The Key Determinants and Effects of Pension Participation among Working Adults

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Britta Odgren

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Abstract

This paper examines the key determinants and effects of pension participation among working adults ages 22-61. I am specifically interested in pension participation and its effects among the low income population. Using the Panel Study of Income Dynamics (PSID), I find that the key determinants of pension participation are income, age, education, having a transaction account, marital status among men and employment under union contract. Furthermore, my results suggest that holding income, age and education constant, participation in both an employer pension and IRA is positively correlated with wealth accumulation. The effects of employer pensions only however, are inconclusive. I discuss the implications of these results and provide an overview of legislation and policy proposals that aim to increase pension participation and better ensure financial security in retirement.

Introduction

Low income workers have historically saved less as a percentage of income than their higher income counterparts. Wealth in the United States is concentrated and skewed to the right. The top one percent of households own one third of total wealth while one third of households have zero or negative net financial assets (Cagetti and Nardi 2006, Carney and Gale 2000). One possible contributing factor to this disparity is the lack of pension participation among low income workers. In 1997, only 22 percent of households with adjusted gross incomes below $20,000 participated in employer provided retirement plans or Individual Retirement Accounts (IRAs) compared to 51 percent of all households. Low income workers often are not offered a savings vehicle through their employer, and those who are offered this type of account tend to contribute less as a percentage of income than higher income households. In 2001, the median household in the bottom fifth of the income distribution had only $4500 in a retirement savings account (The Retirement Security Project 2007b).

Using 2005 data from the Panel Study of Income Dynamics, this paper aims to uncover the key determinants of pension participation among working adults. I am specifically interested in confirming and expanding upon the findings of other studies which show that low income workers participate in pensions at lower rates than higher income workers. I also analyze the effects of pension participation on wealth accumulation and examine the implications of these findings. Finally, I discuss several policy proposals aimed at increasing saving among low income workers and the population as a whole.

Background on Pensions and Pension Types

For the purposes of this paper, the term "pension" refers to any type of employer-provided or individual retirement account when not otherwise specified. The two main types of pensions typically provided by employers include defined benefit and defined contribution plans. A defined benefit plan promises employees a specific monthly benefit in retirement. The plan may specify an exact dollar benefit amount, but more often calculates a worker's benefit based on a formula that includes such factors as retirement age, salary, and years of service to the company. Under defined benefit plans, employees most often are not involved in choosing plan investments (U.S. Department of Labor 2009b). Defined benefit plans have fallen in popularity since the 1980s. This fall in popularity can largely be attributed to changes in pension law enacted by the Employee Retirement Income Security Act of 1974 (ERISA). The ERISA set standards for voluntarily established pension plans in areas such as fiduciary responsibility, benefit accrual and funding, and mandatory survivor benefits (U.S. Department of Labor 2009b). These new regulations made defined benefit plans less desirable for employers, and thus played a part in the rise of defined contribution plans witnessed around 1980.

Apart from being less desirable from an employer standpoint, defined benefit plans are criticized because the accounts do not follow employees as they move from job to job, and therefore may lead workers to stay in a job that they would otherwise leave (Ulrich 2002). These plans are considered by some to be outdated because they lack job portability opportunities that make sense for an economy in which most the average worker holds 9.2 jobs from ages 18 to 34 (U.S. Department of Labor 2000) . A study performed by the Social Security Administration noted a large shift away from defined benefit plans from 1994 to 2004 across all household types and wealth quintiles (Dushi and Iams 2008 51). In 2006, 67.1 percent of individuals with

pensions had a defined contribution plan as a primary retirement plan type, compared with only 30.9 percent with defined benefit plans (MacDonald 2009).

Unlike defined benefit plans, defined contribution plans do not promise a specific benefit during retirement, and instead, establish individual accounts to which employees and/or employers contribute. Under defined contribution plans, employees often choose the asset allocation of their account funds, and designate a contribution rate. Some employers offer to match a certain percentage of employee contributions. Unlike defined benefit plans, the value of defined contribution plans, and therefore the benefits in retirement, depends on how much money is contributed to the account and how well the investments perform. Defined contribution account holders can purchase annuities that ensure lifetime monthly benefits, but again, the value of these annuities depends on the value of the account. Defined contribution plans place more risk and responsibility on the employee, but allow job portability options not afforded by defined benefit plans. The most common types of defined contribution plans are 401(k) s (U.S. Department of Labor 2009c). At the end of 2000, over 42 million Americans actively participated in an employer sponsored 401(k) plan (Choi et al. 2001).

Individuals who are not offered a pension through their employer can set up a retirement account through a financial institution. The most common type of account is an Individual Retirement Account (IRA) through which individuals can, up to a certain maximum, invest personal savings that grows tax deferred. Employees who change jobs can transfer funds from an employer defined contribution plan into an IRA when they leave a job (Department of Labor 2009c).

Previous Findings

The literature on pension participation determinants is extensive. However, most studies conducted in this area are limited to a certain type of pension, a specific age or racial group, or another specification. Many studies that focus on pension participation also contain information about the effects of pension participation on net worth.

Dushi and Iams(2008), using 1994 and 2004 Health and Retirement Study data, found that, though pension participation rose between 1994 and 2004 cohorts, a wide gap in participation persists among near retirees (ages 55-61) across income quintiles. The authors found that approximately 60 percent of workers in the lowest two quintiles reported having a pension, while approximately 75 percent of those in the highest three quintiles reported having a pension from which to draw retirement funds (Dushi and Iams 2008 51). They also find that single people (both men and women) are less likely to have pensions than married individuals, and that married women are less likely to have a pension through their own employment than are single women. Dushi and Iams also find evidence of a strong positive relationship between pension participation and total net worth. In 2004, approximately 52 percent of near retirees in the lowest net worth quintile had a pension during their working life, while 78 percent of individuals in the highest net worth quintile reported having a pension (Dushi and Iams 2008 51). The authors also find that wealth inequality grew between 1994 and 2004, with those at the bottom of the wealth distribution experiencing little change in assets, and those in the highest wealth quintile enjoying substantial gains (Dushi and Iams 2008 56).

Carney and Gale, using Survey of Income and Program Participation data find that income, age, education and being married are positively correlated with net worth and level of financial assets (Carney and Gale Tables 6-12 and 6-14). It should be noted that the authors do

not include defined benefit pensions and non-401(k) defined contribution plans in their measurements of asset accumulation, which is consistent with the measurement of wealth in the PSID. Carney and Gale also find that the absence of a transaction account is correlated with significant effects on ownership of financial assets. Specifically, they find that households that do not have transaction accounts are 43 percentage points less likely to have positive net asset holdings. While the authors acknowledge that having a transaction account is endogenous with respect to other asset behavior, they suggest that these results should be interpreted as "consistent with a view that transaction accounts are some sort of "gateway" for household entering the financial mainstream. (Carney and Gale 23)"

Carney and Gale provide several possible reasons, both observed and unobserved, for the wealth disparity between income levels. First, low income households are more likely to be headed by younger persons with less education than those in higher income households. These heads of household are also more likely be single parents and be unemployed, employed part-time or employed in jobs with little or no benefits. These employment characteristics make heads of low income households less likely to have access to subsidized pension plans. The authors also suggest that advertising for IRAs and other tax advantaged personal savings vehicles is targeted toward high income households (Carney and Gale 5-6). Also, "because saving incentives are structured as deductions, they do not provide any immediate benefits at all to the large number of low-income households who pay no federal income tax. (Carney and Gale 6)" An unobservable reason for wealth disparity could be that low-income households may have a higher time-preference rate, and therefore value the future relative to the present less than higher income households (Carney and Gale 5). Carney and Gale's time-preference idea is somewhat

related to liquidity constraints facing low income persons. Lower income workers may face higher borrowing costs and therefore retain income in liquid form.

While Carney and Gale provide several reasons for inadequate savings among low income individuals, they do not address the availability of government safety nets, like Social Security, Welfare, Food Stamps, Unemployment, Medicare and Medicaid, as a possible deterrent to saving. Auerbach and Kotlikoff find, using a two period life-cycle model, that the presence of social safety nets discourages precautionary saving. Precautionary saving is meant to protect individuals from income loss due to events such as unemployment or a catastrophic medical expense, and therefore largely serves the same purpose as do social safety net programs. The authors suggest that for this reason, social safety nets decrease propensity to save (Auerbach and Kotlikoff 1998 165). Though the presence of safety nets likely affects all individuals, those in the low income population may have greater incentives to reduce saving due to safety net availability. Social Security benefits, for example, provide a large portion of pre-retirement income for low income individuals compared to their higher income counterparts (Social Security Administration 2009). Therefore, low income individuals may not need to save nearly as much relative to their income as high earners to maintain their pre-retirement lifestyles in retirement.

Neuberger (2009) suggests that asset limits on social safety net programs also discourage savings. Because asset test limits for programs like Temporary Assistance to Needy Families (TANF), Food Stamps, and Medicaid include funds in 401(k)s and IRAs, these programs require asset depletion of non-defined benefit retirement accounts (Neuberger 3-4). The Food Stamp program, for example, requires that recipients have no more than $2,000 in total assets. Individuals with retirement accounts that exceed this account would therefore have to withdraw

from these accounts with a steep penalty in order to qualify for food stamps (U.S. Department of Agriculture 2009). Studies such as Hubbard et. al (1995) and Powers (1998) have confirmed that asset tests for social insurance programs discourage saving among individuals with low expected lifetime earnings.

Chun and Sun (2008), using 1996 Survey of Income and Program Participation data, found that Latinos have low pension participation rates because of low sponsorship rates, high ineligibility rates and the growing existence of voluntary opt-in pension systems. Though this paper focuses on discrepancies in pension participation between Latinos and other racial/ethnic groups, the characteristics that prevent Latinos from participating in pensions can likely be extrapolated to low income workers in general, when compared to their higher income counterparts.

Interestingly, Chun and Sun also suggest that the shift from defined benefit pension plans to defined contribution plans will lead to decreases in pension wealth. The reasons given for this decrease include low income earners' preferences for liquid assets, and the placement of saving responsibility on the employee. The authors claim that low pension participation will lead to insecure financial futures for Latinos and other groups with similar pension participation rates. Similarly, Even and Macpherson (2007) find using Survey of Consumer Finances data that the shift from defined benefit to defined contribution pension plans is likely to increase wealth inequality and may result in lower pension wealth at retirement for low income workers, women and minorities. Pension type analysis is beyond the scope of this paper, but is an important topic for further research as defined benefit plans are becoming obsolete, and defined contribution plans are on the rise.

Data

This study uses the Panel Study of Income Dynamics (PSID). The PSID is a nationally representative sample of United States individuals and family units and includes substantial data on income sources, assets, employment, residential location and family composition. Most interviews are conducted by telephone. From 1968 until 1996, adults were interviewed and re-interviewed as part of a core sample that reached 8,500 in 1996, but was reduced to 6,168 in 1997 to better represent the national population when a new immigrant sample was introduced.

The detailed asset information in the Panel Study of Income Dynamics makes it one of few datasets that could be used to study the effects of pension participation and pension type on wealth accumulation. Not only does the PSID provide both home and non home wealth information, but it includes pension information that is lacking in many other datasets such as the Current Population Survey, which does not include any asset information on its respondents.

Specifically, this study uses family level data from 2005, and focuses on respondents (heads of households) between the ages of 22 and 61. These age limits ensure that the majority of individuals in my sample are finished with school, but have not begun to receive retirement benefits (either from Social Security or pension payments). Since individuals can claim Social Security benefits at 62, I chose to restrict my sample to those 61 and under. The sample excludes those who are self-employed since self-employment income often varies greatly from year to year. Self-employed individuals may report low income or even income loss in the PSID, but have very high levels of wealth. Married women are also excluded from the sample because the definition of head of household does not allow for the inclusion of a representative sample of married women in the population. This will be discussed further in later sections.

The questions used to determine pension participation in my analysis are "Not including Social Security or Railroad retirement, are you covered by a pension or retirement plan at your present job?" and "Do you [or anyone in your family living here] have any money in private annuities or Individual Retirement Accounts (IRAs)?" Since the IRA question is a household question, and the pension question refers to just heads of household, I include married respondents' answers to the same pension question about their wives in my determination of pension participation. In other words, any employer pension or IRA variable used in my analysis refers to household participation. It should be noted though, that very few wives participate in pensions when the head of the household does not participate in a pension, so the inclusion of wives' pension participation does not significantly change the results of my analysis with regard to pension participation.

To identify pension type, I use responses to the following question: "How are the benefits for your pension determined – by a defined benefit formula based on years of service or salary, by the amount of money in your account, or in both ways?"[1] Because the wealth measures in the PSID are not fully reliable, as will be discussed in the limitations section, I use the amount in checking and savings accounts as a substitute for wealth. I created a total earned family income (head and wife) variable by adding 2004 wages and salaries of the head and the wife; this income variable was used to construct income quartiles utilized in my analysis. [2]

The PSID employs family sampling weights that are intended to allow an unbiased estimation of descriptive statistics of the U.S. population that is eligible for the PSID survey

[1] The lead up to this question in interviews went as follows: Some pension plans have a definite formula based on years of service or salary, often called defined benefit plans. Some plans base benefits on how much money has accumulated in a person's retirement account. Other plans use both ways of setting benefits.

[2] Quartile 1= lowest through $20,000.00
Quartile 2= $20,000.01 through $41,814.00
Quartile 3= $41,814.01 through $74,245.00
Quartile 4 = $74245.01 through highest

population. The PSID's individual longitudinal weights are inverse probability weights. Family weights are calculated by averaging the individual weights of all individuals in a family each year.[3] Before I performed any regression analyses, I first normalized the family sample weights so that the mean of the weights is equal to one.[4]

Limitations

Several characteristics of PSID data place limitations on my analysis. One of the major limitations of these data is the restrictive head of household definition. The head of household is defined as follows in the Panel Study of Income Dynamics:

> *The Head of the FU must be at least 16 years old and the person with the most financial responsibility for the FU. If this person is female and she has a husband in the FU, then he is designated as Head. If she has a boyfriend with whom she has been living for at least one year, then he is Head. However, if the husband or boyfriend is incapacitated and unable to fulfill the functions of Head, then the FU will have a female Head.*[5]

The definition used to identify heads of household in the PSID therefore suggests that all of the women used in my analysis are either single with no live in boyfriend, divorced, widowed or married with a husband who is institutionalized or incapacitated, as these are the only situations in which a woman is labeled head of household. There are very few married women who are heads of household in the PSID, and because they do not represent married women in the population, I removed them from my sample. The PSID's head of household definition

[3] For more information on family sampling weights, see "Technical Report, Panel Study of Income Dynamics-Revised Longitudinal Weights 1993-2005

[4] This was done by multiplying the family sample weight by the (sample weight divided by the sum of weights). This method for normalizing can be found at http://www.albany.edu/csda/adjspss.pdf.

[5] This definition can be found in the Panel Study of Income Dynamics "Frequently Asked Questions" section at http://psidonline.isr.umich.edu/GUIDE/FAQ.aspx#130.

unfortunately limits opportunities for meaningful gender sub-group analysis. Future research would benefit from a more representative sample of women.

The pension questions in the PSID inquire only about participation and do not ask if respondents have access to a pension through their employer. This analysis focuses only on respondents answers to the questions "do you have a pension through your current employer," and "do you have any money in private annuities or Individual Retirement Accounts?" There may be differences between those who do not have access to a pension and those who have access to a pension, but choose not to participate. Pension access information would allow for a more robust analysis of pension participation.

Another limitation of this study is the measurement of wealth. The wealth variables in the PSID do not include employer pension wealth from defined benefit or defined contribution plans. This omission makes it difficult to determine the full effects of pension participation on wealth, since the wealth measurement excludes the asset component about which this paper is most concerned. Also, according to Juster et al. (1999), the seven questions used to elicit asset information in the PSID do not provide accurate estimations of total net worth. Since three of these questions are aimed at tangible assets such as real estate, business and vehicles, only four questions address the large number of other possible financial assets. The authors suggest that grouping together these financial assets types in only four questions leads respondents to underreport their total assets (Juster et. al. 255). They compare the PSID's seven wealth related questions to the Survey of Consumer Finance (SCF), which includes over 100 questions in this area. According to Juster et al., the wealth questions in the SCF offer the memory probes needed for accurate total asset measurement. This measurement difference is evidenced by the fact that

aggregate household net worth in the PSID totals only 75 percent of that in the SCF (Juster et. al 257).

Though the wealth measurement differences are most noticeable at the very top of the wealth distribution- the richest one percent of PSID households report less than one tenth the wealth of the same group in the Survey of Consumer Finance- Juster et. al. observe at least a slight gap in wealth as reported in the two surveys from the 30th percentile and up (Juster et. al. 257). To avoid this measurement error, I do not use the wealth variables in my analysis of pension participation's effects on wealth accumulation. I instead substitute checking and savings account levels, as these reported values likely include less measurement error than the total wealth variable and are positively correlated with wealth accumulation.

Descriptive Statistics

This section contains a descriptive overview of my sample to provide a context for my analysis, and a reference point for the reader. Since each quartile contains high wealth outliers, I report median wealth and checking/savings amounts. Table 1 displays demographic information about my sample for certain variables used in my analysis; these include race, education and marital status. Only those respondents that answered questions regarding race, marital status and high school graduation are included in the table. For that reason, the binary categories of race (white and non-white) and high school education (high school graduate and less than high school) do not add up to 100 percent of the total sample size.

Table 1. Sample Demographics

	Race		Marital Status			Education	
Income Quartile	**White**	**Non-White**	**Married Male**	**Divorced Male**	**Divorced Female**	**H.S. Graduate**	**Less than H.S.**
1	65.9%	33.6%	14.7%	10.1%	17.3%	62.8%	35.1%
2	73%	26.2%	32.7%	9.6%	17.2%	70.5%	26.4%
3	81.7%	17.4%	59.1%	7.4%	8.6%	80.5%	14.6%
4	88.5%	11.4%	85.7%	4.5%	1.7%	88%	7.5%
Total	**77.7%**	**21.7%**	**49.5%**	**7.7%**	**10.8%**	**76.1%**	**20.3%**

n=5072

Table 2 below shows pension participation in each quartile. The table shows individuals in higher income quartiles participate in pensions at a higher rate than those in lower quartiles. Pension participation in the lowest quartile is especially astounding and indicates that the poorest 25 percent of workers participate in pensions at much lower rates than the rest of the income distribution. Participation ranges from 12.5 percent in the lowest quartile to 82.2 percent in the highest income quartile.

Table 2. Pension Participation by Quartile

Income Quartile	Pension/IRA Participants	Percent Participation
1	146	12.5%
2	602	47.6%
3	851	67.5%
4	1135	82.2%

Table 3 shows that median wealth and the amount in checking and savings accounts increases as we move upward from quartile one to quartile four. Median non-home wealth increases from $1,700 in the lowest income quartile to $83,561 in the top quartile. Checking and savings account amounts and median wealth including home equity follow the same pattern. The large difference in median wealth including home equity is not surprising, as homeownership levels are higher among higher income households. It should be noted that the amount in a checking and savings is equal to 0 for those who do not have a checking account. A

median transaction account amount of $20 for those in the lowest quartile therefore suggests that several respondents in this category likely do not have a checking or savings account.

Table 3. Median Wealth by Income Quartile

Quartile	Median Wealth (Incd. Home Equity)	Median Wealth (Non-home)	Amount in Checking/Saving	N
1	4,000	1,700	20	1164
2	16,500	6,500	1,000	1266
3	60,356	20,000	3,000	1263
4	225,000	83,561	10,000	1379

Table 4 displays wealth in each quartile broken down by pension participation. In each quartile, those with pensions have higher median wealth and checking and savings account amounts than individuals that do not participate in a pension. Perhaps the most striking difference in checking and savings account amounts appears in the bottom quartile. The median checking and savings account amount for an individual who participates in a pension in the lowest quartile is $1,400 compared with only $13 for those who do not participate in a pension. Again, since those without transaction accounts are given a value of 0, the $13 median checking and savings account amount suggests that many individuals without pensions in the lowest income quartile likely do not have a bank account.

Table 4. Median Wealth in dollars by Income Quartile and Pension Participation

Quartile	Pension	Median Wealth (Home)	Median Wealth (non-home)	Amount in Checking/Saving	N
1	YES	15,000	9,815	1,400	146
	NO	2,000	1,083	13	482
2	YES	28,973	10,525	1,500	602
	NO	8,000	3,100	500	522
3	YES	88,000	26,000	4,000	851
	NO	25,073	9,000	2,000	314
4	YES	251, 977	94,000	10,000	1135
	NO	102,801	30,315	6,000	160

As explained previously, employer pensions can come in the form of defined benefit plans or defined contribution plans. Table 5 provides a breakdown of pension type in each quartile, and displays median wealth by pension type. As mentioned previously, the PSID includes a question that asks respondents who report having a pension through their employer to identify their pension type. The results are coded into three categories- defined benefit, defined contribution and both. Those with IRAs (and no employer pensions) are shown in the IRA only category, while individuals who reported having neither an employer pension, nor an IRA are displayed in the "None" category. Since not everyone who reported having an employer pension also reported their pension type, the number of respondents in each quartile is less than in the previous tables.

Except for the lowest quartile, each group contains more individuals who participate in a defined benefit pension plan than any other type of pension. This makes sense given that in 2005, several older employees still carried these types of plans. New workers, who may be in the lowest income distribution because they are young, may be more likely to have defined contribution plan given that they participate in an employer pension. The sample size of each pension type in the bottom quartile is small, and therefore may not allow for meaningful inference. Among the top three quartiles, there does not seem to be a consistent observable pattern between employer pension type and median wealth and transaction account amounts. It is interesting though, that in each quartile, individuals with IRAs have substantially higher wealth than those in any other pension category. The dramatic differences in both wealth categories for IRA holders in the first quartile is unexpected, as these values are higher in the first quartile than they are in the second or third. This suggests that individuals with IRAs in the first quartile may be different than those with IRAs in the second, third and fourth quartiles.

Self-employment could explain this difference, since business owners could report a low income or net loss in income and still have substantial wealth, but those individuals were removed from my sample. It is possible that many of the individuals with IRAs in the lowest quartile are those who retired from full time work before the age of 62 and may be working very little, but have high amounts of wealth.

Table 5. Median Wealth and Transaction Account Amounts by Quartile and Pension Type

Quartile	Pension Type	Median Wealth (Home)	Median Wealth (Non-home)	Amount in Checking/Savings	N
1	DB	9,400	5,729	1,341	25
	DC	7,000	3,000	500	37
	Both	12,028	9,682	265	14
	IRA Only	139,030	98,201	5,000	44
	None	2,000	1,083	13	482
2	DB	24,105	10,000	1,500	190
	DC	35,000	8,000	1,500	151
	Both	38,200	10,504	1,000	76
	IRA Only	48,277	25,996	2,903	80
	None	8,000	3,100	500	522
3	DB	80,000	25,800	13,011	295
	DC	97,800	23,000	13,979	207
	Both	59,837	25,000	3,024	114
	IRA Only	107,100	60,274	4,000	113
	None	25,073	9,000	2,000	314
4	DB	243,149	85,000	10,000	361
	DC	237,877	94,000	11,000	264
	Both	211,282	57,708	10,000	179
	IRA Only	393,357	184,500	15,000	206
	None	102,801	30,315	6,000	160

DB = Defined Benefit Plan
DC= Defined Contribution Plan
IRA= Individual Retirement Account
None= Respondent reported that he/she does not have a pension or IRA

Models and Results

1. *Examining the Key Determinants of Pension Participation*

To examine the determinants of pension participation, I used the following binary logistic model:

$$[\Pr(Pension) = f\{\beta_0 + \beta_1 income + \beta_2 age + \beta_3 additionaljobs + \beta_4 education + \beta_6 married +$$

The pension dummy dependent variable is equal to one for those who reported having a pension, while those reporting that they do not have a pension were given a value of 0.

The income variable used in this regression is continuous and measured in thousands. I expect that income will have a positive effect on pension participation because of liquidity constraints. Borrowing is likely more expensive, or perhaps not possible for low income workers. Lower income individuals therefore need their income to remain liquid. Since pensions are typically illiquid, and therefore do not allow quick access to assets without penalty, low income individuals may be less likely to participate in such savings vehicles. Age is a continuous variable with values ranging from 22 and 61. I expect that as age increases, pension participation will increase for two reasons. First, as an individual gets older, they may be more likely to be employed in a type of job or occupation that offers a pension. Secondly, as an individual gets older, he may become more conscious of his approaching retirement and therefore be more likely to save for this upcoming event through a pension or IRA.

The completed education variable is continuous, and ranges in value from 0 to 17.[6] I expect that as years of completed education increases, pension participation will also increase.

[6] If the head is a high school graduate, the value is 12.
If the head received a GED, the value is the last grade finished.
If the head neither graduated from high school nor got a GED, the value is the last grade finished.

More highly educated workers may have more knowledge about the financial system and therefore be more willing to navigate the pension/retirement account system. These individuals may also be more likely to work in occupations that typically provide pension options to their employees.

The additional jobs variable is continuous and ranges from 0-6. I expect that as the number of additional jobs increases, pension participation decreases. Individuals working more than one job may be more likely to be employed in occupations that do not provide pensions to employees. This hypothesis assumes that the majority of those with more than one job in my sample are working low wage jobs. If this assumption is not true, the additional jobs variable may not have a significant impact on pension participation.

The race categories in the PSID are limited, as Hispanics are grouped with whites, and very few observations for non-white races other than black are included in the sample. These limitations prohibit meaningful racial sub group analysis. For these reasons, the race dummy is binary; the dummy is set to one for those who identified as white, and zero for those respondents who reported a non-white racial category. I expect that white individuals will be more likely to participate in pensions because they may be more likely to work in occupations that offer pensions to employees. The checking and savings account variable is a dummy for which 1 indicates that the respondent has a checking or savings account in the household and 0 if he/she does not. I expect those who have a checking or savings account to have higher rates of pension participation. Holding income constant, those with a checking or savings account may be more

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If the head went to college, the value is 12 plus the number of years the head attended college.
If the head has post-graduate work, the value is 17.
If it is not known whether the head graduate from high school, received a GED or attended college, they were omitted from the sample.

financially literate than those who do not have these accounts, and therefore be more likely to seek out an employer pension or IRA.[7]

The union dummy is set to one for those employed in a job under union contract, and zero for those who are not. I expect that those employed in a job that is under union contract will be more likely to participate in a pension. Union negotiations may result in better worker benefits, including pension plans. On the same note, occupations with a higher prevalence of unionization, like manufacturing or teaching, may be more likely to offer employer pensions in the first place. Unions may also play a large role in educating employees about pension opportunities and provide resources to aid workers in navigating the financial system.

Finally, I am interested in exploring the effects of marital status on pension participation. The reference group for all marital status dummies is single men. The married dummy is set to one for those who are married, and zero for those who are not. This dummy captures the effect of being a married man, since I eliminated married women from the sample. I expect that married men may be more likely to have a pension than the single male reference group because they are planning for retirement with the security of both themselves and their wives and families in mind.

The single female dummy is set to one for those who are female and single, and zero for those who are not. It is not clear that single females will have significantly different pension participation rates than the single male reference group. However, if we consider that many single, never married women are young and may plan to get married in the future, we may

[7] Ideally, I would use an alternative investment variable such as stocks to address financial literacy. The stock dummy is set to one for respondents who reported that they have shares of stock in publicly held corporations, mutual funds, or investment trusts not including pensions or IRAs. Unfortunately, participation in other investments is likely endogenous in this equation, since participating in a pension may increase financial literacy and simply through exposure may make individuals more aware of the financial system. Since pension participation likely does not affect individuals' awareness of checking and savings accounts, this variable serves a substitute.

expect that single females participate in pensions at a lower rate than single males. Single females may expect that their future marriage partner will have a retirement account, and therefore be less likely to initiate pension participation. This sentiment was likely more accurate in the past, and may not carry much weight for single females in 2005. Also, single women who are older and have already established their financial holdings, or any single woman who is not planning on marrying, would not align with this hypothesis.

The female divorced dummy is set to one for those who are female and divorced, and zero for those who are not. Similarly, the male divorced dummy is set to one for those who are male and divorced and zero for those who are not. I would expect divorced women to participate in pensions more often than married women, simply because they are individually financing retirement. Since married women are not included in this sample though, this comparison cannot be explored. When compared to the rest of the population, I expect that divorced females will participate in pensions at a lower rate because they may take time to find jobs with pensions and other benefits after a divorce if they did not have such employment prior to the divorce. Pension participation among this population likely depends on the amount of time that has passed since the divorce. Since this information is not included in the dataset, I instead initially created an age and marital status dummy interaction variable (Age X Marital Status) which I expected to have a positive effect for divorced females. Given that an individual is female and divorced, she may be more likely to participate in a pension as she ages. She may have had more time since the divorce to find a job offering a pension, or could simply be more likely to already have a job that offers a pension since she is older. I included the age and marital interaction variable for both divorced women and divorced men, but since neither interaction variable was significant in preliminary regressions, they are not included in my final model.

Results

Table 6 in the Appendix displays the results of a binary logistic regression model where pension participation is the dummy dependent variable. These results suggest that the significant determinants of pension participation are age and income, years of completed education, having a checking or savings account, being a married male and employment in a job under union contract. I present both odds ratio and marginal effect interpretations for these significant determinants.

Odds Ratios

The coefficient on income suggests that, as expected, an increase in income increases the odds of pension participation. Specifically, a one thousand dollar increase in income is associated with a 2.8 percent increase in the odds that an individual will participate in a pension. The results suggest that an increase in age has the same effect; a one year increase in age yields a 4.7 percent increase in the odds of that an individual will participate in a pension.

As expected, education has a significant impact on pension participation. The results suggest that a one year increase in completed education is associated with a 24.6 percent increase in the odds that an individual will participate in a pension. Having a checking or savings account also appears to be positively associated with pension participation. The odds that an individual will participate in a pension are approximately 100 percent higher for those who have a checking or savings account compared to those who do not. Employment in a job that is under union contract appears to have a significant positive relationship with pension participation. The odds that an individual will participate in a pension are nearly 300 percent higher for those employed in a job under union contract compared with those who are not.

Though being divorced and being a single female do not appear to significantly affect pension participation, the results suggest that married men have a greater chance of participating. Specifically, being a married man increases the odds that an individual will participate in a pension by over 100 percent compared to the single male reference group. This is an expected result, especially because of the large number of married men in the top quartile of the income distribution. The insignificance of the divorced female variable is surprising; however this result is seemingly reliable given that there are 550 divorced women in my sample. That the white dummy is insignificant is also surprising, but again, likely reliable given that the sample includes 1100 non-white individuals (see Table 1 in the text).

Marginal Effects

Table 6 in the appendix presents two sets of marginal effects on pension participation- one for a typical low income earner, and another for a typical high income earner. These marginal effects are important because the relationship of each variable to pension participation greatly depends on the values of the other independent variables and the point from which we are starting. For instance, a one year increase in education likely has a different effect on pension participation for an individual with a high school diploma than it does for a college graduate. To calculate marginal effects for the typical low income earner, I set all continuous variables equal to their averages in the lowest income quartile. I set dummy variables equal to the value that appears most in the lowest quartile. Using this method, the typical low income earner is a 41 year old white single female with an earned income of $7,200 per year and 12.2 years of education. This typical low income earner has a checking and savings account, is not employed in a job with a union contract and has .016 additional jobs.

To calculate marginal effects for the typical high income earner, I set all continuous variables equal to their average in the highest income quartile. Again, I set dummy variables equal to the value that is predominant in the fourth income quartile. The typical high income earner is a 45 year old white married male with an earned income of $83,800 and 14.7 years of education. This individual has a checking or savings account, is not employed in a job that is under union contract, and does not have any additional jobs.

When all variables are held at the values noted above, a one year increase in age yields an approximate 0.011 increase in the probability that a low income earner will participate in a pension. A one year increase in age for the typical high income earner is associated with a 0.002 increase in the probability of pension participation. These results suggest that age may be more important in determining pension participation at lower income levels. This makes sense since those in the highest income quartile already participate in pensions at higher rates, and may begin participating at earlier ages because they are in occupations that offer pensions, and/or are more knowledgeable about the financial system.

The same discrepancy is seen in the marginal effects of income. For the typical low earner, a one thousand dollar increase in income yields an approximate 0.006 increase in the probability of pension participation. For an average high income earner, this increase is only 0.001. Again this makes sense, since a one thousand dollar increase in income is a large percentage increase in income for an individual making only $7,200 per year. This increase could have greater effects on behavior, including pension participation, than the same increase for an individual making over $83,000. A one thousand dollar increase in income for individuals in the highest quartile likely will not substantially change behavior, especially since these

individuals have higher levels of education and are slightly older on average than those in the lowest income quartile.

Completed education, like age and income, has a different marginal effect on pension participation for low and high earners. For the typical low income individual, a one year increase in education is associated with a .052 increase in the probability of pension participation. For the typical high income individual, one more year of education yields only a 0.01 increase in the probability of pension participation. This again makes sense given that the higher educated an individual is to begin with, the more likely she may be to have a job that offers a pension and be financially literate. Increasing education from 12 to 13 years may have a large impact on pension participation since one year of college or an associate's degree, when compared with a high school diploma, may open the door to jobs that offer pensions, and increase financial literacy, either through classroom education or by exposure to more financially literate peers. An increase in education from 14 to 15 years may not have this effect since the jump from 2 years to 3 years of college may not be associated with a substantial change in labor market prospects or financial literacy.

The union contract, checking account and married dummy variables present perhaps the most astounding marginal effect differences between low and high income earners. Employment in a job under union contract is associated with a 0.317 increase in the probability that a low income individual will participate in a pension compared to those that are not employed in this type of job. Predicted pension participation probability increases by only 0.034 for high income earners with these types of jobs. These results suggest that union contract employment has a much more substantial effect on pension participation for low income earners. This could be because union negotiated contracts are more likely to include pension benefits, and low income

persons employed in these jobs may not otherwise participate in a pension in the absence of the union contract. Higher income people on the other hand are probably more likely to participate in a pension, either through their employer, or on their own, regardless of employment contract conditions because of other characteristics conducive to participation.

The probability that a typical low income earner participates in a pension increases by 0.14 for those that have a checking or savings account, holding all other variables at their averages. The marginal effect for the typical high earner is only 0.048. Again, this is not surprising since having a checking or savings account as a high income individual is likely not indicative of higher financial literacy or willingness to navigate the financial system. There are likely very few people in the highest income quartile that do not have a checking or savings account. Any individual in this position as a high income earner is likely much different than a low income individual that does not have a checking or savings account.

Finally, when I changed the typical low income earner to the reference group category single male, I found that married males have a predicted pension probability that is 0.179 higher than the single male reference group. For the typical high earner, this predicted probability increase is only .052. Again, this is not surprising, since the constant values of other variables for those who are not married are more conducive to pension participation in the high income group. Since a single man in the high income group already has on average, higher income, education, and age than a single man in the lowest income quartile, the higher income man is already more likely to participate in pensions. Changing from a single to a married male therefore has a smaller effect in this group.

2. *Estimating the Effects of Pension Participation on Wealth Accumulation*

To discover the effects of pension participation on wealth accumulation, I use the amount in checking and savings accounts as a substitute for wealth. To use this as a valid substitute for wealth accumulation, I assume that checking and savings account values have a positive relationship with net wealth. Regression results confirm this relationship for my sample, as the coefficient on checking and savings is positive and significant at the one percent level (Appendix Table 8). Since transaction account amounts are positively correlated with non-pension wealth, we may also expect these values to be positively correlated with total wealth including pensions. Again, since employer pension wealth is not included in PSID wealth measurements, we cannot test this relationship.

It should be noted that checking and savings account amounts vary greatly for many people, especially those in with lower incomes, in any given month or even week depending on pay schedule. Since respondents were asked about the current, and not average, amount in their checking and savings accounts, the dependent variable could suffer from statistical noise and may contribute to the low R-squared observed in this regression. The sample used in this regression excludes those without a checking and savings account since these individuals are given a value of 0 for checking and savings account amounts. Having a transaction account with a 0 balance may be different than not having an account at all.

I used the following OLS regression model:

Checking/Saving =

$$\beta_0 + \beta_1 EmployerPensionOnly + \beta_2 IRAOnly + \beta_3 PensionandIRA + \beta_4 incomeXage + \beta_5 Income + \beta_6 age$$

The income and completed education variables in this model are defined in the same manner as in the first model; however age in this model is defined as age – education – 6. I redefined age in this way to account for the fact that individuals usually do not begin to accumulate assets until they have completed their education. New variables in this model include three pension dummies for which the reference group is those with no pension or IRA. The employer pension only dummy is equal to one for those who have an employer pension only and no IRA and zero for those who do not fit into this category. I expect that having an employer pension will have a positive effect on wealth accumulation. Those with pensions will likely have more money saved than those who do not, therefore increasing their total net wealth. Also, the matching incentives involved with many pension plans allow employees to accumulate funds faster than they would through most other investments. Also, these individuals are likely more financially literate and may have greater wealth from participating in more investments that those without pensions.

The IRA only dummy variable is set to one for those who have an IRA and no pension and zero for those who do not meet these qualifications. I expect that the IRA dummy will be positive for many of the same reasons listed above. Those with IRAs are likely more financially literate and may have more investments than those who do not, and the tax deferment associated with IRAs may increase wealth accumulation relative to other investments. Finally, the pension and IRA dummy is equal to one for those who have both an IRA and an employer pension and zero for those who do not. Based on my hypotheses for employer pensions and IRAs individually, I expect this combination variable to have a positive relationship with wealth accumulation.

The income and age interaction variable is the product of income and age where age is defined as (age-education-6). I included this interaction variable in order to account for the strong relationship between age, income and wealth accumulation. Individuals with higher income can accumulate wealth faster, but older persons have been accumulating wealth at the faster rate for longer. The significance of this variable will indicate a difference in the effect of income on checking and savings account values as age (minus education) increases. I expect that income and age will individually have positive effects on bank account values.

I expect that years of completed education will have a positive effect on wealth accumulation, and therefore a positive effect on checking and savings account values. As education increases, individuals may become more aware of the financial system, and be employed in occupations that provide retirement savings vehicles.

It should be noted here that in order to explore non-linearity, I included squared terms for income, age and education in preliminary regressions. All of these squared terms were insignificant, even after removing the least significant terms one by one. To be sure that these variables were jointly insignificant, I performed a Wald Test. The results of the test verified the joint insignificance of the squared terms and caused me to remove these terms from my final model.[8]

Results

The OLS regression results are displayed in Table 7 in the Appendix. The results show that employer pension participation alone does not have a significant relationship with the amount in checking and savings. However, IRA participation alone, and pension and IRA

[8] The F-Statistic for this Wald Test is .705, with a p-value of .549. Thus we conclude that the quadratic terms (income squared, education squared and age squared) are jointly insignificant.

participation together both appear to have a significant positive relationship with the amount in checking and savings. The results suggest that on average, those who participate in IRAs but not employer pensions have approximately $21,937 more in their checking and savings accounts than do individuals with no retirement account. Furthermore, those with both an employer pension and an IRA have, on average, $8,659 in checking and savings than do individuals with no retirement account.

The insignificance of the employer pension dummy is unexpected. One possible explanation for the difference in significance between employer pension and IRA participation is that individuals who participate in IRAs may be more financially sophisticated than those with employer pensions only. Even though employer pensions may require employees to opt-in to a plan, these plans are offered through employers and, unlike IRAs, do not demand that participants seek out a financial product and institution independently. For this reason, those who participate in an IRA may be more financially aware and motivated to save than individuals with employer pensions only. These differences could result in higher wealth accumulation for IRA participants when compared to individuals who only participate in an employer pension.

Also, the variation in the reporting of checking and savings account amounts could make a significant relationship hard to detect for employer only pensions. Table 5 in the text shows that individuals with IRAs in my sample have much higher wealth and checking and savings account amounts than any other group in each quartile. Significance could be more easily determined for the IRA group given these substantial differences in wealth. If the differences are more subtle between those with employer pensions only and those with no retirement account, the statistical noise in the dependent variable could be contributing to employer pension's insignificance. If the results are reliable though, they suggest that employer pension alone may

not significantly impact wealth accumulation. If this is true, improving employer pension participation rates may not improve retirement security as I hypothesized. Because of the statistical noise in my dependent variable, and the lack of good wealth measurements in this study, the effects of pension participation on wealth accumulation should be further researched.

Income is positive and significant as expected and suggests that a one thousand dollar increase in income yields a $355 increase in the amount in checking and savings. Age also has the expected positive effect on bank account values. The results suggest that a one year increase in age yields an $703 increase in the amount in checking and savings. The income and age significant and surprisingly negative, suggesting that the slope of income is flatter as age (minus education) increases. This seems counterintuitive if we think that throughout their lives, individuals keep a similar percentage of their total wealth in checking and savings accounts. Since older individuals have been accumulating wealth longer, and high income individuals can accumulate wealth faster, I would expect that as age increases, the slope of income would increase.

Finally, as expected, the results suggest that increasing education increases the amount in checking and savings. Specifically, a one year increase in completed education yields a $1,543 increase in checking and savings account funds. We can infer that education therefore likely also has a positive effect on total wealth accumulation.

Discussion

Implications

The results of this analysis suggest that income and education are positively correlated with pension participation. Though we cannot infer from the results of this study that employer

pensions alone are positively correlated with wealth accumulation, the findings suggest that pension and IRA participation together appear have this effect. For this reason, several it is important to discuss possible implications associated with the lack of pension participation among the lowest income and least educated individuals. First, those who do not participate in pensions have less of a safety net in times of unexpected income loss. Using the 1995 Survey of Consumer Finances, Wolff (1998) finds that the middle, second and bottom quintiles of the wealth distribution could sustain current consumption for only 1.2, 1.1 and 0 months respectively with their non-housing financial wealth (Wolff 1998 144). Ideally, individuals would not withdraw pension funds to cover current consumption, as these funds are meant for retirement. Nonetheless, the absence of these funds and other assets increases insecurity in times of financial uncertainty.

Since withdrawing from pensions to sustain current consumption is not ideal and should only be used as a last resort, the greatest concern about low participation among the poor relates to retirement. If not participating in a pension reduces wealth accumulation, the retirement security for the low income population could be at stake. Less retirement security could lead low income workers to rely heavily on Social Security payments and welfare programs in retirement, or continue to work in old age (Dushi and Iams 2008 51). Social Security benefits are not designed to replace pre-retirement income, and in the midst of the current Social Security funding crisis, heavily relying on these payments for retirement income may be risky. Limited financial wealth in retirement and reliance on Social Security benefits will likely lead to increased consumption of welfare services, placing a greater burden on federal and state governments.

Policy Proposals

Several policies and reforms have been proposed to address the low pension participation rates among all workers in the United States, but especially the low income population. Choi et al. (2001) and researchers at the Retirement Security Project discuss proposals that focus specifically on replacing current 401(k) plan structures with automatic features to increase pension participation. Since defined contribution plans are becoming the norm for employer pensions, these policy reforms have become increasingly relevant. It should be noted though, that these reforms will only benefit workers who are offered a 401(k) plan through their employer.

The first of these reform proposals is automatic 401(k) enrollment. As noted previously, typical 401(k) plans require employees to "opt-in" to the plan to initiate participation. Since much research has shown that humans tend toward the status quo, it is not surprise that this component of 401(k) plans creates a barrier to entry. According to Choi et al, several companies have instead elected to automatically enroll their employees into 401(k) plans unless the employee opts out of participation. The authors analyze the effects of automatic 401(k) enrollment on 401(k) participation at three large companies. They find that for all three companies, participation rates increased dramatically at all examined tenure statuses. Among employees with six months of tenure, participation rates rose by over 50 percentage points at all three companies. For employees with two years of tenure, participation rates rose by over 35 percentage points at all three companies. The participation rates for all tenure categories rose to over 90 percent at two of the companies and over 80 percent at the other (Choi et al. 2001 46). This evidence suggests that simply changing a default opt-in to a default opt-out structure would substantially increase 401(k) participation.

The same "default bias" that prevents employees from enrolling in 401(k) plans also seems to stifle changes in plan structure. Many plans have a low default contribution rate and a conservative default investment allocation. Evidence suggests that account holders tend to stick with these defaults for the majority of the account life (Choi et. al. 2001 13). Maintaining these default levels and allocations can result in lower accumulation at retirement. Choi et. al. therefore suggest that employers change these defaults to be more advantageous to their employees. One such change could involve automatic contribution rate escalation. According to the Retirement Security Project, automatic escalation can increase overall contributions to 401(k) accounts and allows employees to gradually become accustomed to delaying receipt of a certain portion of their pay (The Retirement Security Project 2009). Similarly, employers can create an automatic investment structure that "can direct assets into balanced, prudently diversified, low-cost vehicles and can help discourage over-concentration in employer stock or in money-market or stable value assets (The Retirement Security Project 2009)." Instead of remaining in a fixed conservative allocation into retirement, employees could lock into an investment schedule that would not require employee action.

Another 401(k) feature promoted by Choi et. al and the Retirement Security Project is automatic rollover. When an employee leaves a job with a 401(k), he must explicitly request that the account be rolled over into an IRA or a new employer's 401(k) plan, or request a cash disbursement. Prior to 2001, employers could require that accounts under $5,000 be distributed to the employee if he did not elect to roll the account over (Choi et. al 14). Since low income workers tend to have lower account balances, it is likely that the cash distribution policy unevenly targeted this group and deterred several low income persons from continuing to save and earn interest on accumulated account balances. The Economic Growth and Tax Relief

Reconciliation Act of 2001 prohibits employers from requiring cash disbursements for accounts over $1000. Instead, employers are required to set up an IRA for the employee if they do not want to maintain these accounts (Choi et. al.16). Automatic rollover into either an IRA or new employer's 401(k) plan would help workers to retain previous retirement funds when they change employers.

In 2006, the federal government passed legislation to encourage the adoption of automatic 401(k) features. The Pension Protection Act of 2006 (PPA) made it clear that it is legal for employers to automatically enroll their employees in a 401(k) plan (H.R. 4 Sec. 902). The PPA also directed the Department of Labor to issue regulations for default investment to assure employers that they would not be held responsible for fluctuations in the market or ill performing investments (U.S. Department of Labor 2009a). Automatic enrollment appears to be steadily increasing. The Retirement Security Project reports that in 2006, 23 percent of plan sponsors were automatically enrolling new employees compared to 14 percent in 2005. Automatic contribution rate escalation also rose from 7 percent in 2004 to 14 percent in 2005 (The Retirement Security Project 2009).

As mentioned previously, the 401(k) reforms would only benefit workers who are offered a 401(k) plan through their employer. To increase retirement savings among workers who do not have access to a pension through their employer, two Washington D.C. think tanks, the Brookings Institution and the Heritage Foundation, proposed that employers should automatically enroll their employees who are not offered 401(k) plans in direct payroll deposit Individual Retirement Accounts (IRAs). Under this proposal, firms would receive a tax credit to offset administrative costs of providing IRA accounts to their employees. The financial institution could be chosen by the employer, or directly by the employee. For workers and

employers who prefer not to choose the IRA, a default low cost account would be made available (The Retirement Security Project 2007). This proposal was introduced in the 110th Congress as the Automatic IRA Act of 2007, but failed to make it out of committee (govtrack.us H.R. 2167).

In 2001, the Bush Administration introduced the low income savers credit. This program aims to provide tax incentives to low and moderate income individuals for contributing to 401(k) plans, Individual Retirement Accounts and other retirement savings. Through the saver's credit, the government matches contributions for retirement accounts with a tax credit equal to a certain percentage of qualifying contributions (Gale, Iwry and Orzag 2004). This rate is highest for those with the lowest incomes to encourage savings among the lowest income earners. Recipients can earn a tax credit up to $1,000 for single filers and $2,000 for married couples filing jointly in 2008 (Internal Revenue Service 2008). The saver's credit is an important addition to the tax incentive system, since the tax incentives traditionally associated with retirement accounts are much more attractive and beneficial to higher income earners. This is because the value of these tax incentives to recipients usually come in the form of deductions, the value of which is the deduction amount multiplied by the marginal tax rate. Since low income people have very low marginal tax rates, the value of these traditional tax incentives is low. The saver's credit attempts to encourage saving by extending these retirement savings incentives to the low income population.

Conclusion

This paper finds that the key determinants of pension participation are income, age, education, having a checking and savings account, and being a married male. These results are consistent with the findings of other studies done in this area and illustrate the gap in

participation between the lowest and highest portions of the income distribution. The results of the analyses in this paper also suggest that controlling for income, age and education, participation in both an IRA and an employer pension has a significant positive relationship with wealth accumulation. Again, these findings are consistent with other studies and suggest the importance of retirement savings accounts as vehicles for financial security later in life.

Several implications arise from the lack of pension participation among the poorest members of the work force, the most important being retirement insecurity. To address this problem, automatic 401(k) and IRA features are becoming more popular among employers. Furthermore, the federal government extends savings incentives to low income earners so that tax advantaged accounts are beneficial for individuals at all levels of the income distribution. In order to help low income individuals secure their own retirement security, and reduce the burden on government, policy makers will need to continue to develop policies that encourage saving among the low income population and the population as a whole.

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Appendix

Table 6. Binary Logistic Regression- Determinants of Pension Participation

	B	S.E.	Odds Ratio	Marginal Effects Low Income	Marginal Effects High Income
Income* **	0.027	0.002	1.028	0.011	0.0023
Age* **	0.046	0.004	1.047	0.006	0.00135
Completed Education* **	0.22	0.019	1.246	0.052	0.011
Additional Jobs	-0.294	0.245	0.745	-	-
Checking/Savings* **	0.695	0.109	2.004	0.14	0.048
White	0.039	0.105	1.039	-	-
Married* **	0.736	0.113	2.087	0.179	0.052
Divorced Female	0.119	0.153	1.126	-	-
Single Female	0.037	0.137	1.037	-	-
Divorced Male	-0.215	0.173	0.806	-	-
Union contract* **	1.316	0.134	3.729	0.317	0.034
Constant* **	-6.17	0.321	0.002		

Source: Panel Study of Income Dynamics 2005

n = 4377

*** = P< .01

(Marginal Effects presented only for significant variables)

Table 7. OLS Regression
Effects of Pension Participation on Wealth Accumulation

	B	S.E.
Employer Pension Only	-1216.24	2614.63
IRA Only* **	21937.24	4057.5
Both Pension and IRA* **	8659.64	3023.65
IncomeXAge **	-5.217	2.209
Income* **	354.89	62.437
Age* **	702.97	113.6
Completed Education* **	1543.2	484.48
Constant* **	-34155.14	5786.69

Dependent: Amount in Checking and Savings

Source: Panel Study of Income Dynamics 2005

R^2= .09

n= 4050

***= p<.01 **= p<.05

Table 8. OLS Regression
Wealth Regressed on Checking and Savings Account Values

	B	S.E.
Amount in Checking/Savings***	4.21	0.179
Constant***	162331.83	10760.69

R^2= .09

n= 5544

Source: Panel Study of Income Dynamics 2005