final measure relies on the ten waves of HRS data in our analysis and divides individuals over age 50 into three groups based on their self-employment experience during the panel: those who were never self-employed, those who were always self-employed, and those who were self-employed in some but not all of their HRS waves (columns 10-14 of Table 1). These three categories are time-invariant, in that a respondent’s category is retrospectively assigned to each of their individual waves after examining the individual’s entire HRS history.

Summary statistics for these measures of self-employment are presented for 1992 through 2010 in Table 1. A large and growing percentage of working HRS respondents over age 50 reported to be self-employed over time, starting at a self-employment rate of 18.2 percent in 1992 and steadily rising to 24.5 percent by 2010. This can reflect both an increasing reliance on self-employment later in life and/or a slower rate of retirement among the self-employed. Interestingly, a declining share of the self-employed work full-time in later years of the panel, which is consistent with gradual retirement of the self-employed or wage and salary workers becoming self-employed part-time prior to full retirement. Slightly less than 80 percent were full-time in 1992, but this falls to less than 60 percent by 2010. Again, this may be evidence that more workers turn to part-time self-employment as they approach (or even begin) retirement, or that the full-time self-employed are just more likely to retire over time.

Looking only at the years they were eligible for the HRS (age 50 and older), approximately one in eight HRS respondents (12.3 percent) were mostly self-employed over their working lives as of 1992, but this share falls to about 8 percent by 2010. Nonetheless, the presence of a large number of mostly-self-employed workers in our data enables us to get a better picture of the impact of longer-term or more intensive self-employment experience on retirement prepara-

⁵ During the first interview, HRS respondents are asked about their current or most recent job if currently unemployed and also for details about the job prior to their current job (if currently employed) or the job prior to their most recent job (if currently unemployed). During each subsequent interview, HRS respondents are asked if there have been changes since the previous waves with appropriate follow-up questions to try to ascertain the labor force details in between the two waves. We exploit this longitudinal follow up and details collected on “job history” during the first wave in order to create our measures of self-employment over one’s work life.

tion. Note that our “mostly self-employed” measure is available for all HRS respondents, including those who were not working at the time of the HRS interview, while the current self-employment status is only available for respondents working in the current interview year.

Table 1: Self-Employment Measures by Year

	Currently Self-Employed						Mostly Self-Employed			Self-Employed During HRS Waves				
	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11	Col 12	Col 13	Col 14
	No	Yes	Self-Employed %	Part-Time	Full-Time	Full-Time %	No	Yes	% Yes	Never	Some	Always	% Some	% Always
1992	6,815	1,513	18.2	312	1,201	79.4	10,979	1,543	12.3	9,768	2,334	420	18.6	3.4
1994	5,660	1,374	19.5	334	1,040	75.7	10,065	1,355	11.9	8,838	2,263	319	19.8	2.8
1996	4,919	1,273	20.6	406	867	68.1	9,714	1,250	11.4	8,455	2,234	275	20.4	2.5
1998	6,238	1,622	20.6	513	1,109	68.4	13,754	1,679	10.9	12,149	2,847	437	18.4	2.8
2000	5,417	1,393	20.5	426	967	69.4	13,209	1,370	9.4	11,429	2,751	399	18.9	2.7
2002	4,508	1,334	22.8	486	848	63.6	12,748	1,310	9.3	10,942	2,735	381	19.5	2.7
2004	5,977	1,701	22.2	588	1,113	65.4	15,113	1,651	9.8	13,127	3,031	606	18.1	3.6
2006	5,018	1,456	22.5	527	929	63.8	14,345	1,424	9.0	12,298	2,919	552	18.5	3.5
2008	4,410	1,385	23.9	560	825	59.6	13,718	1,357	9.0	11,708	2,837	530	18.8	3.5
2010	3,461	1,126	24.5	456	670	59.5	12,769	1,108	8.0	10,734	2,640	503	19.0	3.6
All Years	52,423	14,177	21.3	4,608	9,569	67.5	126,414	14,047	10.0	109,448	26,591	4,422	18.9	3.1

Source: Authors’ calculations using HRS data. “All Years” row includes totals for number of observations and mean percentages using all years of data in the percent columns.

Our final self-employment measure in Table 1 provides a more recent view of self-employment intensity. Note that about 18 to 20 percent of HRS respondents were self-employed in some but not all of their HRS waves, while about 2.5 to 3.6 percent were self-employed in all of their HRS waves.

The HRS data also include detailed information on a variety of retirement preparation indicators including pension plans and financial literacy measures. For the purposes of this research, “pension plans” include any defined benefit, defined contribution, or retirement savings plan offered through one’s employer. IRAs not sponsored through their business and Keogh plans are excluded for the self-employed.

While a full consideration of all of the HRS retirement-related variables would fill volumes, we limit our consideration in this report to fourteen selected outcomes that provide a reasonably diverse view of retirement preparation and financial literacy among HRS respondents. These variables are listed and defined in Table 2 along with mean values for the first and last years of availability for each. We will consider the addition of other outcome variables in future research.

Our first task is to investigate basic differences in our selected retirement preparation and financial literacy measures by self-employment status in a series of cross-tabulations. We then

estimate a series of multivariate cross-sectional regressions that allow us to control for important individual-level characteristics. Our general specification is as follows:

$$y_i = \beta SE_i + \Phi X_i + \varepsilon_i$$

where y_i is one of our outcome measures for individual i ; SE_i is one of our measures of self-employment; X_i is a vector of control variables; and ε_i is the error term. A separate cross-sectional regression is estimated for each pair-wise combination of outcome measures and self-employment measures. That is, we consider outcomes based on current self-employment (any, full time and part time), mostly self-employed for the entire available work history, and self-employment during the HRS (ever and always).⁶ This approach provides a cleaner look at potential recessionary impacts and also recognizes the fact that several of our outcome variables are only available in one or two survey waves. Probit models are estimated for dichotomous outcome variables and linear regression models are estimated for continuous variables (e.g. value of IRA/Keogh plans).⁷

Our matrix of control variables includes the respondent's age (in quadratic form to permit non-linear effects), an indicator for being married, indicators for educational attainment (high school graduate, some college, and college graduate, with less than high school being the omitted reference category), and indicators for region of residence (Northeast, Midwest, and West, with South being the omitted reference category). We have deliberately chosen a parsimonious baseline specification to highlight the effects of self-employment. In this case, we have chosen a simple specification and included only the factors that we would expect to be correlated with self-employment and retirement preparation as excluding these factors might bias our results (e.g. Married individuals are more likely to be self-employed and might also be more likely to save at higher rates. Excluding marital status would then lead us to conclude that self-employment has a greater effect on savings than is true because some of the effect is due to their marital status).

Throughout both major components of our analysis, we pay particular attention to any observed interruptions in patterns or trends during recessionary years, namely 2002 and 2010, as these survey waves include data for the previous year. Summary statistics for all outcome measures, self-employment measures, and control variables are provided for each survey year in Appendix Table A1.

⁶ Please see Tables 9 through 14 and Appendix tables beginning with A2.1 for regression results.

⁷ Please see Table 2 for an explanation of the dichotomous variables (i.e. when these variables take a value of one as opposed to zero). We also experimented with a logged transformation of our IRA/Keogh Plan Savings variable. These logged specifications required a significant reduction in sample size but yielded qualitatively identical results and are thus not reported here.

Table 2: Outcome Variables

Variable	Definition	Years	First-Year Mean	Final-Year Mean
Has Pension on Current Job	=1 if respondent answered "Yes" to a question of whether they had a pension plan on their current job. (For the self-employed: "Aside from IRAs not sponsored by your business or Keogh plans, are you included in any pension plans or tax-deferred savings plans through your work?" For those employed by a firm: "Now I'd like to ask about pension or retirement plans on your job, sponsored by your employer or union. This includes not only basic pension or retirement plans, but also tax-deferred plans like thrift, savings, 401k, deferred profit-sharing, or stock ownership plans. Are you included in any such pension, retirement, or tax-deferred plan with this employer?")	1992-2010	0.538	0.409
Value of IRA/Keogh Plan Savings	Total value of all Individual Retirement Account (IRA) and Keogh Account savings (\$). This outcome includes both business-sponsored IRA plans and personal plans.	1992-2010	\$11,983	\$72,702
Expected Retirement Age	Calculated as the respondent's expected year of retirement (if not currently retired) and their birth year. All respondents are age 51 or older.	1992, 1996-2010	63.2	69.1
Would Work Longer if SS Benefits Cut	=1 if respondent said he/she would work longer if Social Security benefits were hypothetically reduced	2008		0.017
Typical SS Benefit for 70-Year-Old Retiree	Respondent's estimate of what a typical 70-year-old retiree receives per month from Social Security	2004		\$1,031
Thought About Retirement A Lot Before Retiring	=1 if respondent said he/she thought about retirement a lot before actually retiring (retirees only)	2004-2010	0.253	0.235
Age Started to Save for Retirement	Age at which respondent started saving for retirement	1996		30.6
Answered "Don't Know" to Current Pension Q.	=1 if respondent answered "I Don't Know" to the above question regarding the availability of a pension plan on the current job	1992-2010	0.005	0.002
Answered Interest Q. Correctly	=1 if respondent answered the following correctly: "First, suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow -- more than \$102, exactly \$102, or less than \$102?"	2004, 2010	0.700	0.706
Answered Inflation Q. Correctly	=1 if respondent answered the following correctly: "Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than today, exactly the same as today, or less than today with the money in this account?"	2004, 2010	0.781	0.818
Answered Safe Return Q. Correctly	=1 if respondent answered the following as FALSE: "Do you think that the following statement is true or false: buying a single company stock usually provides a safer return than a stock mutual fund?"	2004, 2010	0.546	0.637
Answered Safe Money Q. as True	=1 if respondent answered the following as TRUE: "You should put all your money into the safest investment you can find and accept whatever return it pays."	2008, 2010	0.299	0.293
Answered That Retired People Should Hold Stocks	=1 if respondent answered the following as TRUE: "[Even older/Older] retired people should hold some stocks."	2010		0.062
Has Some Control Over Pension; Mostly in Stocks	=1 if respondent reports having some control over how his/her employer-provided retirement plan is invested AND that it is mostly invested in stocks.	1992, 1996-2006	0.430	0.440

Results

Cross-Tabulations. We begin with a discussion of cross-tabulation results of the various outcome measures by self-employment status, starting with our current pension indicator in Table 3. Unsurprisingly, while most of the non-self-employed workers over age 50 report having a pension, the percentage among the older self-employed is much lower. More interestingly, the percentage of older self-employed with pensions rises during the 1990s but falls just as quickly during the 2000s. This may be evidence that older workers with pensions are simply more likely to retire earlier during the HRS period than those without pensions.

Interestingly, all but one of the various groups experienced a decrease in the average probability of having a pension on the current job during the two recessionary periods (as reflected in the 2002 and 2010 survey waves). The lone exception was those who were always self-employed during the HRS panel, who continued to see an increase in pension availability during the first recession.

Table 3: Does the worker have any pension plan on the current job? (% Yes)

	Currently Self-Employed				Mostly Self-Employed		Self-Employed During HRS Waves		
	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9
	No	Yes	Part-Time	Full-Time	No	Yes	Never	Some	Always
1992	64.15	7.36	3.22	8.44	61.01	14.25	65.14	28.75	7.89
1994	64.57	8.39	4.79	9.55	64.36	8.50	65.88	27.31	11.01
1996	63.27	9.16	6.40	10.47	63.06	9.14	65.39	24.97	13.19
1998	60.42	12.21	9.96	13.26	59.14	14.44	62.53	25.80	15.63
2000	59.59	10.60	6.82	12.27	59.31	10.66	62.10	25.28	14.39
2002	56.54	9.15	5.80	11.08	56.09	9.44	58.98	21.30	14.63
2004	58.37	10.22	4.94	13.03	57.02	12.36	61.04	19.05	14.93
2006	55.27	9.63	5.89	11.76	54.69	9.64	58.08	16.58	14.18
2008	56.52	7.84	4.50	10.12	56.20	7.92	59.41	15.92	11.79
2010	52.31	6.17	2.88	8.40	51.84	6.32	55.34	12.91	9.62
All Years	59.61	9.19	5.62	10.92	58.68	10.42	61.80	22.57	12.79

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent the percent of respondents answering "yes" to a question regarding whether they have a pension plan (includes savings plans) through their current job. "All Years" row includes totals for number of observations and mean percentages using all years of data in the percent columns.

Table 4 provides average IRA/Keogh Plan values (in 2010 \$) by self-employment status over time. These figures exclude savings in other retirement plans (including pensions). Perhaps unsurprisingly, the self-employed have more in their individual retirement accounts than other workers (columns 1-2 of Table 4). Note that the table entries represent total mean savings in

these accounts and that much of this total likely represents rollovers from previous 401(k) plans and lump sum payments from defined benefit plans.⁸

No noticeable pattern is observed between part-time and full-time self-employed. It appears that those who had been self-employed for most of the working history available in the HRS were able to enjoy a modest gain in their IRA/Keogh accounts in 2010, while others experienced a slight decline (columns 5-6). Similarly, those who were self-employed throughout their HRS years enjoyed a larger gain in 2010 than those who have never been self-employed during the HRS (column 7 vs. column 9). Those who were self-employed for only part of their HRS years experienced a rather sharp drop in their IRA/Keogh savings, perhaps linked in some way to their less stable work patterns during these years (column 8).

Table 4: Mean Value of IRA/Keogh Plan Savings (in constant 2010 Dollars)

	Currently Self-Employed				Mostly Self-Employed		Self-Employed During HRS Waves		
	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9
	No	Yes	Part-Time	Full-Time	No	Yes	Never	Some	Always
1992	10,578	20,302	22,800	19,654	11,177	17,719	10,670	15,825	21,157
1994	17,204	26,956	28,138	26,577	17,581	26,903	17,193	22,921	30,035
1996	22,527	34,813	35,254	34,606	24,116	34,890	22,966	32,269	42,224
1998	28,634	53,290	57,720	51,241	32,256	53,076	31,416	44,014	59,019
2000	40,346	77,675	83,259	75,215	46,821	77,458	44,582	66,812	78,301
2002	36,415	60,501	71,181	54,381	44,154	61,245	41,931	57,851	68,434
2004	38,296	88,282	84,533	90,263	47,448	91,951	44,009	73,718	111,809
2006	61,463	83,565	96,397	76,287	72,819	84,949	61,840	124,290	76,532
2008	66,111	104,371	138,720	81,056	70,814	105,351	63,510	112,787	95,903
2010	71,213	103,884	98,809	107,337	69,704	107,252	67,352	88,311	104,937
All Years	36,567	64,949	76,767	59,258	45,739	65,312	42,076	66,473	73,903

Source: Authors' calculations using 1992 through 2010 HRS data. .

Entries represent the reported dollar value (2010 dollars) of IRA/Keogh plans regardless of whether they are employer sponsored. "All Years" row includes totals for number of observations and mean percentages using all years of data in the percent columns.

The self-employed typically plan longer working lives as revealed by the expected retirement age data in Table 5. Specifically, the self-employed over age 50 in 1992 reported that they would retire on average at age 64.6, while the expected retirement age among their non-self-employed counterparts was 63. By 2010, these figures were 72.6 and 68.4, respectively. This may be an indication that the older self-employed enjoy their work more and are willing to work at it for a longer period of time. Alternatively, they may work longer as a result of lower earnings and retirement savings. Yet another explanation is that workers who retire from

⁸ Many households have little or no IRA/Keogh Plan Savings and the means presented in Table 4 are largely driven by large balances among relatively few households. However, the same general story holds when comparing medians. Non self-employed households generally have a median value of zero dollars in IRA/Keogh accounts (1994 is the only exception and the median was \$756). The medians for self-employed households are larger, ranging from \$1,314 in 1992 to \$10,000 in 2010.

wage-and-salary jobs may become self-employed near or during retirement, thus pushing back their eventual retirement age.

Table 5: Expected Retirement Age (Years)

	Currently Self-Employed				Mostly Self-Employed		Self-Employed During HRS Waves		
	No	Yes	Part-Time	Full-Time	No	Yes	Never	Some	Always
1992	63.0	64.6	63.6	64.9	63.0	64.4	63.0	63.8	65.2
1996	63.6	65.9	66.1	65.7	63.6	65.9	63.5	65.1	66.4
1998	63.9	67.1	67.6	66.8	63.9	67.0	63.8	65.8	67.6
2000	64.6	68.4	68.6	68.3	64.6	68.4	64.6	66.6	68.5
2002	65.7	69.7	70.4	69.1	65.7	69.6	65.5	68.5	68.7
2004	65.5	68.7	70.1	68.0	65.5	68.7	65.2	68.8	67.8
2006	66.3	70.5	72.2	69.5	66.4	70.5	66.0	70.4	69.1
2008	66.8	70.9	72.1	70.1	66.8	70.9	66.6	70.6	70.2
2010	68.4	72.6	74.0	71.6	68.4	72.6	67.9	73.0	71.6
All Years	64.9	68.4	69.5	67.7	64.9	68.3	64.7	67.3	68.5

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent the respondent's expected retirement age if not already retired. "All Years" row includes totals for number of observations and mean percentages using all years of data in the percent columns.

Table 6: Answered "Don't Know" to question of whether they have a pension plan on the current job (percent)

	Currently Self-Employed				Mostly Self-Employed		Self-Employed During HRS Waves		
	No	Yes	Part-Time	Full-Time	No	Yes	Never	Some	Always
1992	97	13	0	17	60	13	63	17	48
1994	32	22	0	29	19	15	18	18	31
1996	39	08	0	12	21	0	19	13	36
1998	35	43	0	63	18	24	14	35	46
2000	63	36	23	41	26	36	23	36	75
2002	53	37	21	47	20	31	19	22	79
2004	42	35	17	45	17	36	18	13	50
2006	48	07	0	11	17	07	17	10	18
2008	73	22	36	12	23	22	24	21	19
2010	72	53	66	45	20	45	19	30	60
All Years	55	28	17	32	23	23	23	22	45

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent the percent of respondents who answered "don't know" the question of whether they have a pension (or savings) plan through their current employer. "All Years" row includes totals for number of observations and mean percentages using all years of data in the percent columns.

Our first glance at the relative financial literacy of the self-employed is provided in Table 6, which shows the percent of HRS respondents who answered "I don't know" to the earlier question of whether they have a pension plan on their current job. The currently self-employed were much less likely to be unaware of whether they have a pension plan, but the longer-term self-employed were not noticeably different. Interestingly, those who were always self-employed during the HRS were actually more likely to respond that they did not know whether they had a pension plan on their current job. This mixed evidence does not suggest that older

self-employed are either more or less financially literate than the non-self-employed. Additionally, no obvious recessionary impacts are observed in Table 6, although it does seem that the self-employed were a bit more likely to answer “I don’t know” during the 2010 wave.

In Table 7, we see, unsurprisingly, that the self-employed are more likely to exercise some control over their employer-provided retirement plans and also to invest most of those funds in stocks. Interestingly, the data show a sharp increase in this tendency during the 2001-2002 recession as reflected in the 2002 data. Unfortunately, more recent data covering the latest recession are not directly comparable. The greater use of stock investments might be correlated with more risk-tolerant preferences among the self-employed vis-à-vis wage workers, but it might also represent greater knowledge of financial markets and recognition of buying opportunities during recessions.⁹

**Table 7: Has some control over employer-provided retirement plan
AND it is mostly invested in stocks (percent)**

	Currently Self-Employed				Mostly Self-Employed		Self-Employed During HRS Waves		
	No	Yes	Part-Time	Full-Time	No	Yes	Never	Some	Always
1992	43.6	34.0	20.0	35.4	43.0	43.3	43.6	41.4	33.3
1996	45.3	51.6	55.6	50.0	45.3	51.6	46.1	45.0	50.0
1998	54.8	63.1	36.4	68.5	55.3	58.9	53.4	64.6	66.7
2000	44.9	40.8	66.7	37.2	45.1	38.8	45.1	42.5	45.5
2002	37.7	61.1	50.0	64.3	37.5	61.5	36.8	45.7	64.7
2004	40.7	54.0	33.3	58.3	40.8	50.7	40.1	46.8	60.9
2006	43.4	56.6	42.9	58.7	43.4	55.8	43.6	44.7	53.3
All Years	53.8	63.6	73.7	58.6	68.5	63.3	67.7	68.4	74.1

Source: Authors’ calculations using 1992 through 2010 HRS data.

Entries represent the percent of respondents who report having some control over how their employer-provided pension (or savings) plans are invested AND report that most of these funds are invested in stocks. “All Years” row includes totals for number of observations and mean percentages using all years of data in the percent columns.

Table 8 provides cross-tabular results for the rest of our outcome measures, most of which are only available for one or two of the HRS survey waves. Our focus with these outcomes is on the comparison between the self-employed and non-self-employed. The first result of note is that the currently self-employed are slightly less likely to report that they would work longer if their Social Security benefits were hypothetically cut, while the longer-term self-employed (either by the “mostly” or “some/always” measures) were more likely. The differences are quite small in any case, however, and the low percentages indicate that the vast majority of HRS respondents would not adjust their retirement dates in response to Social Security benefit reductions.

HRS respondents were also asked what they thought a typical 70-year-old retiree gets from Social Security each month. For reference, the average benefit paid out in 2004 was just over

⁹ See Gentry and Hubbard (2004) for a discussion of risk preferences and investments and Helppie, Kapinos, and Willis (2010) for evidence on the financial literacy of the self-employed.

\$900, while aged couples with both receiving benefits got about \$1,500.¹⁰ Average responses among the HRS respondents were generally quite accurate, although it appears that the part-time self-employed were broadly more pessimistic, providing estimates that were over \$100 lower than full-time self-employed or non-self-employed workers. It is interesting to see that the currently self-employed generally gave lower estimates, while longer-term self-employed gave higher estimates. These responses provide interesting signals about the relative awareness of Social Security policies.

Data for the next outcome reveal that the older self-employed were broadly less concerned with retirement before actually retiring, while older wage workers were more likely to report that they had thought a lot about retirement. This pattern is also observed among the longer-term self-employed. Perhaps the best explanation for this trend is that the self-employed are generally happier about their work and more interested in continuing it later in life. They might be thinking less about retirement simply because more of them plan not to retire at all.

The age at which HRS respondents started to save for retirement does not vary dramatically between the currently self-employed and non-self-employed, but the part-time self-employed appear to have gotten a much earlier start than the full-timers on their retirement savings. This result could indicate many things, including that the part-time self-employed saved more aggressively in previous wage and salary jobs to allow them to reduce their work effort and focus on part-time self-employment in a business that provides more lifestyle or non-pecuniary benefits. Longer-term self-employed workers reported much later starting points than others, suggesting that more of their earlier-year incomes were devoted to building their enterprises than to building retirement nest eggs. Of course, these business owners might plan to use their business equity for retirement purposes, reflecting more of a difference in savings vehicles than retirement preparation. On the other hand, heavily investing in one's own business venture provides little diversification and increases financial risk. Thus, while the self-employed may indeed be more financially literate, this does not necessarily translate into earlier or better retirement preparation according to this particular outcome measure.

Our final five outcomes gauge the overall fiscal literacy of the HRS sample and reveal across the board that the older self-employed are at least slightly more literate than the older non-self-employed. For the first three of these measures, the self-employed (regardless of how we define them) were more likely to give correct answers to questions about interest or inflation calculations and about whether holding a single company stock was preferred to a diversified mutual fund. Similarly, on the safe money question, in most cases a smaller percentage of the self-employed than their non self-employed counterparts responded that it was best to put all of one's money into the safest investment and accept whatever return one could get. The noticeable exception to this involved the currently self-employed during the most recent Great Recession, although it should be noticed that more conservative attitudes among the self-employed in 2010 could easily have represented the wiser outcome. The final outcome measure reveals that a larger share of the self-employed over age 50 reported that even older retirees should

¹⁰ Press Office Fact Sheet, 2004 Social Security Changes, October 2003.

<http://www.ssa.gov/pressoffice/factsheets/colafacts2004.htm>. Accessed October 1, 2012.

hold some stocks in their portfolios, again possibly reflecting more risk-tolerant preferences among entrepreneurs.

Table 8: Retirement Literacy and Planning Outcomes (percent)

		Currently Self-Employed				Mostly Self-Employed		Self-Employed During HRS Waves		
		No	Yes	Part-Time	Full-Time	No	Yes	Never	Some	Always
Would Work Longer if SS Benefits Cut	2008	3.0	2.5	2.9	2.2	1.7	2.4	1.6	2.0	2.1
Typical SS Benefit for 70-Year-Old Retiree (Dollars)	2004	1,076	1,038	878	1,090	1,028	1,047	1,030	996	1,155
	2004	26.2	20.0	18.5	20.9	25.9	19.7	26.3	22.3	18.2
Thought About Retirement A Lot Before Retiring	2006	27.6	18.4	18.8	18.1	25.6	18.4	25.9	22.8	15.5
	2008	26.8	18.3	18.4	18.2	25.3	18.2	25.8	21.0	18.2
	2010	25.2	20.4	22.4	18.9	23.8	20.1	24.6	19.6	20.7
	1996	33.8	32.6	26.9	34.9	30.3	32.5	30.3	30.4	37.3
Answered Interest Q. Correctly	2004	74.8	79.3	86.1	76.0	69.0	79.6	68.5	74.2	81.0
	2010	76.9	83.3	74.0	90.6	69.2	83.9	68.6	75.9	83.3
Answered Inflation Q. Correctly	2004	82.0	85.6	83.3	86.7	77.6	83.5	76.1	85.3	88.1
	2010	82.7	87.7	84.0	90.6	81.1	88.4	80.8	83.2	93.8
Answered Safe Return Q. Correctly	2004	59.0	65.8	50.0	73.3	53.8	62.1	53.2	57.9	69.0
	2010	67.8	68.4	64.0	71.9	63.2	67.9	62.6	66.8	68.8
Answered Safe Money Q. as True	2008	26.0	19.1	21.4	17.3	31.0	18.9	31.5	25.2	16.7
	2010	21.9	23.7	24.0	23.4	29.9	23.2	29.4	31.5	16.7
Answered That Retired People Should Hold Stocks	2010	7.0	8.0	8.6	7.6	6.0	7.9	6.0	6.7	7.8

Source: Authors' calculations using 1994 through 2010 HRS data where appropriate.

Entries represent percent of respondents with the exception of the rows for estimated typical Social Security benefits and age the respondent started saving for retirement.

Regressions. We now turn to a discussion of our regression results, which attempt to shed additional light on the surface-level differences observed in our various cross-tabulations above. It is important to determine whether these differences are robust to controlling for individual level characteristics that are likely correlated with retirement decisions and planning, including age, education, marital status, and region of residence. Recall that we estimate separate linear regressions (or probits for dichotomous variables) for each pair-wise combination of outcome measures and self-employment measures. Tables 9 through 13 provide an overview of selected results from those numerous regression models, where each table represents a different outcome (or set of outcomes), each column represents a different year (or outcome), and each row or pair of rows represents a different self-employment measure. Only the coefficients (or marginal effects in the case of probits) for the self-employment variables are included in these summary tables. Full results are provided in the Appendix.

We begin with a discussion of our estimated marginal effects of self-employment status on the likelihood that the worker has a pension on his current job. The first two rows of Table 9 represent coefficients and t-statistics for the “currently self-employed” indicator for each of the year-specific models. The next four rows represent results for the “part-time” and “full-time” self-employed indicators (with not self-employed being the omitted category). The next two rows include results for the “mostly” self-employed indicator and the final four rows provide results for the “ever” and “always” self-employed indicators (again with never self-employed being the omitted category).

Table 9: Selected Results from Yearly Cross-Sectional Probits - Pension on the Current Job

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Currently Self-Employed	-0.608 (47.42)**	-0.578 (45.69)**	-0.550 (41.95)**	-0.474 (40.26)**	-0.478 (36.90)**	-0.473 (34.26)**	-0.475 (40.67)**	-0.459 (34.35)**	-0.491 (35.83)**	-0.493 (30.35)**
Part-Time Self-Employed	-0.735 (16.67)**	-0.654 (18.12)**	-0.592 (19.85)**	-0.478 (19.48)**	-0.517 (18.05)**	-0.523 (18.40)**	-0.559 (20.48)**	-0.496 (17.96)**	-0.539 (19.17)**	-0.551 (15.68)**
Full-Time Self-Employed	-0.585 (40.37)**	-0.559 (37.61)**	-0.533 (32.40)**	-0.473 (32.67)**	-0.464 (29.71)**	-0.451 (26.18)**	-0.445 (31.48)**	-0.443 (26.97)**	-0.468 (26.71)**	-0.468 (23.21)**
Mostly Self-Employed	-0.489 (35.53)**	-0.576 (44.92)**	-0.550 (41.17)**	-0.438 (35.25)**	-0.476 (36.17)**	-0.468 (33.38)**	-0.435 (35.33)**	-0.458 (33.59)**	-0.491 (35.24)**	-0.489 (29.53)**
Ever Self-Employed	-0.346 (34.29)**	-0.359 (34.79)**	-0.366 (34.40)**	-0.326 (31.71)**	-0.315 (29.18)**	-0.320 (27.25)**	-0.348 (31.44)**	-0.353 (28.13)**	-0.360 (27.91)**	-0.367 (24.19)**
Always Self-Employed	-0.663 (22.23)**	-0.600 (19.65)**	-0.555 (17.47)**	-0.499 (20.82)**	-0.495 (19.64)**	-0.457 (17.59)**	-0.473 (24.39)**	-0.442 (21.03)**	-0.478 (21.97)**	-0.462 (20.02)**

Source: Authors’ calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Consistent with the above cross-tabular results, our estimates suggest that the self-employed over age 50 are indeed less likely to have a pension plan on their current jobs than their non-self-employed counterparts, regardless of how we measure self-employment. Additionally, there does not appear to be a difference in the direction (and in most cases in the magnitude) of this effect during the two recessionary years of data (highlighted columns)—2002 and 2010.

Similarly, our regression results in Table 10 indicate that the older self-employed hold larger balances in their individual retirement and Keogh accounts than their non-self-employed counterparts even after controlling for sociodemographic characteristics. The vast majority of our self-employment coefficients are positive and statistically significant. Further, while their magnitudes fall somewhat during recessions, they often remain positive and significant.

Table 10: Selected Results from Yearly Linear Cross-Sectional Regressions – IRA/Keogh Savings

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Currently Self-Employed	8,082 (8.24)**	6,917 (4.23)**	8,410 (4.17)**	18,506 (6.96)**	28,337 (5.46)**	17,028 (4.95)**	42,879 (4.03)**	8,919 (0.71)	23,206 (2.07)*	20,323 (3.06)**
Part-Time Self-Employed	10,498 (5.28)**	7,188 (2.36)*	7,772 (2.35)*	21,126 (4.81)**	30,444 (3.51)**	26,569 (5.06)**	38,908 (2.32)*	18,000 (0.93)	55,810 (3.40)**	16,481 (1.70)
Full-Time Self-Employed	7,457 (6.92)**	6,831 (3.74)**	8,703 (3.71)**	17,350 (5.65)**	27,447 (4.61)**	11,764 (2.89)**	44,864 (3.60)**	4,089 (0.28)	2,314 (0.17)	22,817 (2.83)**
Mostly Self-Employed	4,786 (4.96)**	5,305 (3.27)**	4,988 (2.40)*	12,290 (4.99)**	16,860 (3.43)**	3,928 (1.10)	29,786 (3.55)**	-7,908 (0.46)	12,383 (1.26)	9,883 (1.61)
Ever Self-Employed	3,011 (3.67)**	2,766 (2.09)*	5,281 (3.21)**	6,575 (3.31)**	12,985 (3.53)**	7,052 (2.67)**	20,393 (3.13)**	48,251 (3.81)**	37,124 (5.15)**	9,514 (2.25)*
Always Self-Employed	6,582 (3.72)**	6,866 (2.15)*	9,903 (2.34)*	15,064 (3.25)**	14,591 (1.66)	6,196 (0.96)	48,810 (3.63)**	-7,930 (0.30)	2,864 (0.19)	7,582 (0.85)

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent regression coefficients and t-statistics in parentheses. * p<0.05; ** p<0.01.

In yet another confirmation of our cross-tabulations, we report in Table 11 that the older self-employed indeed expect later retirements than their non-self employed counterparts, regardless of how we define self-employment. Interestingly, the coefficients on our self-employment measures increase substantially in magnitude during the 2002 wave, suggesting that the earlier recession added roughly half of one year to the self-employed worker's career. A similar result is not observed for the most recent Great Recession, which may simply reflect that most of the HRS respondents were either in or very near retirement by 2010. If anything, the slight reduction in the coefficients in 2010 might reveal that the latest recession actually hastened retirement among older self-employed relative their long-term pattern, but they still expected to retire an average of 1.5 to 2 years later than older non-self-employed workers.

Table 11: Selected Results from Yearly Linear Cross-Sectional Regressions – Expected Retirement Age

	1992	1996	1998	2000	2002	2004	2006	2008	2010
Currently Self-Employed	1.483 (9.48)**	1.812 (8.33)**	2.042 (9.05)**	2.025 (7.63)**	2.432 (9.59)**	2.118 (9.29)**	2.352 (9.48)**	1.880 (8.26)**	1.810 (7.12)**
Part-Time Self-Employed	0.442 (1.32)	1.476 (4.24)**	1.680 (4.68)**	1.539 (3.64)**	2.233 (5.91)**	1.608 (4.36)**	2.086 (5.38)**	1.561 (4.52)**	1.532 (4.03)**
Full-Time Self-Employed	1.736 (10.09)**	1.998 (7.55)**	2.243 (8.18)**	2.295 (7.12)**	2.569 (8.07)**	2.387 (8.69)**	2.508 (8.29)**	2.080 (7.45)**	1.990 (6.36)**
Mostly Self-Employed	1.139 (7.24)**	1.832 (8.39)**	1.970 (8.46)**	2.035 (7.62)**	2.396 (9.36)**	1.979 (8.46)**	2.359 (9.49)**	1.884 (8.23)**	1.829 (7.17)**
Ever Self-Employed	0.702 (5.59)**	1.298 (7.10)**	1.231 (6.52)**	1.006 (4.76)**	1.604 (7.54)**	1.718 (8.05)**	2.038 (8.79)**	1.190 (5.35)**	1.964 (7.66)**
Always Self-Employed	2.179 (7.33)**	2.816 (5.43)**	3.461 (7.48)**	3.308 (6.33)**	3.050 (6.14)**	3.018 (8.12)**	2.682 (6.75)**	2.700 (7.47)**	1.944 (5.41)**

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent regression coefficients and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table 12: Selected Results from Yearly Cross-Sectional Probits – Answered “Don’t Know” on Current Pension Question

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Currently Self-Employed	-0.013 (2.73)**	-0.000 (0.25)	-0.004 (1.36)	0.001 (0.88)	-0.003 (1.13)	-0.002 (0.85)	-0.000 (0.11)	-0.006 (1.89)	-0.007 (1.97)*	-0.001 (0.47)
Part-Time Self-Employed	0.000	0.000	0.000	0.000	-0.005 (1.00)	-0.005 (1.02)	-0.003 (0.74)	0.000	-0.004 (0.89)	-0.000 (0.04)
Full-Time Self-Employed	-0.012 (2.39)*	0.000 (0.15)	-0.003 (0.97)	0.003 (1.63)	-0.002 (0.77)	-0.001 (0.37)	0.001 (0.32)	-0.005 (1.47)	-0.010 (1.83)	-0.002 (0.60)
Mostly Self-Employed	-0.007 (2.03)*	-0.000 (0.11)	0.000	0.001 (0.60)	0.001 (0.76)	0.001 (0.46)	0.001 (1.57)	-0.001 (1.02)	-0.001 (0.50)	0.002 (1.41)
Ever Self-Employed	-0.006 (2.36)*	0.000 (0.21)	-0.001 (0.59)	0.002 (2.05)*	0.001 (1.17)	0.000 (0.06)	-0.000 (0.37)	-0.001 (0.69)	-0.000 (0.18)	0.001 (1.47)
Always Self-Employed	-0.001 (0.14)	0.001 (0.62)	0.001 (0.78)	0.002 (1.40)	0.004 (1.93)	0.003 (1.67)	0.001 (1.19)	-0.000 (0.13)	-0.001 (0.57)	0.003 (1.61)

Source: Authors’ calculations using 1992 through 2010 HRS data.
 Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table 13: Selected Results from Yearly Cross-Sectional Probits – Has Some Control Over Employer-Provided Retirement Plan and It Is Mostly Invested in Stocks

	1992	1996	1998	2000	2002	2004	2006
Currently Self-Employed	-0.134 (1.85)	0.041 (0.43)	0.028 (0.43)	-0.071 (0.96)	0.186 (2.22)*	0.114 (2.49)*	0.102 (1.44)
Part-Time Self-Employed	-0.271 (1.10)	0.065 (0.39)	-0.246 (1.61)	0.190 (0.93)	0.064 (0.38)	-0.063 (0.56)	-0.060 (0.32)
Full-Time Self-Employed	-0.121 (1.61)	0.031 (0.28)	0.081 (1.14)	-0.108 (1.37)	0.221 (2.35)*	0.146 (2.96)**	0.126 (1.67)
Mostly Self-Employed	-0.018 (0.28)	0.041 (0.43)	-0.008 (0.13)	-0.093 (1.24)	0.196 (2.45)*	0.081 (1.86)	0.093 (1.31)
Ever Self-Employed	-0.043 (0.96)	-0.034 (0.51)	0.069 (1.30)	-0.038 (0.79)	0.082 (1.50)	0.078 (2.18)*	0.003 (0.06)
Always Self-Employed	-0.155 (1.29)	-0.019 (0.12)	0.063 (0.63)	-0.054 (0.50)	0.238 (1.97)*	0.177 (2.93)**	0.050 (0.54)

Source: Authors’ calculations using 1992 through 2010 HRS data.
 Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

The results in Tables 12 and 13 do not reveal many significant impacts of self-employment on (a) answering “I don’t know” to the current pension question or (b) having control over an employer-provided retirement plan and investing most of it in stocks. One notable exception is the 2002 results in Table 13, where we find that the older self-employed are more likely to report having control over an employer-provided retirement plan and investing it mainly in stocks than their non-self-employed counterparts. This finding also persists into the 2004 wave. We note, however, that the relative percent of individuals reporting “I don’t know” is low, so we are cautious to make inferences about retirement planning based on this question alone.

Table 14: Selected Results from Yearly Cross-Sectional Probits/Regressions – Other Outcomes

	Would Work Longer if SS Benefits Cut	Typical SS Benefit for 70-Year-Old Retiree	Age Started to Save for Retirement	Thought About Retirement A Lot Before Retiring			
	2008	2004	1996	2004	2006	2008	2010
Currently Self-Employed	-0.004 (0.79)	-52.840 (0.91)	-2.183 (0.73)	-0.057 (4.36)**	-0.090 (6.38)**	-0.083 (5.76)**	-0.045 (2.85)**
Part-Time Self-Employed	0.001 (0.08)	-234.886 (2.19)*	-8.223 (1.59)	-0.063 (3.02)**	-0.072 (3.26)**	-0.071 (3.34)**	-0.016 (0.71)
Full-Time Self-Employed	-0.008 (1.13)	5.182 (0.08)	0.066 (0.02)	-0.054 (3.49)**	-0.101 (5.91)**	-0.090 (5.13)**	-0.065 (3.33)**
Mostly Self-Employed	0.005 (1.56)	-5.485 (0.11)	0.386 (0.13)	-0.076 (6.07)**	-0.088 (6.63)**	-0.087 (6.44)**	-0.048 (3.34)**
Ever Self-Employed	0.005 (1.79)	-33.661 (0.73)	-1.325 (0.55)	-0.050 (5.26)**	-0.037 (3.90)**	-0.055 (5.66)**	-0.054 (5.51)**
Always Self-Employed	0.001 (0.23)	109.029 (1.44)	3.017 (0.54)	-0.099 (4.75)**	-0.131 (6.02)**	-0.096 (4.54)**	-0.052 (2.48)*

	Answered Interest Question Correctly		Answered Inflation Question Correctly		Answered Safe Return Question Correctly		Answered Safe Money Question as True		Retired People Should Hold Stocks
	2004	2010	2004	2010	2004	2010	2008	2010	2010
Currently Self-Employed	0.024 (0.52)	0.063 (1.36)	0.018 (0.43)	0.047 (1.08)	0.037 (0.71)	-0.007 (0.14)	-0.075 (1.73)	0.018 (0.40)	0.009 (0.99)
Part-Time Self-Employed	0.100 (1.20)	-0.015 (0.25)	-0.008 (0.12)	0.012 (0.20)	-0.141 (1.67)	-0.023 (0.32)	-0.082 (1.28)	0.021 (0.32)	0.014 (1.07)
Full-Time Self-Employed	-0.005 (0.09)	0.135 (2.16)*	0.030 (0.62)	0.076 (1.36)	0.121 (1.97)*	0.004 (0.06)	-0.071 (1.30)	0.016 (0.30)	0.006 (0.51)
Mostly Self-Employed	0.055 (1.12)	0.099 (2.01)*	0.010 (0.24)	0.052 (1.23)	0.013 (0.26)	-0.039 (0.81)	-0.086 (1.86)	-0.042 (0.88)	0.012 (1.60)
Ever Self-Employed	0.023 (0.62)	0.057 (1.71)	0.066 (1.89)	0.005 (0.17)	0.008 (0.22)	0.018 (0.52)	-0.063 (1.92)	0.018 (0.53)	0.005 (1.00)
Always Self-Employed	0.059 (0.77)	0.076 (1.04)	0.078 (1.07)	0.129 (1.74)	0.076 (0.96)	-0.055 (0.77)	-0.090 (1.20)	-0.099 (1.31)	0.009 (0.84)

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects for dichotomous outcomes and regression coefficients for linear outcome variables. T-statistics are in parentheses. * p<0.05; ** p<0.01.

Despite some interesting findings in our preliminary cross-tabulations, our multivariate regression analysis does not provide much in the way of noticeable all-else-equal impacts of self-employment on the bulk of our remaining outcomes. As shown in Table 14, the only systematic result we observe is that the older self-employed were indeed less likely to have thought a lot about retiring before actually retiring than their non-self-employed counterparts. Of course, it remains unseen whether this is reflective of sub-par retirement preparation or merely a general satisfaction with work among the self-employed. For example, the self-employed might receive non-pecuniary benefits from their work (e.g. "lifestyle self-employment") or a general level of satisfaction from work that makes retirement preparation less necessary as many self-employed might not plan to retire. Conversely, focusing on running their business, including day-to-day operations and the administrative burdens of tax compliance, might leave the self-

employed little time to focus on retirement planning. Sorting out these effects would be an interesting avenue for future research.

It is worthwhile to note that when we do find a statistically significant effect of self-employment on our financial literacy questions, we tend to find that self-employed individuals over age 50 are more likely to answer those questions correctly relative to their non-self-employed counterparts. For example, the full-time self-employed and mostly self-employed were statistically more likely to correctly answer a basic question about interest, and the full-timers were also more likely to answer a safe return question correctly.

Discussion and Conclusions

In our preliminary exploration of how self-employed workers over age 50 compare to their non self-employed counterparts with respect to retirement planning, preparation, and financial literacy, we find suggestive evidence that self-employment correlates significantly with several retirement planning measures.

First, consistent with our hypotheses and the previous literature (Gustman and Steinmeier 1998), older self-employed individuals are significantly less likely to have an employer provided pension than older wage and salary workers. Not surprisingly, however, self-employed individuals tend to have significantly greater IRA/Keogh savings, likely due in large part to pension and 401(k) rollovers from previous wage and salary employment. Thus, small business owners and self-employed individuals may “compensate” for not having private pensions by saving more money in other savings vehicles or holding wealth in other assets such as business equity. We do not find evidence that either the probability of having a private pension or the value of IRA/Keogh savings varies considerably in recessionary years 2001 and 2009, though other assets such as home equity and business equity may.

We also find little evidence that older self-employed individuals who are covered by private plans over which they have some control exhibit different portfolio allocation behavior as compared to older non-self-employed individuals. In other words, these self-employed individuals do not seem to be more likely to choose equities over bonds as compared to non-self-employed individuals. With respect to other retirement planning measures, we find little evidence that self-employed individuals start to save for retirement sooner than those who not self-employed, but we are only able to examine this for one survey year and respondents were reporting on activity that occurred more than 20 years earlier in most cases. In fact, we find that self-employed individuals tend to report thinking about retirement less frequently. This, coupled with the significantly later expected retirement age of the self-employed, is consistent with the notion that self-employed individuals may be less likely to retire all together.

Finally, we consistently find that self-employed individuals over age 50 exhibit greater financial knowledge about concepts such as inflation, interest calculations, and general financial literacy than their non-self-employed counterparts. In some models, these differences are quite small and not statistically significant, but still suggestive. Indeed, when we find a significant differ-

ence, it is usually the case that the self-employed are more financially literate than their non-self-employed counterparts. While these findings are not surprising if we think that self-employed individuals are more likely to be exposed to this knowledge through the day-to-day tasks associated with running a business, more research is needed to determine whether this increased financial knowledge translates into better retirement preparation. Unfortunately, we do not have enough years of data to examine how financial literacy varies by self-employment status across recessionary periods.

These findings add support in favor of small business assistance programs in that those who choose self-employment might gain valuable financial skills. More research is certainly needed, but by this line of reasoning, it is possible that facilitating small business ownership could lead to greater retirement preparation and retirement income security.

In general, the self-employed over age 50 expect to retire at older ages and have larger balances in their retirement savings accounts. While these characteristics might make it easier for older self-employed to weather a recessionary financial storm, our analysis does not reveal key differences in outcome variables during recessionary years. That is, we find that older self-employed differ from their wage and salary counterparts in important ways including financial literacy, but these differences are not exacerbated or lessened during recessionary periods. A key area for further research is a closer examination of wealth portfolio allocations over time to see if the increased levels of financial literacy among the self-employed lead to fewer financial losses during recessions or different rates of financial recovery following a recession. Research along these lines would more closely address the question of how much of a financial impact recessions have on the self-employed, whereas the current study focused on whether there is a differential impact on the self-employed compared to wage and salary workers.

In the literature, entrepreneurs including the self-employed have sometimes been portrayed as great risk-takers. While it may be true that the self-employed are more willing to take risk to achieve financial gain than their wage and salary counterparts, the results of our analysis add further texture to the existing literature and suggest that the self-employed are more financially savvy than their counterparts, perhaps enabling them to better evaluate potential financial risks.

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Appendix

The appendix includes summary statistics and full regression results for the analyses presented above. Table A1.1 contains summary statistics for the analysis sample for all available years (1992 to 2010). Table A1.2 contains summary statistics for 2010 by our various measures of self-employment. Tables A2.1 through A8.4 contain full regression output for the regressions presented in Tables 8 through 14 of the report.

Table A1: Basic Summary Statistics by Year

	1992		1996		1998		2000		2002		2004		2008		2010	
	Mean	S. D.	Mean	S. D.	Mean	S. D.	Mean	S. D.	Mean	S. D.	Mean	S. D.	Mean	S. D.	Mean	S. D.
OUTCOME MEASURES:																
Has Pension on Current Job	0.538	0.499	0.521	0.500	0.505	0.500	0.495	0.500	0.457	0.498	0.477	0.499	0.449	0.497	0.409	0.492
Value of IRA/Keogh Plan Savings (Dollars)	11,983	36,569	25,345	70,876	34,521	98,471	49,700	176,051	45,747	127,497	51,831	322,959	73,923	347,227	72,702	201,675
Expected Retirement Age (Years)	63.188	4.002	63.878	4.520	64.277	5.237	65.054	5.583	66.203	5.620	65.914	5.745	67.491	6.071	69.104	6.755
Would Work Longer if SS Benefits Cut													0.017	0.131		
Typical SS Benefit for 70-Year-Old Retiree (Dollars)											1,031	487				
Thought About Retirement A Lot Before Retiring											0.253	0.435	0.246	0.431	0.235	0.424
Age Started to Save for Retirement (Years)			30.554	22.068												
Answered "Don't Know" to Current Pension Q.	0.005	0.073	0.002	0.043	0.002	0.043	0.003	0.052	0.002	0.046	0.002	0.043	0.002	0.048	0.002	0.047
Answered Interest Q. Correctly											0.700	0.458		0.706	0.456	
Answered Inflation Q. Correctly											0.781	0.414		0.818	0.386	
Answered Safe Return Q. Correctly											0.546	0.498		0.637	0.481	
Answered Safe Money Q. Correctly													0.299	0.458	0.293	0.455
Answered That Retired People Should Hold Stocks													0.000	0.000	0.062	0.241
Has Some Control Over Pension; Mostly in Stocks	0.430	0.495	0.459	0.499	0.556	0.497	0.446	0.497	0.393	0.489	0.415	0.493				
SELF-EMPLOYMENT MEASURES:																
Currently Self-Employed	0.182	0.386	0.206	0.404	0.206	0.405	0.205	0.403	0.228	0.420	0.222	0.415	0.239	0.427	0.245	0.430
Currently Part-Time Self-Employed	0.037	0.190	0.066	0.248	0.065	0.247	0.063	0.242	0.083	0.276	0.077	0.266	0.097	0.295	0.099	0.299
Currently Full-Time Self-Employed	0.144	0.351	0.140	0.347	0.141	0.348	0.142	0.349	0.145	0.352	0.145	0.352	0.142	0.349	0.146	0.353
Mostly Self-Employed (Lifetime Tenure Basis)	0.123	0.329	0.114	0.318	0.109	0.311	0.094	0.292	0.093	0.291	0.098	0.298	0.090	0.286	0.080	0.271
Self-Employed During Some But Not All of HRS	0.186	0.389	0.204	0.403	0.184	0.388	0.189	0.391	0.195	0.396	0.181	0.385	0.188	0.391	0.190	0.393
Always Self-Employed During HRS Waves	0.034	0.180	0.025	0.156	0.028	0.166	0.027	0.163	0.027	0.162	0.036	0.187	0.035	0.184	0.036	0.187
CONTROL VARIABLES:																
Age (Years)	55.162	5.574	58.891	5.676	60.649	7.369	62.362	7.456	64.239	7.472	63.122	8.960	66.779	8.934	68.682	9.008
Married	0.810	0.392	0.790	0.408	0.756	0.430	0.744	0.436	0.727	0.445	0.723	0.447	0.688	0.463	0.670	0.470
High School Graduate	0.323	0.468	0.323	0.468	0.315	0.465	0.314	0.464	0.315	0.465	0.302	0.459	0.303	0.460	0.305	0.460
Completed Some College	0.192	0.394	0.195	0.397	0.203	0.403	0.204	0.403	0.206	0.404	0.226	0.418	0.226	0.418	0.232	0.422
College Graduate	0.167	0.373	0.173	0.378	0.189	0.392	0.195	0.397	0.198	0.399	0.213	0.410	0.219	0.413	0.220	0.415
Northeast	0.177	0.382	0.167	0.373	0.163	0.370	0.164	0.370	0.158	0.365	0.157	0.364	0.150	0.357	0.152	0.359
Midwest	0.241	0.428	0.243	0.429	0.247	0.431	0.243	0.429	0.245	0.430	0.247	0.431	0.247	0.431	0.251	0.434
West	0.159	0.366	0.162	0.368	0.169	0.374	0.171	0.377	0.173	0.379	0.190	0.392	0.188	0.390	0.180	0.384
Max. N	12,522		10,964		15,433		14,579		14,058		16,764		15,075		13,877	

Source: Authors' calculations using 1992 through 2010 HRS data. Data for 1996 and 2006 excluded for brevity.

Table A2.1: Yearly Cross-Sectional Probit Results - Pension on the Current Job — Current Self-Employment Status

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Currently Self-Employed	-0.608 (47.42)**	-0.578 (45.69)**	-0.550 (41.95)**	-0.474 (40.26)**	-0.478 (36.90)**	-0.473 (34.26)**	-0.475 (40.67)**	-0.459 (34.35)**	-0.491 (35.83)**	-0.493 (30.35)**
Age	0.075 (7.14)**	0.094 (8.35)**	0.102 (9.00)**	0.110 (13.02)**	0.108 (12.48)**	0.080 (9.38)**	0.076 (10.19)**	0.073 (8.75)**	0.053 (6.51)**	0.036 (3.89)**
Age ²	-0.001 (7.25)**	-0.001 (8.69)**	-0.001 (9.65)**	-0.001 (14.34)**	-0.001 (14.08)**	-0.001 (11.03)**	-0.001 (11.67)**	-0.001 (10.08)**	-0.001 (7.98)**	-0.000 (5.26)**
Married	0.042 (3.41)**	0.039 (2.99)**	0.030 (2.21)*	0.050 (4.15)**	0.015 (1.20)	0.004 (0.33)	0.040 (3.46)**	0.022 (1.74)	0.038 (2.91)**	0.054 (3.74)**
High School	0.089 (7.23)**	0.109 (8.15)**	0.103 (7.01)**	0.085 (6.20)**	0.109 (7.27)**	0.103 (6.32)**	0.144 (9.58)**	0.108 (6.25)**	0.088 (4.86)**	0.093 (4.48)**
Some College	0.139 (10.00)**	0.159 (10.69)**	0.112 (6.89)**	0.114 (7.67)**	0.132 (8.31)**	0.118 (6.80)**	0.180 (11.79)**	0.138 (7.96)**	0.124 (6.87)**	0.157 (7.74)**
College Graduate	0.255 (18.31)**	0.264 (17.75)**	0.262 (16.32)**	0.260 (18.18)**	0.259 (16.91)**	0.261 (15.91)**	0.299 (20.58)**	0.249 (14.89)**	0.211 (12.09)**	0.239 (12.24)**
Northeast	0.046 (3.39)**	0.028 (1.88)	0.055 (3.44)**	0.051 (3.54)**	0.045 (2.93)**	0.036 (2.18)*	0.053 (3.66)**	0.036 (2.20)*	0.059 (3.47)**	0.048 (2.53)*
Midwest	0.052 (4.29)**	0.033 (2.53)*	0.023 (1.65)	0.047 (3.74)**	0.013 (0.95)	-0.015 (1.06)	0.036 (2.86)**	0.040 (2.88)**	0.042 (2.91)**	0.036 (2.24)*
West	-0.016 (1.07)	-0.006 (0.37)	-0.012 (0.72)	0.026 (1.78)	-0.008 (0.51)	-0.017 (1.01)	-0.024 (1.71)	-0.015 (0.95)	0.022 (1.36)	0.010 (0.57)
<i>N</i>	8,248	7,009	6,125	7,813	6,750	5,780	7,619	6,420	5,722	4,488

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A2.2: Yearly Cross-Sectional Probit Results - Pension on the Current Job — Part-Time or Full-Time Self-Employment Status

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Part-Time	-0.735	-0.654	-0.592	-0.478	-0.517	-0.523	-0.559	-0.496	-0.539	-0.551
Self-Employed	(16.67)**	(18.12)**	(19.85)**	(19.48)**	(18.05)**	(18.40)**	(20.48)**	(17.96)**	(19.17)**	(15.68)**
Full-Time	-0.585	-0.559	-0.533	-0.473	-0.464	-0.451	-0.445	-0.443	-0.468	-0.468
Self-Employed	(40.37)**	(37.61)**	(32.40)**	(32.67)**	(29.71)**	(26.18)**	(31.48)**	(26.97)**	(26.71)**	(23.21)**
Age	0.074	0.093	0.101	0.110	0.108	0.079	0.075	0.072	0.053	0.035
	(7.10)**	(8.27)**	(8.92)**	(13.00)**	(12.41)**	(9.30)**	(10.05)**	(8.66)**	(6.42)**	(3.83)**
Age ²	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.000
	(7.21)**	(8.60)**	(9.56)**	(14.31)**	(13.99)**	(10.94)**	(11.49)**	(9.97)**	(7.86)**	(5.19)**
Married	0.042	0.039	0.030	0.050	0.016	0.004	0.040	0.022	0.038	0.054
	(3.40)**	(2.97)**	(2.19)*	(4.15)**	(1.24)	(0.30)	(3.44)**	(1.74)	(2.90)**	(3.71)**
High School	0.089	0.109	0.103	0.085	0.109	0.104	0.144	0.108	0.088	0.093
	(7.24)**	(8.16)**	(7.01)**	(6.20)**	(7.27)**	(6.34)**	(9.58)**	(6.24)**	(4.85)**	(4.47)**
Some Coll.	0.140	0.159	0.111	0.114	0.133	0.117	0.179	0.137	0.124	0.156
	(10.04)**	(10.68)**	(6.87)**	(7.67)**	(8.32)**	(6.79)**	(11.75)**	(7.93)**	(6.86)**	(7.70)**
College Grad	0.255	0.264	0.262	0.260	0.259	0.262	0.300	0.249	0.211	0.239
	(18.30)**	(17.75)**	(16.32)**	(18.18)**	(16.91)**	(15.96)**	(20.66)**	(14.89)**	(12.10)**	(12.22)**
Northeast	0.045	0.028	0.055	0.051	0.045	0.036	0.052	0.036	0.059	0.048
	(3.38)**	(1.90)	(3.44)**	(3.54)**	(2.93)**	(2.19)*	(3.59)**	(2.19)*	(3.47)**	(2.52)*
Midwest	0.052	0.033	0.023	0.047	0.013	-0.015	0.037	0.040	0.042	0.036
	(4.30)**	(2.53)*	(1.65)	(3.73)**	(0.96)	(1.07)	(2.94)**	(2.91)**	(2.91)**	(2.25)*
West	-0.015	-0.005	-0.011	0.026	-0.008	-0.017	-0.024	-0.015	0.021	0.011
	(1.06)	(0.33)	(0.68)	(1.78)	(0.51)	(1.01)	(1.72)	(0.96)	(1.34)	(0.59)
<i>N</i>	8,248	7,009	6,125	7,813	6,750	5,780	7,619	6,420	5,722	4,488

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A2.3: Yearly Cross-Sectional Probit Results - Pension on the Current Job — Mostly Self-Employed During Career

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Mostly Self-Employed	-0.489 (35.53)**	-0.576 (44.92)**	-0.550 (41.17)**	-0.438 (35.25)**	-0.476 (36.17)**	-0.468 (33.38)**	-0.435 (35.33)**	-0.458 (33.59)**	-0.491 (35.24)**	-0.489 (29.53)**
Age	0.080 (7.16)**	0.093 (8.27)**	0.102 (8.94)**	0.116 (13.50)**	0.108 (12.47)**	0.082 (9.63)**	0.079 (10.40)**	0.073 (8.78)**	0.054 (6.57)**	0.037 (4.06)**
Age ²	-0.001 (7.38)**	-0.001 (8.61)**	-0.001 (9.58)**	-0.001 (14.87)**	-0.001 (14.09)**	-0.001 (11.32)**	-0.001 (11.89)**	-0.001 (10.17)**	-0.001 (8.07)**	-0.000 (5.46)**
Married	0.030 (2.29)*	0.037 (2.82)**	0.029 (2.12)*	0.045 (3.72)**	0.014 (1.14)	0.003 (0.23)	0.036 (3.06)**	0.022 (1.71)	0.036 (2.74)**	0.054 (3.69)**
High School	0.093 (7.08)**	0.110 (8.17)**	0.102 (6.91)**	0.088 (6.25)**	0.110 (7.35)**	0.103 (6.32)**	0.150 (9.75)**	0.105 (6.08)**	0.087 (4.80)**	0.093 (4.48)**
Some College	0.135 (9.15)**	0.159 (10.63)**	0.112 (6.88)**	0.115 (7.63)**	0.135 (8.43)**	0.120 (6.88)**	0.182 (11.66)**	0.135 (7.80)**	0.126 (6.94)**	0.157 (7.74)**
College Graduate	0.242 (16.59)**	0.264 (17.72)**	0.261 (16.21)**	0.255 (17.54)**	0.259 (16.87)**	0.260 (15.77)**	0.298 (20.07)**	0.247 (14.75)**	0.213 (12.17)**	0.240 (12.25)**
Northeast	0.048 (3.38)**	0.027 (1.87)	0.054 (3.41)**	0.056 (3.80)**	0.046 (2.98)**	0.034 (2.06)*	0.053 (3.59)**	0.034 (2.07)*	0.058 (3.42)**	0.050 (2.62)**
Midwest	0.058 (4.52)**	0.033 (2.53)*	0.023 (1.68)	0.044 (3.48)**	0.013 (0.94)	-0.016 (1.13)	0.036 (2.81)**	0.039 (2.84)**	0.041 (2.87)**	0.036 (2.22)*
West	-0.026 (1.71)	-0.007 (0.47)	-0.011 (0.68)	0.026 (1.80)	-0.007 (0.46)	-0.018 (1.09)	-0.030 (2.14)*	-0.019 (1.23)	0.021 (1.31)	0.008 (0.42)
<i>N</i>	8,248	7,009	6,127	7,815	6,752	5,784	7,622	6,451	5,722	4,491

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A2.4: Yearly Cross-Sectional Probit Results - Pension on the Current Job — Self-Employment Intensity (Ever and Always) During the HRS Waves

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Ever Self-Employed	-0.346 (34.29)**	-0.359 (34.79)**	-0.366 (34.40)**	-0.326 (31.71)**	-0.315 (29.18)**	-0.320 (27.25)**	-0.348 (31.44)**	-0.353 (28.13)**	-0.360 (27.91)**	-0.367 (24.19)**
Always Self-Employed	-0.663 (22.23)**	-0.600 (19.65)**	-0.555 (17.47)**	-0.499 (20.82)**	-0.495 (19.64)**	-0.457 (17.59)**	-0.473 (24.39)**	-0.442 (21.03)**	-0.478 (21.97)**	-0.462 (20.02)**
Age	0.079 (7.17)**	0.103 (8.75)**	0.107 (9.18)**	0.117 (13.76)**	0.114 (13.09)**	0.083 (9.52)**	0.076 (10.14)**	0.070 (8.38)**	0.048 (5.88)**	0.034 (3.76)**
Age ²	-0.001 (7.43)**	-0.001 (9.26)**	-0.001 (9.92)**	-0.001 (15.19)**	-0.001 (14.80)**	-0.001 (11.22)**	-0.001 (11.53)**	-0.001 (9.61)**	-0.000 (7.24)**	-0.000 (5.03)**
Married	0.041 (3.19)**	0.030 (2.18)*	0.027 (1.90)	0.047 (3.86)**	0.010 (0.75)	0.008 (0.58)	0.039 (3.31)**	0.021 (1.67)	0.035 (2.60)**	0.057 (3.94)**
High School	0.099 (7.72)**	0.118 (8.55)**	0.105 (6.96)**	0.090 (6.46)**	0.115 (7.56)**	0.106 (6.37)**	0.150 (9.82)**	0.110 (6.36)**	0.094 (5.16)**	0.093 (4.46)**
Some Coll.	0.147 (10.18)**	0.172 (11.15)**	0.122 (7.29)**	0.120 (7.98)**	0.140 (8.67)**	0.120 (6.81)**	0.188 (12.18)**	0.142 (8.23)**	0.135 (7.39)**	0.160 (7.85)**
College Grad	0.277 (19.29)**	0.285 (18.57)**	0.274 (16.66)**	0.274 (18.96)**	0.269 (17.40)**	0.266 (15.90)**	0.308 (21.00)**	0.257 (15.34)**	0.226 (12.82)**	0.243 (12.34)**
Northeast	0.040 (2.84)**	0.016 (1.05)	0.045 (2.78)**	0.042 (2.83)**	0.034 (2.19)*	0.025 (1.49)	0.051 (3.48)**	0.026 (1.59)	0.050 (2.89)**	0.035 (1.85)
Midwest	0.047 (3.74)**	0.029 (2.15)*	0.023 (1.62)	0.041 (3.26)**	0.012 (0.90)	-0.020 (1.36)	0.034 (2.70)**	0.033 (2.39)*	0.036 (2.51)*	0.027 (1.68)
West	-0.019 (1.25)	-0.010 (0.65)	-0.014 (0.82)	0.028 (1.90)	-0.009 (0.55)	-0.017 (1.00)	-0.020 (1.47)	-0.012 (0.79)	0.023 (1.44)	0.008 (0.47)
N	8,248	7,009	6,127	7,815	6,752	5,784	7,622	6,451	5,722	4,491

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A3.1: Yearly Cross-Sectional Regression Results - Value of IRA/Keogh Plan Savings — Current Self-Employment Status

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Currently Self-Employed	8,081.706 (8.24)**	6,916.908 (4.23)**	8,409.739 (4.17)**	18,505.937 (6.96)**	28,336.572 (5.46)**	17,028.051 (4.95)**	42,878.719 (4.03)**	8,919.092 (0.71)	23,206.059 (2.07)*	20,323.375 (3.06)**
Age	840.648 (1.06)	-607.620 (0.50)	970.781 (0.65)	3,422.603 (2.06)*	4,031.164 (1.36)	4,793.630 (2.42)*	-2,501.635 (0.40)	10,287.924 (1.49)	-2,402.491 (0.38)	5,349.905 (1.42)
Age ²	-2.530 (0.34)	11.565 (1.04)	-1.167 (0.09)	-20.683 (1.44)	-24.388 (0.97)	-33.394 (2.03)*	25.708 (0.50)	-66.433 (1.18)	36.755 (0.72)	-28.936 (0.98)
Married	8,161.229 (8.32)**	12,428.380 (7.54)**	17,877.521 (8.74)**	23,621.051 (9.13)**	33,027.762 (6.65)**	30,790.971 (9.14)**	30,462.420 (2.96)**	49,872.444 (4.11)**	56,013.632 (5.10)**	53,179.691 (8.24)**
High School	5,758.344 (5.80)**	10,076.233 (5.88)**	12,743.531 (5.83)**	15,614.266 (5.23)**	25,098.495 (4.25)**	14,333.072 (3.50)**	16,914.758 (1.27)	31,672.147 (1.97)*	31,757.344 (2.14)*	21,202.832 (2.35)*
Some Coll.	9,367.907 (8.41)**	15,367.580 (8.08)**	21,574.786 (8.94)**	23,729.437 (7.40)**	33,558.901 (5.33)**	25,792.112 (5.94)**	32,552.191 (2.39)*	30,268.245 (1.86)	58,034.503 (3.86)**	43,061.622 (4.78)**
College Grad	20,596.528 (18.43)**	31,515.024 (16.50)**	40,380.880 (16.75)**	58,719.070 (18.54)**	86,437.356 (14.05)**	70,039.951 (16.50)**	84,215.583 (6.32)**	108,739.288 (6.78)**	122,530.562 (8.36)**	125,355.567 (14.25)**
Northeast	6,242.600 (5.87)**	10,195.724 (5.57)**	11,042.306 (4.75)**	10,434.534 (3.35)**	14,741.032 (2.45)*	10,063.677 (2.42)*	40,718.343 (3.16)**	13,485.020 (0.87)	31,398.193 (2.20)*	36,575.798 (4.30)**
Midwest	4,509.249 (4.73)**	5,492.546 (3.38)**	6,767.124 (3.32)**	2,921.756 (1.09)	4,010.243 (0.77)	3,173.209 (0.89)	12,377.900 (1.12)	16,987.967 (1.30)	7,413.382 (0.62)	13,048.519 (1.84)
West	2,768.982 (2.46)*	5,102.623 (2.66)**	7,417.455 (3.10)**	4,515.333 (1.47)	5,645.924 (0.95)	2,359.324 (0.58)	5,776.465 (0.48)	-733.001 (0.05)	25,715.852 (1.98)*	2,164.478 (0.28)
Constant	-44,703.226 (2.11)*	-11,896.627 (0.36)	-65,304.726 (1.56)	-144,140.412 (3.01)**	-177,402.519 (2.03)*	-183,419.617 (3.05)**	25,104.619 (0.14)	-402,784.821 (1.91)	-38,938.826 (0.20)	-251,165.209 (2.09)*
R ²	0.07	0.06	0.07	0.07	0.05	0.08	0.01	0.01	0.03	0.09
N	8,328	7,033	6,167	7,853	6,798	5,834	7,668	6,469	5,791	4,536

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent regression coefficients and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A3.2: Yearly Cross-Sectional Regression Results - Value of IRA/Keogh Plan Savings — Part-Time or Full-Time Self-Employment Status

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Part-Time Self-Employed	10,497.600 (5.28)**	7,187.994 (2.36)*	7,772.478 (2.35)*	21,126.149 (4.81)**	30,443.623 (3.51)**	26,569.214 (5.06)**	38,908.167 (2.32)*	17,999.639 (0.93)	55,809.907 (3.40)**	16,481.188 (1.70)
Full-Time Self-Employed	7,456.821 (6.92)**	6,831.461 (3.74)**	8,702.709 (3.71)**	17,350.051 (5.65)**	27,446.874 (4.61)**	11,763.841 (2.89)**	44,864.401 (3.60)**	4,089.190 (0.28)	2,313.522 (0.17)	22,816.605 (2.83)**
Age	877.808 (1.11)	-599.997 (0.49)	947.234 (0.63)	3,501.354 (2.11)*	4,058.697 (1.37)	4,964.619 (2.50)*	-2,599.006 (0.42)	10,592.263 (1.53)	-1,327.000 (0.21)	5,264.490 (1.39)
Age ²	-2.887 (0.39)	11.490 (1.03)	-0.938 (0.07)	-21.463 (1.49)	-24.678 (0.98)	-35.139 (2.14)*	26.694 (0.51)	-69.361 (1.22)	26.611 (0.52)	-28.076 (0.95)
Married	8,173.782 (8.33)**	12,430.272 (7.54)**	17,878.567 (8.74)**	23,616.378 (9.13)**	32,986.456 (6.64)**	30,996.881 (9.21)**	30,396.094 (2.95)**	49,935.659 (4.12)**	56,304.367 (5.13)**	53,045.812 (8.22)**
High School	5,740.957 (5.78)**	10,076.642 (5.88)**	12,741.617 (5.83)**	15,599.029 (5.23)**	25,096.654 (4.25)**	14,252.091 (3.48)**	16,896.915 (1.27)	31,748.903 (1.97)*	31,737.056 (2.14)*	21,213.895 (2.35)*
Some Coll.	9,366.547 (8.41)**	15,369.577 (8.08)**	21,559.395 (8.93)**	23,712.420 (7.39)**	33,544.365 (5.33)**	25,838.532 (5.95)**	32,498.617 (2.39)*	30,503.654 (1.87)	58,559.894 (3.90)**	42,935.255 (4.77)**
College Grad	20,588.303 (18.42)**	31,514.787 (16.50)**	40,380.343 (16.75)**	58,702.887 (18.54)**	86,412.912 (14.04)**	69,760.693 (16.44)**	84,239.292 (6.32)**	108,723.897 (6.78)**	122,540.951 (8.36)**	125,303.824 (14.25)**
Northeast	6,249.218 (5.87)**	10,192.638 (5.57)**	11,047.682 (4.75)**	10,440.147 (3.35)**	14,740.888 (2.45)*	10,108.596 (2.43)*	40,653.409 (3.16)**	13,514.692 (0.87)	31,073.614 (2.18)*	36,601.104 (4.30)**
Midwest	4,506.774 (4.73)**	5,490.838 (3.38)**	6,775.919 (3.33)**	2,939.427 (1.10)	3,986.546 (0.77)	3,098.705 (0.87)	12,457.995 (1.13)	16,888.316 (1.30)	7,395.947 (0.62)	13,061.208 (1.84)
West	2,749.407 (2.44)*	5,098.416 (2.65)**	7,435.200 (3.11)**	4,485.987 (1.46)	5,629.918 (0.94)	2,344.540 (0.58)	5,777.738 (0.48)	-786.638 (0.06)	25,893.196 (1.99)*	2,164.658 (0.28)
Constant	-45,657.313 (2.15)*	-12,087.204 (0.36)	-64,715.017 (1.54)	-146,046.675 (3.04)**	-177,954.837 (2.03)*	-187,361.535 (3.12)**	27,427.010 (0.15)	-410,452.724 (1.94)	-66,566.586 (0.33)	-249,097.049 (2.07)*
R ²	0.07	0.06	0.07	0.07	0.05	0.08	0.01	0.01	0.03	0.09
N	8,328	7,033	6,167	7,853	6,798	5,834	7,668	6,469	5,791	4,536

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent regression coefficients and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A3.3: Yearly Cross-Sectional Regression Results - Value of IRA/Keogh Plan Savings — Mostly Self-Employed During Career

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Mostly Self-Employed	4,785.512 (4.96)**	5,305.447 (3.27)**	4,987.787 (2.40)*	12,289.634 (4.99)**	16,860.166 (3.43)**	3,928.173 (1.10)	29,785.901 (3.55)**	-7,907.812 (0.46)	12,383.216 (1.26)	9,883.103 (1.61)
Age	2,151.243 (3.91)**	1,520.551 (1.69)	4,259.363 (3.67)**	6,014.202 (5.19)**	8,287.897 (4.00)**	8,728.246 (5.66)**	6,806.121 (2.14)*	25,357.243 (4.01)**	9,957.394 (2.72)**	16,049.819 (7.24)**
Age ²	-15.503 (3.08)**	-9.111 (1.14)	-31.836 (3.18)**	-41.794 (4.33)**	-59.447 (3.53)**	-63.223 (5.18)**	-45.891 (1.80)	-184.849 (3.77)**	-68.672 (2.47)*	-114.821 (7.04)**
Married	8,833.753 (10.80)**	12,866.865 (9.85)**	18,015.607 (11.06)**	26,753.154 (14.90)**	35,683.771 (10.81)**	35,724.255 (15.20)**	37,549.413 (6.70)**	66,008.125 (6.08)**	56,648.409 (9.25)**	53,707.378 (15.01)**
High School	6,383.641 (7.99)**	10,557.714 (7.97)**	14,255.556 (8.52)**	18,009.690 (9.09)**	26,767.003 (7.20)**	22,036.093 (8.12)**	24,417.582 (3.64)**	30,050.597 (2.28)*	40,876.157 (5.37)**	29,170.957 (6.42)**
Some Coll.	10,498.102 (11.35)**	17,135.802 (11.21)**	24,091.538 (12.53)**	31,150.290 (13.94)**	45,656.287 (10.91)**	37,616.937 (12.36)**	42,725.708 (5.89)**	56,549.087 (3.96)**	56,425.454 (6.87)**	48,466.095 (9.97)**
College Grad	23,239.630 (24.16)**	33,184.701 (20.92)**	44,416.999 (22.29)**	65,933.426 (28.87)**	93,221.599 (21.96)**	85,122.887 (27.62)**	101,143.049 (13.67)**	120,407.200 (8.29)**	137,977.400 (16.58)**	139,600.655 (28.21)**
Northeast	4,582.255 (5.11)**	9,449.018 (6.32)**	8,415.451 (4.43)**	7,469.688 (3.36)**	8,627.761 (2.08)*	12,639.136 (4.14)**	18,530.542 (2.51)*	-10,079.781 (0.69)	16,867.285 (2.00)*	18,945.146 (3.83)**
Midwest	3,918.952 (4.82)**	5,826.970 (4.36)**	8,563.930 (5.09)**	5,716.283 (2.94)**	6,485.729 (1.77)	4,544.323 (1.72)	5,683.450 (0.89)	7,739.246 (0.62)	4,218.432 (0.59)	12,134.830 (2.89)**
West	3,315.519 (3.55)**	5,390.688 (3.49)**	5,464.434 (2.83)**	2,910.256 (1.31)	4,897.682 (1.19)	7,212.114 (2.43)*	4,762.480 (0.69)	-14,718.327 (1.08)	17,967.693 (2.30)*	2,679.653 (0.57)
Constant	-77,017.542 (5.08)**	-65,209.122 (2.56)*	-150,156.558 (4.43)**	-223,383.906 (6.45)**	-300,596.471 (4.73)**	-312,734.837 (6.44)**	-265,089.813 (2.68)**	-870,119.151 (4.30)**	-381,649.649 (3.17)**	-572,552.746 (7.65)**
R ²	0.07	0.06	0.07	0.08	0.05	0.08	0.02	0.01	0.03	0.09
N	12,521	11,417	10,922	15,412	14,554	14,036	16,741	15,758	15,064	13,623

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent regression coefficients and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A3.4: Yearly Cross-Sectional Regression Results - Value of IRA/Keogh Plan Savings — Self-Employment Intensity (Ever and Always) During the HRS Waves

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Ever Self-Employed	3,010.582 (3.67)**	2,765.929 (2.09)*	5,280.830 (3.21)**	6,574.776 (3.31)**	12,984.685 (3.53)**	7,051.863 (2.67)**	20,393.017 (3.13)**	48,250.610 (3.81)**	37,124.078 (5.15)**	9,513.825 (2.25)*
Always Self-Employed	6,582.386 (3.72)**	6,866.459 (2.15)*	9,902.935 (2.34)*	15,063.844 (3.25)**	14,590.883 (1.66)	6,195.530 (0.96)	48,809.861 (3.63)**	-7,930.256 (0.30)	2,863.871 (0.19)	7,582.434 (0.85)
Age	2,097.636 (3.81)**	1,513.679 (1.68)	4,214.280 (3.63)**	5,846.979 (5.04)**	8,066.872 (3.89)**	8,574.256 (5.56)**	6,537.370 (2.05)*	23,842.269 (3.76)**	8,938.762 (2.44)*	15,798.282 (7.11)**
Age ²	-14.865 (2.95)**	-8.947 (1.12)	-31.360 (3.13)**	-40.097 (4.14)**	-57.484 (3.41)**	-61.909 (5.07)**	-43.743 (1.72)	-173.810 (3.54)**	-61.779 (2.23)*	-113.245 (6.93)**
Married	8,718.609 (10.64)**	12,913.795 (9.89)**	17,860.252 (10.96)**	26,777.335 (14.91)**	35,545.243 (10.77)**	35,439.141 (15.07)**	37,040.955 (6.61)**	63,666.585 (5.87)**	55,445.937 (9.05)**	53,428.820 (14.92)**
High School	6,336.295 (7.93)**	10,537.890 (7.95)**	14,172.203 (8.47)**	17,984.946 (9.07)**	26,642.346 (7.17)**	21,938.997 (8.09)**	24,383.400 (3.64)**	29,442.002 (2.23)*	40,674.602 (5.35)**	29,238.948 (6.43)**
Some Coll.	10,427.597 (11.26)**	17,117.464 (11.19)**	23,894.906 (12.42)**	31,282.772 (14.00)**	45,512.087 (10.88)**	37,340.933 (12.27)**	42,366.078 (5.84)**	54,610.454 (3.82)**	55,618.438 (6.78)**	48,395.259 (9.96)**
College Grad	22,945.079 (23.75)**	33,091.212 (20.80)**	44,013.846 (22.04)**	65,718.246 (28.70)**	92,974.250 (21.87)**	84,646.817 (27.42)**	100,292.252 (13.56)**	117,228.161 (8.08)**	136,664.869 (16.44)**	139,592.229 (28.23)**
Northeast	4,596.917 (5.12)**	9,536.887 (6.37)**	8,620.013 (4.53)**	7,695.863 (3.45)**	9,047.756 (2.18)*	12,885.793 (4.22)**	18,828.354 (2.55)*	-7,756.873 (0.53)	18,431.579 (2.19)*	19,308.823 (3.90)**
Midwest	3,967.503 (4.88)**	5,847.235 (4.37)**	8,595.715 (5.11)**	5,822.962 (2.99)**	6,624.173 (1.81)	4,619.927 (1.75)	5,599.612 (0.88)	8,933.006 (0.72)	5,270.963 (0.74)	12,432.027 (2.95)**
West	3,265.898 (3.49)**	5,427.831 (3.52)**	5,385.851 (2.79)**	3,078.876 (1.39)	4,889.536 (1.19)	7,103.135 (2.39)*	4,148.031 (0.60)	-15,318.833 (1.12)	17,542.144 (2.24)*	2,644.884 (0.56)
Constant	-76,047.401 (5.01)**	-65,502.202 (2.57)*	-149,693.683 (4.42)**	-219,968.143 (6.35)**	-295,702.870 (4.65)**	-309,160.477 (6.36)**	-258,640.752 (2.61)**	-826,100.770 (4.08)**	-349,940.383 (2.91)**	-564,087.635 (7.53)**
R ²	0.07	0.06	0.07	0.08	0.05	0.08	0.02	0.01	0.03	0.09
N	12,521	11,417	10,922	15,412	14,554	14,036	16,741	15,758	15,064	13,623

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent regression coefficients and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A4.1: Yearly Cross-Sectional Regression Results - Expected Retirement Age — Current Self-Employment Status

	1992	1996	1998	2000	2002	2004	2006	2008	2010
Currently Self-Employed	1.483 (9.48)**	1.812 (8.33)**	2.042 (9.05)**	2.025 (7.63)**	2.432 (9.59)**	2.118 (9.29)**	2.352 (9.48)**	1.880 (8.26)**	1.810 (7.12)**
Age	-0.770 (6.52)**	-1.578 (10.23)**	-1.745 (13.99)**	-1.924 (14.48)**	-2.104 (17.59)**	-2.108 (17.38)**	-2.027 (16.61)**	-2.101 (16.65)**	-1.486 (11.79)**
Age ²	0.009 (8.40)**	0.017 (12.37)**	0.019 (17.33)**	0.021 (18.00)**	0.022 (21.61)**	0.022 (20.93)**	0.021 (20.62)**	0.022 (21.04)**	0.017 (16.71)**
Married	-0.490 (3.71)**	-0.606 (3.31)**	-0.545 (3.01)**	-0.437 (2.20)*	-0.607 (3.05)**	-0.544 (2.91)**	-0.298 (1.47)	-0.507 (2.60)**	0.225 (1.02)
High School	-0.053 (0.39)	-0.054 (0.27)	-0.007 (0.04)	0.071 (0.29)	-0.053 (0.21)	0.046 (0.18)	0.160 (0.57)	-0.100 (0.37)	-0.129 (0.42)
Some Coll.	0.088 (0.58)	0.467 (2.08)*	0.364 (1.58)	0.602 (2.33)*	0.500 (1.86)	0.279 (1.09)	0.706 (2.50)*	0.353 (1.31)	0.010 (0.03)
College Grad	0.348 (2.31)*	0.315 (1.42)	0.499 (2.20)*	0.498 (1.97)*	0.470 (1.78)	0.331 (1.32)	0.513 (1.82)	0.379 (1.43)	0.262 (0.85)
Northeast	0.061 (0.43)	-0.068 (0.32)	-0.147 (0.69)	-0.415 (1.76)	-0.499 (2.00)*	-0.147 (0.63)	-0.296 (1.14)	-0.239 (0.97)	0.154 (0.53)
Midwest	-0.077 (0.61)	-0.329 (1.80)	-0.226 (1.22)	-0.129 (0.62)	-0.005 (0.02)	-0.131 (0.65)	0.065 (0.31)	-0.109 (0.53)	0.083 (0.35)
West	-0.120 (0.78)	-0.025 (0.11)	0.205 (0.95)	0.150 (0.62)	-0.214 (0.87)	0.004 (0.02)	0.095 (0.40)	0.017 (0.07)	0.502 (1.85)
Constant	77.234 (24.67)**	97.239 (22.89)**	100.693 (28.63)**	105.669 (27.65)**	112.282 (32.06)**	113.862 (32.44)**	111.537 (30.74)**	114.085 (29.67)**	95.030 (24.03)**
R ²	0.11	0.21	0.34	0.40	0.48	0.41	0.47	0.55	0.57
N	5,705	3,027	3,400	2,804	2,315	3,201	2,733	2,489	2,151

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent regression coefficients and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A4.2: Yearly Cross-Sectional Regression Results - Expected Retirement Age — Part-Time or Full-Time Self-Employment Status

	1992	1996	1998	2000	2002	2004	2006	2008	2010
Part-Time	0.442	1.476	1.680	1.539	2.233	1.608	2.086	1.561	1.532
Self-Employed	(1.32)	(4.24)**	(4.68)**	(3.64)**	(5.91)**	(4.36)**	(5.38)**	(4.52)**	(4.03)**
Full-Time	1.736	1.998	2.243	2.295	2.569	2.387	2.508	2.080	1.990
Self-Employed	(10.09)**	(7.55)**	(8.18)**	(7.12)**	(8.07)**	(8.69)**	(8.29)**	(7.45)**	(6.36)**
Age	-0.774	-1.592	-1.755	-1.931	-2.107	-2.128	-2.036	-2.108	-1.489
	(6.56)**	(10.30)**	(14.04)**	(14.52)**	(17.61)**	(17.47)**	(16.63)**	(16.69)**	(11.81)**
Age ²	0.009	0.017	0.019	0.021	0.022	0.022	0.021	0.022	0.017
	(8.44)**	(12.43)**	(17.38)**	(18.05)**	(21.62)**	(21.01)**	(20.62)**	(21.08)**	(16.74)**
Married	-0.489	-0.599	-0.543	-0.429	-0.607	-0.550	-0.302	-0.508	0.218
	(3.71)**	(3.27)**	(2.99)**	(2.16)*	(3.05)**	(2.94)**	(1.49)	(2.61)**	(0.98)
High School	-0.045	-0.054	-0.007	0.075	-0.052	0.036	0.161	-0.101	-0.127
	(0.34)	(0.27)	(0.04)	(0.31)	(0.21)	(0.15)	(0.58)	(0.38)	(0.41)
Some Coll.	0.087	0.466	0.363	0.606	0.498	0.264	0.706	0.356	-0.000
	(0.58)	(2.08)*	(1.58)	(2.35)*	(1.86)	(1.04)	(2.50)*	(1.32)	(0.00)
College Grad	0.348	0.318	0.501	0.501	0.474	0.329	0.517	0.390	0.257
	(2.31)*	(1.43)	(2.22)*	(1.98)*	(1.79)	(1.31)	(1.84)	(1.47)	(0.83)
Northeast	0.054	-0.058	-0.147	-0.419	-0.496	-0.148	-0.298	-0.236	0.152
	(0.38)	(0.27)	(0.69)	(1.77)	(1.99)*	(0.63)	(1.15)	(0.96)	(0.52)
Midwest	-0.085	-0.324	-0.226	-0.130	-0.005	-0.122	0.066	-0.102	0.090
	(0.67)	(1.77)	(1.23)	(0.63)	(0.02)	(0.61)	(0.31)	(0.49)	(0.38)
West	-0.115	-0.016	0.205	0.140	-0.209	-0.002	0.098	0.017	0.501
	(0.75)	(0.07)	(0.95)	(0.58)	(0.85)	(0.01)	(0.41)	(0.07)	(1.85)
Constant	77.344	97.567	100.955	105.813	112.362	114.386	111.766	114.249	95.092
	(24.73)**	(22.93)**	(28.66)**	(27.69)**	(32.07)**	(32.48)**	(30.72)**	(29.70)**	(24.05)**
R ²	0.11	0.21	0.34	0.40	0.48	0.41	0.47	0.55	0.57
N	5,705	3,027	3,400	2,804	2,315	3,201	2,733	2,489	2,151

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent regression coefficients and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A4.3: Yearly Cross-Sectional Regression Results - Expected Retirement Age — Mostly Self-Employed During Career

	1992	1996	1998	2000	2002	2004	2006	2008	2010
Mostly Self-Employed	1.139 (7.24)**	1.832 (8.39)**	1.970 (8.46)**	2.035 (7.62)**	2.396 (9.36)**	1.979 (8.46)**	2.359 (9.49)**	1.884 (8.23)**	1.829 (7.17)**
Age	-0.883 (7.97)**	-1.575 (10.22)**	-1.785 (14.32)**	-1.922 (14.46)**	-2.107 (17.61)**	-2.113 (17.38)**	-2.035 (16.72)**	-2.099 (16.62)**	-1.490 (11.83)**
Age ²	0.010 (9.88)**	0.017 (12.35)**	0.020 (17.67)**	0.021 (17.98)**	0.022 (21.62)**	0.022 (20.93)**	0.021 (20.75)**	0.022 (21.01)**	0.017 (16.76)**
Married	-0.386 (3.09)**	-0.604 (3.30)**	-0.539 (2.97)**	-0.442 (2.23)*	-0.612 (3.07)**	-0.532 (2.84)**	-0.295 (1.46)	-0.501 (2.57)*	0.225 (1.02)
High School	-0.040 (0.32)	-0.054 (0.27)	-0.000 (0.00)	0.066 (0.27)	-0.061 (0.24)	0.032 (0.13)	0.164 (0.59)	-0.098 (0.36)	-0.123 (0.39)
Some Coll.	0.241 (1.69)	0.467 (2.08)*	0.382 (1.66)	0.595 (2.30)*	0.493 (1.84)	0.274 (1.07)	0.700 (2.49)*	0.348 (1.29)	0.013 (0.04)
College Grad	0.401 (2.78)**	0.312 (1.40)	0.509 (2.25)*	0.493 (1.95)	0.468 (1.77)	0.350 (1.39)	0.516 (1.84)	0.376 (1.42)	0.267 (0.87)
Northeast	0.081 (0.60)	-0.062 (0.30)	-0.171 (0.80)	-0.422 (1.79)	-0.496 (1.99)*	-0.150 (0.64)	-0.263 (1.01)	-0.239 (0.97)	0.152 (0.52)
Midwest	-0.069 (0.56)	-0.328 (1.80)	-0.222 (1.20)	-0.136 (0.65)	0.005 (0.02)	-0.143 (0.71)	0.064 (0.30)	-0.108 (0.52)	0.086 (0.36)
West	-0.085 (0.58)	-0.027 (0.12)	0.211 (0.98)	0.143 (0.59)	-0.209 (0.85)	0.003 (0.01)	0.097 (0.40)	0.013 (0.06)	0.508 (1.88)
Constant	80.398 (27.43)**	97.167 (22.88)**	101.821 (28.97)**	105.631 (27.64)**	112.378 (32.06)**	113.998 (32.40)**	111.747 (30.85)**	114.007 (29.64)**	95.152 (24.08)**
R ²	0.10	0.21	0.34	0.40	0.48	0.41	0.48	0.55	0.57
N	6,283	3,027	3,400	2,804	2,315	3,201	2,741	2,489	2,151

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent regression coefficients and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A4.4: Yearly Cross-Sectional Regression Results - Expected Retirement Age — Self-Employment Intensity (Ever and Always) During the HRS Waves

	1992	1996	1998	2000	2002	2004	2006	2008	2010
Ever	0.702	1.298	1.231	1.006	1.604	1.718	2.038	1.190	1.964
Self-Employed	(5.59)**	(7.10)**	(6.52)**	(4.76)**	(7.54)**	(8.05)**	(8.79)**	(5.35)**	(7.66)**
Always	2.179	2.816	3.461	3.308	3.050	3.018	2.682	2.700	1.944
Self-Employed	(7.33)**	(5.43)**	(7.48)**	(6.33)**	(6.14)**	(8.12)**	(6.75)**	(7.47)**	(5.41)**
Age	-0.891	-1.615	-1.804	-1.965	-2.118	-2.086	-2.004	-2.097	-1.464
	(8.06)**	(10.48)**	(14.52)**	(14.82)**	(17.67)**	(17.27)**	(16.47)**	(16.57)**	(11.67)**
Age ²	0.010	0.018	0.020	0.021	0.022	0.022	0.021	0.022	0.017
	(9.98)**	(12.63)**	(17.91)**	(18.40)**	(21.71)**	(20.80)**	(20.44)**	(20.92)**	(16.51)**
Married	-0.416	-0.635	-0.550	-0.405	-0.559	-0.550	-0.293	-0.494	0.221
	(3.33)**	(3.47)**	(3.04)**	(2.04)*	(2.81)**	(2.96)**	(1.45)	(2.54)*	(1.00)
High School	-0.054	-0.035	-0.009	0.070	-0.010	0.038	0.129	-0.151	-0.086
	(0.43)	(0.18)	(0.04)	(0.29)	(0.04)	(0.15)	(0.47)	(0.56)	(0.28)
Some Coll.	0.222	0.437	0.355	0.563	0.515	0.245	0.684	0.299	-0.029
	(1.56)	(1.95)	(1.55)	(2.18)*	(1.92)	(0.96)	(2.44)*	(1.11)	(0.09)
College Grad	0.329	0.274	0.407	0.437	0.469	0.273	0.468	0.297	0.202
	(2.29)*	(1.23)	(1.80)	(1.72)	(1.77)	(1.09)	(1.67)	(1.12)	(0.66)
Northeast	0.102	-0.030	-0.129	-0.385	-0.478	-0.154	-0.189	-0.247	0.247
	(0.76)	(0.14)	(0.60)	(1.63)	(1.91)	(0.66)	(0.73)	(1.00)	(0.85)
Midwest	-0.038	-0.317	-0.207	-0.183	-0.056	-0.133	0.113	-0.100	0.121
	(0.31)	(1.73)	(1.12)	(0.88)	(0.26)	(0.66)	(0.54)	(0.48)	(0.51)
West	-0.101	-0.037	0.210	0.128	-0.265	-0.050	0.092	-0.018	0.500
	(0.70)	(0.17)	(0.98)	(0.53)	(1.08)	(0.23)	(0.39)	(0.08)	(1.86)
Constant	80.516	98.106	102.226	106.593	112.414	113.197	110.852	113.939	94.491
	(27.52)**	(23.11)**	(29.17)**	(27.93)**	(32.02)**	(32.38)**	(30.64)**	(29.56)**	(24.02)**
R ²	0.10	0.21	0.34	0.40	0.48	0.41	0.48	0.55	0.58
N	6,283	3,027	3,400	2,804	2,315	3,201	2,741	2,489	2,151

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent regression coefficients and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A5.1: Yearly Cross-Sectional Probit Results - Answered “Don’t Know” to Pension on Current Job Question — Current Self-Employment Status

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Currently Self-Employed	-0.013 (2.73)**	-0.000 (0.25)	-0.004 (1.36)	0.001 (0.88)	-0.003 (1.13)	-0.002 (0.85)	-0.000 (0.11)	-0.006 (1.89)	-0.007 (1.97)*	-0.001 (0.47)
Age	0.004 (1.33)	0.002 (0.97)	-0.000 (0.28)	-0.001 (2.02)*	-0.001 (1.32)	0.002 (1.06)	0.002 (1.18)	-0.001 (0.70)	-0.001 (0.55)	-0.000 (0.01)
Age ²	-0.000 (1.41)	-0.000 (1.12)	-0.000 (0.05)	0.000 (1.69)	0.000 (1.25)	-0.000 (1.03)	-0.000 (1.23)	0.000 (0.58)	0.000 (0.50)	-0.000 (0.02)
Married	-0.004 (1.75)	-0.001 (0.51)	0.000 (0.11)	-0.001 (0.79)	0.003 (1.07)	0.000 (0.19)	0.003 (1.41)	0.005 (1.83)	0.001 (0.24)	-0.001 (0.21)
High School	-0.010 (3.94)**	-0.003 (1.68)	-0.000 (0.04)	-0.001 (0.45)	-0.006 (2.25)*	-0.002 (0.73)	-0.004 (2.10)*	-0.007 (2.71)**	0.000 (0.10)	-0.001 (0.16)
Some Coll.	-0.016 (4.14)**	-0.007 (2.22)*	-0.001 (0.31)	-0.002 (0.83)	-0.004 (1.53)	-0.001 (0.45)	-0.004 (1.86)	-0.005 (2.41)*	0.003 (0.88)	-0.005 (1.40)
College Grad	-0.015 (4.03)**	-0.005 (2.04)*	-0.003 (1.09)	-0.002 (1.09)	-0.009 (2.74)**	-0.002 (0.63)	-0.007 (2.70)**	-0.006 (2.56)*	-0.001 (0.24)	-0.007 (1.85)
Northeast	0.005 (1.81)	0.001 (0.85)	0.003 (1.21)	-0.001 (0.26)	-0.002 (0.64)	0.002 (0.87)	0.002 (0.82)	0.002 (1.03)	0.001 (0.53)	0.000 (0.11)
Midwest	0.001 (0.39)	0.001 (0.31)	0.002 (0.98)	-0.000 (0.23)	-0.002 (0.94)	0.003 (1.04)	0.002 (1.02)	-0.002 (0.92)	-0.002 (0.82)	-0.003 (1.06)
West	0.008 (2.92)**	0.001 (0.39)	0.005 (2.22)*	-0.001 (0.30)	0.000 (0.15)	0.005 (1.81)	0.003 (1.65)	0.001 (0.50)	-0.001 (0.48)	-0.004 (0.95)
N	8,328	7,033	6,167	7,853	6,798	5,834	7,668	6,469	5,791	4,536

Source: Authors’ calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A5.2: Yearly Cross-Sectional Probit Results - Answered “Don’t Know” to Pension on Current Job — Part-Time or Full-Time Self-Employment Status

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Part-Time Self-Employed	0.000	0.000	0.000	0.000	-0.005 (1.00)	-0.005 (1.02)	-0.003 (0.74)	0.000	-0.004 (0.89)	-0.000 (0.04)
Full-Time Self-Employed	-0.012 (2.39)*	0.000 (0.15)	-0.003 (0.97)	0.003 (1.63)	-0.002 (0.77)	-0.001 (0.37)	0.001 (0.32)	-0.005 (1.47)	-0.010 (1.83)	-0.002 (0.60)
Age	0.004 (1.33)	0.002 (0.94)	-0.000 (0.29)	-0.002 (2.16)*	-0.001 (1.33)	0.002 (1.04)	0.002 (1.15)	-0.001 (0.74)	-0.001 (0.55)	0.000 (0.01)
Age ²	-0.000 (1.41)	-0.000 (1.09)	-0.000 (0.04)	0.000 (1.84)	0.000 (1.27)	-0.000 (1.00)	-0.000 (1.19)	0.000 (0.63)	0.000 (0.48)	-0.000 (0.03)
Married	-0.004 (1.75)	-0.001 (0.51)	0.000 (0.13)	-0.001 (0.81)	0.003 (1.06)	0.000 (0.17)	0.003 (1.39)	0.005 (1.82)	0.001 (0.25)	-0.000 (0.18)
High School	-0.010 (3.94)**	-0.003 (1.68)	-0.000 (0.04)	-0.001 (0.46)	-0.006 (2.26)*	-0.002 (0.72)	-0.004 (2.11)*	-0.008 (2.72)**	0.000 (0.12)	-0.001 (0.17)
Some Coll.	-0.016 (4.14)**	-0.007 (2.22)*	-0.001 (0.32)	-0.002 (0.84)	-0.004 (1.53)	-0.001 (0.46)	-0.004 (1.88)	-0.006 (2.42)*	0.003 (0.90)	-0.005 (1.40)
College Grad	-0.015 (4.03)**	-0.005 (2.04)*	-0.003 (1.11)	-0.003 (1.11)	-0.009 (2.74)**	-0.002 (0.59)	-0.007 (2.71)**	-0.006 (2.57)*	-0.001 (0.22)	-0.007 (1.86)
Northeast	0.005 (1.81)	0.002 (0.86)	0.003 (1.22)	-0.001 (0.25)	-0.002 (0.65)	0.002 (0.87)	0.002 (0.84)	0.002 (1.03)	0.002 (0.54)	0.000 (0.10)
Midwest	0.001 (0.39)	0.001 (0.32)	0.002 (1.00)	-0.000 (0.21)	-0.002 (0.93)	0.003 (1.06)	0.002 (1.04)	-0.002 (0.91)	-0.002 (0.82)	-0.003 (1.07)
West	0.009 (2.93)**	0.001 (0.42)	0.005 (2.23)*	-0.001 (0.25)	0.000 (0.15)	0.005 (1.80)	0.003 (1.66)	0.001 (0.52)	-0.001 (0.46)	-0.004 (0.95)
<i>N</i>	8,016	6,699	5,761	7,341	6,798	5,834	7,668	5,942	5,791	4,536

Source: Authors’ calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A5.3: Yearly Cross-Sectional Probit Results - Answered “Don’t Know” to Pension on Current Job Question — Mostly Self-Employed During Career

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Mostly Self-Employed	-0.007 (2.03)*	-0.000 (0.11)	0.000	0.001 (0.60)	0.001 (0.76)	0.001 (0.46)	0.001 (1.57)	-0.001 (1.02)	-0.001 (0.50)	0.002 (1.41)
Age	0.004 (1.79)	0.001 (1.26)	0.000 (0.05)	-0.000 (1.14)	-0.000 (0.28)	0.001 (0.89)	0.001 (1.68)	0.000 (0.15)	0.000 (0.42)	0.000 (0.52)
Age ²	-0.000 (1.92)	-0.000 (1.43)	-0.000 (0.46)	0.000 (0.60)	-0.000 (0.10)	-0.000 (1.08)	-0.000 (1.85)	-0.000 (0.53)	-0.000 (0.77)	-0.000 (0.82)
Married	-0.002 (1.58)	-0.000 (0.33)	0.000 (0.24)	-0.001 (0.69)	0.001 (1.13)	0.000 (0.12)	0.001 (1.56)	0.002 (1.94)	0.000 (0.36)	0.000 (0.13)
High School	-0.006 (3.34)**	-0.001 (1.35)	0.000 (0.34)	0.000 (0.05)	-0.002 (1.72)	-0.000 (0.32)	-0.002 (1.73)	-0.003 (2.37)*	0.001 (0.51)	0.000 (0.35)
Some Coll.	-0.009 (3.61)**	-0.004 (2.01)*	0.000 (0.15)	-0.000 (0.23)	-0.001 (0.72)	0.000 (0.25)	-0.001 (1.39)	-0.002 (1.78)	0.002 (1.51)	-0.001 (0.70)
College Grad	-0.008 (3.22)**	-0.002 (1.61)	-0.001 (0.66)	-0.000 (0.30)	-0.003 (2.00)*	0.000 (0.16)	-0.002 (2.13)*	-0.002 (1.75)	0.001 (0.67)	-0.001 (1.04)
Northeast	0.003 (1.88)	0.001 (0.85)	0.002 (1.31)	-0.000 (0.31)	-0.001 (0.53)	0.001 (0.96)	0.001 (0.98)	0.001 (1.25)	0.001 (0.71)	0.000 (0.22)
Midwest	0.001 (0.63)	0.000 (0.41)	0.002 (1.16)	-0.000 (0.11)	-0.001 (0.67)	0.001 (1.11)	0.001 (1.10)	-0.001 (0.82)	-0.001 (0.61)	-0.001 (0.89)
West	0.005 (2.69)**	0.000 (0.26)	0.003 (2.22)*	-0.000 (0.24)	0.000 (0.08)	0.002 (1.99)*	0.001 (1.62)	0.000 (0.37)	-0.000 (0.34)	-0.001 (1.01)
<i>N</i>	12,521	11,417	9,676	15,412	14,554	14,036	16,741	15,758	15,064	13,623

Source: Authors’ calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A5.4: Yearly Cross-Sectional Probit Results - Answered “Don’t Know” to Pension on Current Job — Self-Employment Intensity During the HRS Waves

	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Ever	-0.006	0.000	-0.001	0.002	0.001	0.000	-0.000	-0.001	-0.000	0.001
Self-Employed	(2.36)*	(0.21)	(0.59)	(2.05)*	(1.17)	(0.06)	(0.37)	(0.69)	(0.18)	(1.47)
Always	-0.001	0.001	0.001	0.002	0.004	0.003	0.001	-0.000	-0.001	0.003
Self-Employed	(0.14)	(0.62)	(0.78)	(1.40)	(1.93)	(1.67)	(1.19)	(0.13)	(0.57)	(1.61)
Age	0.004	0.001	0.000	-0.000	-0.000	0.001	0.001	0.000	0.000	0.000
	(1.79)	(1.24)	(0.03)	(1.20)	(0.31)	(0.85)	(1.68)	(0.13)	(0.45)	(0.51)
Age ²	-0.000	-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(1.93)	(1.42)	(0.45)	(0.68)	(0.06)	(1.04)	(1.85)	(0.50)	(0.79)	(0.82)
Married	-0.002	-0.000	0.000	-0.001	0.001	0.000	0.002	0.002	0.000	0.000
	(1.51)	(0.37)	(0.24)	(0.83)	(1.07)	(0.06)	(1.59)	(1.93)	(0.35)	(0.08)
High School	-0.006	-0.001	0.000	-0.000	-0.002	-0.000	-0.002	-0.003	0.001	0.000
	(3.32)**	(1.38)	(0.30)	(0.06)	(1.79)	(0.33)	(1.72)	(2.38)*	(0.51)	(0.37)
Some Coll.	-0.009	-0.004	0.000	-0.000	-0.001	0.000	-0.001	-0.002	0.002	-0.001
	(3.59)**	(2.03)*	(0.08)	(0.34)	(0.81)	(0.23)	(1.37)	(1.81)	(1.52)	(0.74)
College Grad	-0.008	-0.002	-0.001	-0.001	-0.003	0.000	-0.002	-0.002	0.001	-0.001
	(3.15)**	(1.65)	(0.80)	(0.56)	(2.15)*	(0.11)	(2.10)*	(1.82)	(0.68)	(1.04)
Northeast	0.003	0.001	0.002	-0.000	-0.001	0.001	0.001	0.001	0.001	0.000
	(1.81)	(0.87)	(1.31)	(0.22)	(0.49)	(0.95)	(0.95)	(1.25)	(0.69)	(0.28)
Midwest	0.001	0.000	0.001	-0.000	-0.001	0.001	0.001	-0.001	-0.001	-0.001
	(0.64)	(0.39)	(1.14)	(0.03)	(0.71)	(1.08)	(1.07)	(0.82)	(0.60)	(0.87)
West	0.005	0.000	0.003	-0.000	0.000	0.002	0.001	0.000	-0.000	-0.001
	(2.68)**	(0.21)	(2.21)*	(0.28)	(0.00)	(1.94)	(1.60)	(0.39)	(0.34)	(1.05)
<i>N</i>	12,521	11,417	10,922	15,412	14,554	14,036	16,741	15,758	15,064	13,623

Source: Authors’ calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A6.1: Yearly Cross-Sectional Probit Results - Has Some Control Over Employer-Provided Retirement Plan and It Is Mostly Invested in Stocks — Current Self-Employment Status

	1992	1996	1998	2000	2002	2004	2006
Currently Self-Employed	-0.134 (1.85)	0.041 (0.43)	0.028 (0.43)	-0.071 (0.96)	0.186 (2.22)*	0.114 (2.49)*	0.102 (1.44)
Age	-0.024 (0.59)	0.012 (0.26)	0.064 (2.07)*	0.016 (0.53)	0.017 (0.59)	0.039 (2.21)*	0.029 (1.02)
Age ²	0.000 (0.60)	-0.000 (0.36)	-0.001 (2.30)*	-0.000 (0.55)	-0.000 (0.66)	-0.000 (2.49)*	-0.000 (1.14)
Married	0.084 (1.82)	0.193 (2.64)**	0.038 (0.77)	0.033 (0.70)	0.090 (1.72)	0.071 (2.61)**	0.009 (0.24)
High School	0.124 (2.21)*	0.152 (1.68)	0.027 (0.43)	0.081 (1.20)	0.060 (0.87)	0.015 (0.37)	0.070 (1.26)
Some Coll.	0.084 (1.44)	0.004 (0.04)	0.003 (0.04)	0.067 (0.97)	0.016 (0.23)	0.059 (1.44)	-0.012 (0.22)
College Grad	0.197 (3.59)**	0.192 (2.16)*	0.223 (3.65)**	0.206 (3.06)**	0.128 (1.87)	0.103 (2.59)**	0.148 (2.73)**
Northeast	0.035 (0.73)	-0.105 (1.35)	-0.088 (1.48)	-0.097 (1.66)	0.106 (1.66)	-0.025 (0.77)	0.025 (0.54)
Midwest	-0.048 (1.13)	-0.086 (1.18)	-0.025 (0.57)	-0.085 (1.79)	0.071 (1.39)	-0.008 (0.30)	0.015 (0.40)
West	-0.054 (1.05)	-0.098 (1.19)	-0.046 (0.92)	-0.033 (0.60)	-0.015 (0.26)	-0.023 (0.74)	0.031 (0.73)
N	833	296	718	646	540	2,060	1,065

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A6.2: Yearly Cross-Sectional Probit Results - Has Some Control Over Employer-Provided Retirement Plan and It Is Mostly Invested in Stocks — Part-Time or Full-Time Self-Employment Status

	1992	1996	1998	2000	2002	2004	2006
Part-Time Self-Employed	-0.271 (1.10)	0.065 (0.39)	-0.246 (1.61)	0.190 (0.93)	0.064 (0.38)	-0.063 (0.56)	-0.060 (0.32)
Full-Time Self-Employed	-0.121 (1.61)	0.031 (0.28)	0.081 (1.14)	-0.108 (1.37)	0.221 (2.35)*	0.146 (2.96)**	0.126 (1.67)
Age	-0.024 (0.60)	0.012 (0.27)	0.060 (1.92)	0.021 (0.68)	0.016 (0.58)	0.037 (2.04)*	0.028 (0.98)
Age ²	0.000 (0.60)	-0.000 (0.37)	-0.001 (2.12)*	-0.000 (0.71)	-0.000 (0.65)	-0.000 (2.31)*	-0.000 (1.09)
Married	0.085 (1.82)	0.192 (2.63)**	0.044 (0.89)	0.031 (0.65)	0.090 (1.72)	0.072 (2.63)**	0.009 (0.25)
High School	0.124 (2.22)*	0.152 (1.68)	0.031 (0.49)	0.078 (1.16)	0.061 (0.89)	0.016 (0.38)	0.069 (1.26)
Some Coll.	0.086 (1.47)	0.005 (0.05)	0.004 (0.07)	0.067 (0.97)	0.014 (0.21)	0.059 (1.45)	-0.013 (0.24)
College Grad	0.197 (3.59)**	0.192 (2.17)*	0.230 (3.78)**	0.205 (3.05)**	0.129 (1.90)	0.106 (2.67)**	0.150 (2.76)**
Northeast	0.034 (0.70)	-0.105 (1.34)	-0.091 (1.54)	-0.096 (1.65)	0.107 (1.68)	-0.025 (0.78)	0.025 (0.53)
Midwest	-0.049 (1.16)	-0.086 (1.17)	-0.021 (0.48)	-0.084 (1.78)	0.068 (1.32)	-0.006 (0.23)	0.016 (0.42)
West	-0.055 (1.06)	-0.099 (1.20)	-0.049 (0.98)	-0.037 (0.66)	-0.016 (0.27)	-0.023 (0.75)	0.030 (0.71)
N	833	296	718	646	540	2,060	1,065

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A6.3: Yearly Cross-Sectional Probit Results - Has Some Control Over Employer-Provided Retirement Plan and It Is Mostly Invested in Stocks — Mostly Self-Employed During Career

	1992	1996	1998	2000	2002	2004	2006
Mostly Self-Employed	-0.018 (0.28)	0.041 (0.43)	-0.008 (0.13)	-0.093 (1.24)	0.196 (2.45)*	0.081 (1.86)	0.093 (1.31)
Age	-0.022 (0.54)	0.012 (0.26)	0.064 (2.07)*	0.016 (0.51)	0.018 (0.63)	0.039 (2.16)*	0.029 (1.02)
Age ²	0.000 (0.52)	-0.000 (0.36)	-0.001 (2.29)*	-0.000 (0.53)	-0.000 (0.70)	-0.000 (2.43)*	-0.000 (1.14)
Married	0.085 (1.82)	0.193 (2.64)**	0.040 (0.82)	0.034 (0.71)	0.088 (1.68)	0.073 (2.69)**	0.008 (0.23)
High School	0.124 (2.21)*	0.152 (1.68)	0.028 (0.44)	0.081 (1.20)	0.058 (0.85)	0.015 (0.37)	0.073 (1.32)
Some Coll.	0.080 (1.37)	0.004 (0.04)	0.007 (0.11)	0.068 (0.99)	0.013 (0.18)	0.060 (1.48)	-0.009 (0.16)
College Grad	0.186 (3.38)**	0.192 (2.16)*	0.228 (3.76)**	0.208 (3.10)**	0.126 (1.85)	0.106 (2.67)**	0.152 (2.82)**
Northeast	0.037 (0.78)	-0.105 (1.35)	-0.092 (1.55)	-0.096 (1.64)	0.108 (1.69)	-0.025 (0.78)	0.025 (0.55)
Midwest	-0.048 (1.13)	-0.086 (1.18)	-0.028 (0.64)	-0.084 (1.77)	0.071 (1.39)	-0.009 (0.32)	0.016 (0.43)
West	-0.054 (1.05)	-0.098 (1.19)	-0.049 (0.98)	-0.033 (0.59)	-0.014 (0.24)	-0.022 (0.72)	0.032 (0.74)
N	833	296	719	646	540	2,061	1,066

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A6.4: Yearly Cross-Sectional Probit Results - Has Some Control Over Employer-Provided Retirement Plan and It Is Mostly Invested in Stocks — Self-Employment Intensity During the HRS Waves

	1992	1996	1998	2000	2002	2004	2006
Ever	-0.043	-0.034	0.069	-0.038	0.082	0.078	0.003
Self-Employed	(0.96)	(0.51)	(1.30)	(0.79)	(1.50)	(2.18)*	(0.06)
Always	-0.155	-0.019	0.063	-0.054	0.238	0.177	0.050
Self-Employed	(1.29)	(0.12)	(0.63)	(0.50)	(1.97)*	(2.93)**	(0.54)
Age	-0.021	0.008	0.066	0.018	0.019	0.040	0.028
	(0.53)	(0.18)	(2.12)*	(0.58)	(0.65)	(2.22)*	(0.99)
Age ²	0.000	-0.000	-0.001	-0.000	-0.000	-0.000	-0.000
	(0.52)	(0.27)	(2.37)*	(0.60)	(0.73)	(2.52)*	(1.10)
Married	0.084	0.198	0.038	0.032	0.096	0.071	0.010
	(1.81)	(2.74)**	(0.78)	(0.67)	(1.83)	(2.61)**	(0.27)
High School	0.125	0.151	0.030	0.080	0.062	0.011	0.074
	(2.24)*	(1.66)	(0.46)	(1.18)	(0.90)	(0.27)	(1.34)
Some Coll.	0.084	0.015	0.004	0.068	0.018	0.053	-0.006
	(1.44)	(0.16)	(0.07)	(0.98)	(0.26)	(1.32)	(0.11)
College Grad	0.198	0.207	0.211	0.206	0.125	0.094	0.158
	(3.58)**	(2.30)*	(3.41)**	(3.04)**	(1.83)	(2.36)*	(2.91)**
Northeast	0.034	-0.105	-0.083	-0.099	0.113	-0.023	0.026
	(0.70)	(1.35)	(1.38)	(1.69)	(1.77)	(0.71)	(0.56)
Midwest	-0.049	-0.082	-0.023	-0.085	0.069	-0.009	0.018
	(1.17)	(1.13)	(0.53)	(1.79)	(1.36)	(0.34)	(0.47)
West	-0.056	-0.093	-0.048	-0.032	-0.023	-0.025	0.032
	(1.08)	(1.12)	(0.96)	(0.57)	(0.40)	(0.83)	(0.74)
<i>N</i>	833	296	719	646	540	2,061	1,066

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A7.1: Yearly Cross-Sectional Probit/Regression Results - Other Outcomes – Part I — Current Self-Employment Status

	Would Work Longer if SS Benefits Cut	Typical SS Benefit for 70-Year-Old Retiree	Age Started to Save for Retirement	Thought About Retirement A Lot Before Retiring			
	2008	2004	1996	2004	2006	2008	2010
Currently Self-Employed	-0.004 (0.79)	-52.840 (0.91)	-2.183 (0.73)	-0.057 (4.36)**	-0.090 (6.38)**	-0.083 (5.76)**	-0.045 (2.85)**
Age	0.010 (2.28)*	3.133 (0.05)	3.265 (1.18)	0.080 (9.34)**	0.073 (7.93)**	0.062 (6.58)**	0.055 (5.33)**
Age ²	-0.000 (2.23)*	0.036 (0.07)	-0.026 (1.07)	-0.001 (9.45)**	-0.001 (8.04)**	-0.001 (6.71)**	-0.000 (5.40)**
Married	-0.008 (1.75)	43.105 (0.75)	7.356 (2.44)*	0.012 (1.00)	0.003 (0.26)	0.007 (0.54)	-0.013 (0.91)
High School	0.007 (1.03)	8.869 (0.12)	3.527 (1.06)	0.028 (1.69)	0.029 (1.60)	0.019 (0.98)	0.024 (1.13)
Some Coll.	0.009 (1.25)	-33.155 (0.44)	6.071 (1.67)	0.045 (2.72)**	0.012 (0.65)	0.037 (1.97)*	0.043 (2.02)*
College Grad	0.001 (0.17)	4.763 (0.06)	5.910 (1.63)	0.050 (3.09)**	0.041 (2.30)*	0.065 (3.53)**	0.084 (4.04)**
Northeast	0.014 (2.17)*	104.627 (1.49)	4.267 (1.15)	-0.017 (1.13)	-0.016 (0.94)	-0.032 (1.82)	-0.001 (0.05)
Midwest	0.011 (2.02)*	203.241 (3.56)**	4.110 (1.44)	-0.012 (0.93)	0.001 (0.11)	-0.006 (0.42)	0.012 (0.74)
West	0.009 (1.39)	118.020 (1.84)	2.743 (0.77)	-0.008 (0.55)	0.011 (0.74)	0.007 (0.41)	-0.005 (0.29)
Constant		664.755 (0.41)	-77.943 (1.00)				
<i>N</i>	5,791	505	295	7,067	6,122	5,515	4,335
<i>R</i> ²		0.03	0.05				

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A7.2: Yearly Cross-Sectional Probit/Regression Results - Other Outcomes – Part I — Part-Time or Full-Time Self-Employment Status

	Would Work Longer if SS Benefits Cut	Typical SS Benefit for 70-Year-Old Retiree	Age Started to Save for Retirement	Thought About Retirement A Lot Before Retiring			
	2008	2004	1996	2004	2006	2008	2010
Part-Time Self-Employed	0.001 (0.08)	-234.886 (2.19)*	-8.223 (1.59)	-0.063 (3.02)**	-0.072 (3.26)**	-0.071 (3.34)**	-0.016 (0.71)
Full-Time Self-Employed	-0.008 (1.13)	5.182 (0.08)	0.066 (0.02)	-0.054 (3.49)**	-0.101 (5.91)**	-0.090 (5.13)**	-0.065 (3.33)**
Age	0.010 (2.31)*	-4.131 (0.07)	2.642 (0.95)	0.079 (9.31)**	0.073 (7.99)**	0.062 (6.61)**	0.056 (5.40)**
Age ²	-0.000 (2.27)*	0.106 (0.20)	-0.021 (0.82)	-0.001 (9.41)**	-0.001 (8.10)**	-0.001 (6.74)**	-0.000 (5.49)**
Married	-0.008 (1.74)	37.590 (0.66)	7.725 (2.56)*	0.012 (1.00)	0.003 (0.26)	0.007 (0.55)	-0.012 (0.85)
High School	0.007 (1.03)	2.302 (0.03)	3.498 (1.06)	0.028 (1.68)	0.029 (1.61)	0.019 (0.98)	0.025 (1.13)
Some Coll.	0.009 (1.26)	-49.189 (0.65)	5.781 (1.59)	0.045 (2.71)**	0.012 (0.68)	0.037 (1.97)*	0.045 (2.08)*
College Grad	0.001 (0.16)	-7.864 (0.10)	5.630 (1.55)	0.050 (3.09)**	0.041 (2.30)*	0.065 (3.52)**	0.084 (4.07)**
Northeast	0.014 (2.17)*	93.537 (1.34)	3.842 (1.04)	-0.017 (1.14)	-0.016 (0.93)	-0.033 (1.84)	-0.001 (0.06)
Midwest	0.011 (2.01)*	204.106 (3.58)**	4.057 (1.42)	-0.012 (0.92)	0.001 (0.09)	-0.006 (0.42)	0.012 (0.73)
West	0.009 (1.40)	115.298 (1.80)	2.678 (0.75)	-0.008 (0.55)	0.011 (0.73)	0.007 (0.41)	-0.005 (0.28)
Constant		863.735 (0.53)	-61.645 (0.79)				
<i>N</i>	5,791	505	295	7,067	6,122	5,515	4,335
<i>R</i> ²		0.04	0.06				

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A7.3: Yearly Cross-Sectional Probit/Regression Results - Other Outcomes – Part I — Mostly Self-Employed During Career

	Would Work Longer if SS Benefits Cut	Typical SS Benefit for 70-Year-Old Retiree	Age Started to Save for Retirement	Thought About Retirement A Lot Before Retiring			
	2008	2004	1996	2004	2006	2008	2010
Mostly Self-Employed	0.005 (1.56)	-5.485 (0.11)	0.386 (0.13)	-0.076 (6.07)**	-0.088 (6.63)**	-0.087 (6.44)**	-0.048 (3.34)**
Age	0.008 (4.23)**	31.939 (0.86)	4.409 (2.34)*	0.043 (8.45)**	0.043 (8.08)**	0.038 (6.93)**	0.025 (4.67)**
Age ²	-0.000 (4.60)**	-0.237 (0.70)	-0.036 (2.25)*	-0.000 (8.59)**	-0.000 (8.51)**	-0.000 (7.23)**	-0.000 (5.02)**
Married	-0.006 (2.52)*	86.831 (2.08)*	9.471 (3.91)**	0.019 (2.38)*	0.006 (0.69)	0.013 (1.55)	0.004 (0.53)
High School	0.001 (0.47)	90.909 (1.72)	3.231 (1.29)	0.021 (2.07)*	0.018 (1.78)	0.016 (1.49)	0.015 (1.38)
Some Coll.	0.002 (0.61)	53.160 (0.97)	7.275 (2.53)*	0.037 (3.41)**	0.005 (0.47)	0.024 (2.14)*	0.022 (1.99)*
College Grad	-0.001 (0.38)	83.481 (1.46)	8.570 (2.96)**	0.035 (3.16)**	0.023 (2.05)*	0.034 (3.04)**	0.024 (2.08)*
Northeast	0.003 (0.80)	83.390 (1.50)	1.139 (0.40)	-0.024 (2.25)*	-0.025 (2.28)*	-0.013 (1.10)	-0.011 (0.94)
Midwest	0.004 (1.51)	146.698 (3.28)**	2.494 (1.06)	-0.015 (1.58)	-0.001 (0.11)	0.003 (0.32)	-0.005 (0.53)
West	0.000 (0.03)	72.874 (1.46)	4.114 (1.44)	-0.006 (0.55)	0.007 (0.70)	-0.000 (0.04)	-0.022 (2.08)*
Constant		-206.325 (0.20)	-115.579 (2.09)*				
<i>N</i>	15,064	736	520	14,254	13,644	13,162	12,631
<i>R</i> ²		0.03	0.07				

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A7.4: Yearly Cross-Sectional Probit/Regression Results - Other Outcomes – Part I — Self-Employment Intensity During the HRS Waves

	Would Work Longer if SS Benefits Cut	Typical SS Benefit for 70-Year-Old Retiree	Age Started to Save for Retirement	Thought About Retirement A Lot Before Retiring			
	2008	2004	1996	2004	2006	2008	2010
Ever	0.005	-33.661	-1.325	-0.050	-0.037	-0.055	-0.054
Self-Employed	(1.79)	(0.73)	(0.55)	(5.26)**	(3.90)**	(5.66)**	(5.51)**
Always	0.001	109.029	3.017	-0.099	-0.131	-0.096	-0.052
Self-Employed	(0.23)	(1.44)	(0.54)	(4.75)**	(6.02)**	(4.54)**	(2.48)*
Age	0.008	25.731	4.355	0.043	0.044	0.039	0.027
	(4.18)**	(0.69)	(2.31)*	(8.57)**	(8.18)**	(7.14)**	(4.95)**
Age ²	-0.000	-0.178	-0.036	-0.000	-0.000	-0.000	-0.000
	(4.57)**	(0.52)	(2.21)*	(8.70)**	(8.60)**	(7.41)**	(5.27)**
Married	-0.006	82.916	9.483	0.020	0.006	0.014	0.006
	(2.55)*	(1.99)*	(3.92)**	(2.48)*	(0.73)	(1.65)	(0.75)
High School	0.001	92.771	3.267	0.021	0.018	0.015	0.015
	(0.50)	(1.75)	(1.30)	(2.05)*	(1.76)	(1.47)	(1.37)
Some Coll.	0.002	48.565	7.267	0.037	0.005	0.025	0.023
	(0.63)	(0.88)	(2.53)*	(3.45)**	(0.47)	(2.21)*	(2.08)*
College Grad	-0.001	77.399	8.671	0.035	0.023	0.035	0.025
	(0.34)	(1.35)	(2.98)**	(3.24)**	(2.07)*	(3.10)**	(2.20)*
Northeast	0.003	83.968	0.978	-0.025	-0.026	-0.014	-0.013
	(0.84)	(1.51)	(0.34)	(2.33)*	(2.37)*	(1.24)	(1.16)
Midwest	0.004	143.006	2.265	-0.015	-0.001	0.002	-0.007
	(1.55)	(3.20)**	(0.96)	(1.60)	(0.12)	(0.23)	(0.69)
West	0.000	72.791	4.145	-0.004	0.008	0.000	-0.022
	(0.02)	(1.46)	(1.45)	(0.44)	(0.74)	(0.00)	(2.05)*
Constant		-41.097	-113.907				
		(0.04)	(2.06)*				
N	15,064	736	520	14,254	13,644	13,162	12,631
R ²		0.04	0.07				

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A8.1: Yearly Cross-Sectional Probit Results - Other Outcomes – Part II — Current Self-Employment Status

	Answered Interest Question Correctly		Answered Inflation Question Correctly		Answered Safe Return Question Correctly		Answered Safe Money Question as True		Retired People Should Hold Stocks
	2004	2010	2004	2010	2004	2010	2008	2010	2010
Currently Self-Employed	0.024 (0.52)	0.063 (1.36)	0.018 (0.43)	0.047 (1.08)	0.037 (0.71)	-0.007 (0.14)	-0.075 (1.73)	0.018 (0.40)	0.009 (0.99)
Age	-0.036 (1.21)	-0.020 (0.64)	0.030 (1.38)	0.057 (2.33)*	-0.022 (0.71)	0.019 (0.58)	-0.054 (2.01)*	-0.005 (0.15)	0.002 (0.39)
Age ²	0.000 (1.15)	0.000 (0.45)	-0.000 (1.44)	-0.000 (2.30)*	0.000 (0.58)	-0.000 (0.79)	0.000 (2.18)*	0.000 (0.22)	-0.000 (0.41)
Married	0.019 (0.45)	0.037 (0.87)	0.063 (1.74)	0.082 (2.15)*	0.027 (0.56)	-0.027 (0.54)	-0.010 (0.25)	0.027 (0.60)	-0.001 (0.11)
High School	0.100 (1.75)	0.167 (2.96)**	0.106 (2.02)*	0.091 (1.66)	0.130 (1.91)	0.141 (2.07)*	-0.102 (1.84)	0.168 (2.41)*	0.017 (1.29)
Some Coll.	0.177 (3.11)**	0.187 (3.43)**	0.026 (0.51)	0.089 (1.68)	0.149 (2.19)*	0.194 (2.96)**	-0.108 (1.97)*	0.165 (2.42)*	0.024 (1.81)
College Grad	0.258 (4.52)**	0.307 (5.62)**	0.109 (2.08)*	0.111 (2.11)*	0.336 (5.15)**	0.361 (5.70)**	-0.235 (4.30)**	-0.006 (0.09)	0.029 (2.27)*
Northeast	0.016 (0.27)	0.011 (0.17)	0.021 (0.35)	-0.013 (0.22)	-0.056 (0.81)	0.012 (0.18)	0.061 (1.20)	0.064 (1.06)	-0.014 (1.16)
Midwest	0.030 (0.64)	-0.049 (1.05)	-0.051 (1.23)	-0.051 (1.19)	-0.023 (0.43)	-0.025 (0.47)	-0.036 (0.80)	0.009 (0.19)	0.003 (0.33)
West	-0.007 (0.14)	-0.051 (0.94)	-0.052 (1.16)	-0.040 (0.81)	0.010 (0.18)	0.082 (1.30)	-0.118 (2.28)*	0.005 (0.08)	-0.012 (1.06)
<i>N</i>	516	440	516	440	516	440	561	440	4,536

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A8.2: Yearly Cross-Sectional Probit Results - Other Outcomes – Part II — Part-Time or Full-Time Self-Employment Status

	Answered Interest Question Correctly		Answered Inflation Question Correctly		Answered Safe Return Question Correctly		Answered Safe Money Question as True		Retired People Should Hold Stocks
	2004	2010	2004	2010	2004	2010	2008	2010	2010
Part-Time Self-Employed	0.100 (1.20)	-0.015 (0.25)	-0.008 (0.12)	0.012 (0.20)	-0.141 (1.67)	-0.023 (0.32)	-0.082 (1.28)	0.021 (0.32)	0.014 (1.07)
Full-Time Self-Employed	-0.005 (0.09)	0.135 (2.16)*	0.030 (0.62)	0.076 (1.36)	0.121 (1.97)*	0.004 (0.06)	-0.071 (1.30)	0.016 (0.30)	0.006 (0.51)
Age	-0.032 (1.09)	-0.024 (0.78)	0.029 (1.31)	0.055 (2.26)*	-0.031 (1.01)	0.019 (0.55)	-0.055 (2.02)*	-0.004 (0.14)	0.002 (0.41)
Age ²	0.000 (1.02)	0.000 (0.62)	-0.000 (1.35)	-0.000 (2.22)*	0.000 (0.91)	-0.000 (0.75)	0.000 (2.18)*	0.000 (0.22)	-0.000 (0.44)
Married	0.016 (0.39)	0.036 (0.85)	0.064 (1.76)	0.081 (2.12)*	0.031 (0.65)	-0.027 (0.54)	-0.010 (0.24)	0.028 (0.60)	-0.001 (0.09)
High School	0.099 (1.75)	0.166 (2.95)**	0.106 (2.01)*	0.092 (1.67)	0.130 (1.91)	0.141 (2.06)*	-0.102 (1.84)	0.168 (2.41)*	0.017 (1.29)
Some Coll.	0.179 (3.15)**	0.179 (3.27)**	0.025 (0.49)	0.087 (1.65)	0.144 (2.13)*	0.193 (2.92)**	-0.108 (1.98)*	0.165 (2.42)*	0.024 (1.83)
College Grad	0.255 (4.46)**	0.304 (5.57)**	0.110 (2.11)*	0.111 (2.10)*	0.344 (5.31)**	0.361 (5.69)**	-0.235 (4.30)**	-0.006 (0.09)	0.029 (2.27)*
Northeast	0.019 (0.31)	0.012 (0.19)	0.019 (0.33)	-0.013 (0.23)	-0.064 (0.93)	0.012 (0.18)	0.061 (1.19)	0.064 (1.06)	-0.014 (1.16)
Midwest	0.032 (0.68)	-0.048 (1.05)	-0.051 (1.24)	-0.050 (1.18)	-0.026 (0.49)	-0.025 (0.47)	-0.036 (0.80)	0.009 (0.19)	0.003 (0.33)
West	-0.003 (0.06)	-0.047 (0.87)	-0.053 (1.18)	-0.040 (0.81)	0.004 (0.07)	0.082 (1.30)	-0.118 (2.27)*	0.005 (0.08)	-0.012 (1.06)
<i>N</i>	516	440	516	440	516	440	561	440	4,536

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A8.3: Yearly Cross-Sectional Probit Results - Other Outcomes – Part II — Mostly Self-Employed During Career

	Answered Interest Question Correctly		Answered Inflation Question Correctly		Answered Safe Return Question Correctly		Answered Safe Money Question as True		Retired People Should Hold Stocks
	2004	2010	2004	2010	2004	2010	2008	2010	2010
Mostly Self-Employed	0.055 (1.12)	0.099 (2.01)*	0.010 (0.24)	0.052 (1.23)	0.013 (0.26)	-0.039 (0.81)	-0.086 (1.86)	-0.042 (0.88)	0.012 (1.60)
Age	-0.014 (0.78)	-0.018 (0.94)	0.038 (2.56)*	0.029 (1.92)	0.023 (1.26)	0.030 (1.54)	-0.019 (1.10)	-0.015 (0.80)	0.000 (0.17)
Age ²	0.000 (0.62)	0.000 (0.75)	-0.000 (2.66)**	-0.000 (1.88)	-0.000 (1.43)	-0.000 (1.76)	0.000 (1.45)	0.000 (1.03)	-0.000 (0.30)
Married	0.049 (1.64)	0.032 (1.17)	0.086 (3.27)**	0.036 (1.52)	0.062 (1.92)	0.082 (2.84)**	0.019 (0.70)	0.026 (0.89)	0.012 (2.62)**
High School	0.081 (2.26)*	0.173 (5.39)**	0.086 (2.64)**	0.114 (3.95)**	0.130 (3.22)**	0.032 (0.89)	-0.030 (0.91)	0.017 (0.48)	0.005 (0.87)
Some Coll.	0.175 (4.66)**	0.186 (5.48)**	0.114 (3.30)**	0.121 (3.97)**	0.197 (4.75)**	0.131 (3.46)**	-0.037 (1.05)	-0.024 (0.64)	0.014 (2.30)*
College Grad	0.256 (6.40)**	0.333 (9.20)**	0.165 (4.49)**	0.155 (4.77)**	0.309 (7.38)**	0.269 (6.77)**	-0.141 (3.80)**	-0.108 (2.71)**	0.017 (2.73)**
Northeast	-0.006 (0.14)	0.049 (1.24)	-0.063 (1.72)	-0.003 (0.10)	0.020 (0.44)	0.044 (1.07)	0.007 (0.21)	0.029 (0.72)	-0.008 (1.19)
Midwest	0.040 (1.13)	-0.030 (0.96)	-0.014 (0.42)	-0.036 (1.31)	0.028 (0.73)	0.047 (1.41)	-0.053 (1.71)	0.018 (0.55)	0.004 (0.85)
West	-0.039 (1.07)	-0.036 (1.00)	-0.050 (1.49)	-0.029 (0.90)	0.008 (0.21)	0.047 (1.21)	-0.081 (2.28)*	0.035 (0.93)	-0.006 (1.00)
<i>N</i>	1,083	1,203	1,083	1,203	1,083	1,203	1,355	1,203	13,622

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.

Table A8.4: Yearly Cross-Sectional Probit Results - Other Outcomes – Part II — Self-Employment Intensity During the HRS Waves

	Answered Interest Question Correctly		Answered Inflation Question Correctly		Answered Safe Return Question Correctly		Answered Safe Money Question as True		Retired People Should Hold Stocks
	2004	2010	2004	2010	2004	2010	2008	2010	2010
Ever	0.023	0.057	0.066	0.005	0.008	0.018	-0.063	0.018	0.005
Self-Employed	(0.62)	(1.71)	(1.89)	(0.17)	(0.22)	(0.52)	(1.92)	(0.53)	(1.00)
Always	0.059	0.076	0.078	0.129	0.076	-0.055	-0.090	-0.099	0.009
Self-Employed	(0.77)	(1.04)	(1.07)	(1.74)	(0.96)	(0.77)	(1.20)	(1.31)	(0.84)
Age	-0.014	-0.020	0.036	0.028	0.023	0.029	-0.019	-0.015	0.000
	(0.76)	(1.04)	(2.47)*	(1.82)	(1.24)	(1.51)	(1.05)	(0.78)	(0.13)
Age ²	0.000	0.000	-0.000	-0.000	-0.000	-0.000	0.000	0.000	-0.000
	(0.59)	(0.83)	(2.58)**	(1.78)	(1.40)	(1.73)	(1.42)	(1.01)	(0.27)
Married	0.047	0.029	0.079	0.035	0.062	0.081	0.022	0.025	0.012
	(1.59)	(1.07)	(2.98)**	(1.50)	(1.89)	(2.77)**	(0.82)	(0.85)	(2.60)**
High School	0.082	0.173	0.083	0.114	0.129	0.030	-0.027	0.015	0.005
	(2.29)*	(5.37)**	(2.55)*	(3.97)**	(3.20)**	(0.83)	(0.82)	(0.43)	(0.89)
Some College	0.175	0.182	0.110	0.120	0.196	0.129	-0.032	-0.026	0.014
	(4.64)**	(5.33)**	(3.18)**	(3.92)**	(4.72)**	(3.38)**	(0.90)	(0.68)	(2.31)*
College Graduate	0.257	0.334	0.156	0.154	0.306	0.266	-0.139	-0.108	0.017
	(6.44)**	(9.21)**	(4.26)**	(4.74)**	(7.30)**	(6.70)**	(3.74)**	(2.72)**	(2.78)**
Northeast	-0.006	0.052	-0.061	-0.003	0.021	0.044	0.005	0.028	-0.007
	(0.15)	(1.32)	(1.65)	(0.07)	(0.46)	(1.08)	(0.15)	(0.71)	(1.16)
Midwest	0.040	-0.030	-0.015	-0.035	0.028	0.046	-0.050	0.017	0.005
	(1.13)	(0.96)	(0.46)	(1.29)	(0.75)	(1.38)	(1.61)	(0.51)	(0.87)
West	-0.040	-0.033	-0.051	-0.028	0.008	0.046	-0.080	0.034	-0.006
	(1.08)	(0.89)	(1.52)	(0.89)	(0.20)	(1.17)	(2.26)*	(0.91)	(0.99)
N	1,083	1,203	1,083	1,203	1,083	1,203	1,355	1,203	13,622

Source: Authors' calculations using 1992 through 2010 HRS data.

Entries represent probit marginal effects and t-statistics in parentheses. * p<0.05; ** p<0.01.