THE ROLE OF FINANCIAL LITERACY AND KNOWLEDGE IN DETERMINING RETIREMENT PLANS*

Robert L. Clark
Professor, Department of Economics
Professor, Department of Management, Innovation, and Entrepreneurship

Melinda Sandler Morrill
Assistant Professor
Department of Economics

Steven G. Allen
Associate Dean for Graduate Programs and Research
Professor, Department of Economics
Professor, Department of Management, Innovation, and Entrepreneurship

College of Management
North Carolina State University

Paper to be Presented at CeRP 10th Anniversary Conference
Saving for Old Age in a Financial Turmoil: New Challenges for Households, Providers, and Policy-makers

Turin, Italy

September 2009

***This research is funded, in part, by a grant from FINRA Investor Education Foundation. The research could not have been accomplished without the cooperation of the companies that partnered with us on this research.**

Older workers develop retirement plans using their basic understanding of financial markets and financial mathematics along with their knowledge of their employer retirement plans, Social Security, and Medicare. To the extent that their knowledge base is correct, employees can develop optimal plans for the transition from full-time work to full-time retirement. Important decisions that will determine each individual's economic well-being in retirement include: the age of retirement from one's career job, the age of beginning to collect company retirement benefits and Social Security, whether to annuitize balances in 401(k) and other account balances in defined contribution plans, and whether to take lump sum distributions from defined benefit plans.

Older workers who have limited or incorrect knowledge will make suboptimal retirement choices. As a result, they will not be able to achieve the highest possible lifetime utility given their available assets. A lack of financial literacy and incorrect assumptions about the generosity and eligibility conditions of retirement programs can lead to workers to plan to retire at ages that are either too young or too old, depending on the type of knowledge error. Thus, it is important to examine the relationship between the lack of specific types of information regarding public and company-provided retirement benefits and an individual's stated retirement plans and goals. More specifically, the impact of being wrong in one's assessment of financial issues and retirement plans depends on the type of errors. In other words, under- versus over-estimates of true values, such as ages of eligibility for retirement programs, will impact retirement decisions differently. Our analysis shows that both the level of knowledge and the types of informational errors influence retirement decisions.

To examine the relationship between knowledge and lifetime planning, we partnered with three large employers who allowed us to survey all of their employees nearing retirement, ages

49 to 65, in 2008 and 2009. Employers in our study are Branch Banking and Trust (BB&T), WakeMed, and the Williams Companies. These employers come from different industries and employ a diverse range of workers. BB&T Corporation is a large financial holding company with $137 billion in assets. Its bank subsidiaries operate approximately 1,500 financial centers in the North Carolina, South Carolina, Virginia, West Virginia, Kentucky, Georgia, Maryland, Tennessee, Florida, Alabama, Indiana and Washington, D.C., employing over 30,000 workers. WakeMed is an 804-bed private, not-for-profit health care system based in Raleigh, NC. WakeMed employs over 7,000 workers including medical professionals, registered nurses, medical staff, and support staff. Williams is an integrated natural gas company that produces, gathers, processes and transports natural gas to heat homes and power electric generation. It is a large company, operating approximately 14,600 miles of interstate natural gas pipeline with a capacity of more than 11 billion cubic feet per day. While not a nationally representative sample of older workers, combining the data gathered from the retirement eligible population at these three employers provides an interesting snapshot of workers approaching retirement while employed at large employers.[1]

The surveys obtained detailed socio-economic information on the respondents and their households, their retirement plans, their knowledge about retirement programs, and their confidence in their knowledge. The survey data were supplemented by specific details of the employer pension plans, Social Security, and Medicare. Thus, we are able to assess the level of worker knowledge regarding their retirement programs, as well as their overall financial literacy. Using this information, we estimate how the retirement plans of the respondents are related to their understanding of retirement plans and their basic financial literacy. Survey responses indicate that the retirement-eligible employees in these companies had a rather low level of knowledge, a lack of confidence in their ability to make optimal retirement choices, and a strong desire for their employers to provide more formal pre-retirement planning programs.

Since older workers must make retirement decisions using their (sometimes limited) knowledge, these findings suggest that many older employees do not possess the information necessary to make optimal retirement decisions. The lack of financial literacy implies that these older workers are unlikely to achieve their maximum potential lifetime utility. The survey data also indicate a willingness of employees to devote the time to gain a greater understanding of their retirement options. To examine the retirement planning process, we first determine the older employees' level of knowledge and then estimate the impact of knowledge on retirement plans. The results provide strong evidence that knowledge matters in retirement plans. Workers who believe benefits are more (less) generous report planning to retire at earlier (later) ages. This demonstrates that there are real implications to the lack of knowledge and financial literacy.

These results suggest that educational programs that enhance the financial literacy of older workers will improve their retirement decisions. In related research, we are examining the pre-retirement planning programs presented by eight large employers to determine whether these seminars are successful in improving knowledge of retirement programs and financial literacy and whether based on this learning, older workers alter their retirement plans. Thus, in contrast to most previous economic studies of retirement that assume individuals have appropriate information and act accordingly, this analysis shows the importance of the financial knowledge and how it affects retirement plans.

I. EMPLOYERS, THEIR BENEFIT PLANS, AND THEIR PRE-RETIREMENT PLANNING PROGRAMS

Some employers offer their employees formal retirement planning programs that provide detailed information on company retirement plans, national retirement programs, health care costs in retirement, life expectancy, and many other issues that one must understand to make optimal retirement decisions. These programs range in duration from several hours to all day to two days. Clark, Morrill, and Allen (2009) examined the impact of these programs on worker knowledge and show that attendance in these programs enhance knowledge and alter retirement plans. Other employers do not have such programs but rely on information provided by their HR personnel and their 401(k) providers. To explore the decision making of employees who do not have access to formal employer-provided retirement programs, we worked with three large employers to assess the knowledge of their employees and their retirement expectations. An important component of the survey was to determine the preferences of employees for employer-provided retirement planning programs and whether they would attend such programs.

At the time of the survey, BB&T did not have a formal pre-retirement planning program. Instead, the company offered individual counseling with its HR department and on-line access to the 401(k) provider. The survey was sent to 2,475 retirement eligible employees with 605 completing the survey for a response rate of 24 percent. BB&T provides its employees with both a defined benefit pension plan and a 401(k) plan and also provides health care coverage which is effective on the date an employee begins work. Retiree medical insurance is available to individuals who participated in the health plan while an active worker.

WakeMed has contracted with AIG to provide seminars lasting an hour and half for their employees nearing retirement. These programs focus primarily on the pension and 403 (b) plans offered by WakeMed. Because of the limited nature of these programs, WakeMed was interested in learning more about the preferences of their employees for more extensive programs. Our survey was sent to approximately 7,700 workers, of which 2,088 were born between 1943 and 1959 (ages 49-65). We received a total of 237 surveys from our target age group, yielding a response rate of 11 percent. WakeMed's provides a pension to all workers age 55 and older with at least three years of service, as long as the worker has worked the equivalent of full-time during those three years. The pension plan allows for either a full lump sum or an annuity, with no partial lump sum option. Retiree medical insurance is only available through COBRA for 18 months following retirement. WakeMed does allow employees to work after retirement, but only with a break in service.

Prior to the survey, Williams also did not offer a formal pre-retirement planning program. The survey was sent to 1,592 retirement eligible employees at Williams and 952 completed the survey for a response rate of 60 percent. Williams provides a cash balance pension plan to employees with one year of service. This plan is integrated with Social Security and provides annual credits to individual accounts that are a function of age and earnings above the Social Security tax base. Workers age 28 or younger receive a credit of 4.5 percent of eligible pay plus 1.0 percent for earnings in excess of the Social Security wage base. Credits increase with age to 10 percent for workers age 50 and older plus 5 percent for earnings above the Social Security wage base. The account balance is credited with a quarterly interest payment based on the 30 year weighted average U.S. treasury Securities Rate. Workers as young as 55 can receive a benefit from the cash balance plan. The employer also offers a 401(k) plan that includes a dollar for dollar match up to 6 percent of eligible pay.

Williams has a subsidized retiree medical plan for employees hired before 1992 that did not have more than a one year break in service. This is the same coverage that is available to active employees. The company typically pays 80 percent of the cost of participating in this health plan for these retirees. Persons hired after 1992 are eligible to participate in the company health plan provided that they pay the entire premium for the coverage. Retirees reaching the age of 65 are no longer allowed to participate in this plan.

II. FINANCIAL LITERACY AND ITS EFFECT ON ECONOMIC DECISONS

The rather thin economics literature on the role of knowledge on retirement decision making can be grouped into two areas. First, what do people know about their retirement plans and what is their general level of financial literacy? Second, how do the lack of accurate information and a low level of finaancial literacy affect retirement decisions? A review of this literature clearly indicates a rather low level of knowledge of retirement plans and general financial literacy among those approaching retirement.

What do people know? Mitchell (1988) provides the first detailed assessment of worker knowledge of the basic characteristics of their pension plans using the 1983 Survey of Consumer Finances. She finds that many workers simply do not know the type of pension that they have, contribution provisions, and the labor supply incentives imbedded in the plan (also see, Luchak, and Gunderson, 2000). More recently, Gustman and Steinmeier (2004) compared the self-reported pension data to information provided by employers for respondents in the Health and Retirement Study (HRS). They found that respondent reports of values and characteristics differed substantially from the information contained in the employer linked data. Clark, Morrill, and Allen (2009) find that retirement eligible workers at 5 large employers have only a limited understanding of their pension plan and of Social Security. Limited evidence also suggests that older workers do not have sufficient understanding of basic financial and investment issues needed to address the important decisions as individuals make the transition from work to retirement (Lusardi and Mitchell 2006, 2008). Related studies have shown that individuals can improve their knowledge of these important programs through participation in educational events such as employer-provided seminars (Bernheim and Garrett, 2003; Clark and d'Ambrosio 2003; Clark et al 2006; Lusardi 2008).

How does inaccurate knowledge affect retirement decisions? Economic theory of retirement decisions assume that older workers respond to the incentives impeded in Social Security and employer-provided retirement plans. But if individuals have inaccurate knowledge of the early and normal retirement ages in these plans or the value of their benefits, they will tend to respond to the perceived incentives and not the actual incentives in the plans. Gustman and Steinmeier (2004, p. 102) concluded that "models of retirement and saving that assume perfect foresight and planning are likely to misestimate the key parameters that supposedly drive retirement and saving behavior." Chan and Stevens (2008, p. 265) also find that knowledge errors are important and may lead to mistakes in retirement decision-making and that individuals do act on their "perceived, but incorrect, pension information."

Building on these studies, we examine the effect of knowledge on planned retirement age and the age of starting Social Security benefits as a function of the level of knowledge of financial markets and retirement programs. Our findings are consistent with these earlier papers and show a rather low level of understanding of these important plans. A unique aspect of our study is that we also examine the asymmetric effect of under and over estimating ages of eligibility for retirement benefits on planned retirement. Our results show the importance of knowledge errors on these key characteristics of retirement plans.

III. SURVEYING RETIREMENT-ELIGIBLE EMPLOYEES

The survey consisted of over 75 questions and differed only slightly between the three employers. The survey was divided into five parts: demographic and economic characteristics of the employee, demographic and economic characteristics of the employee's spouse or partner, retirement plans of the worker and his/her spouse or partner, knowledge questions, and the desire for financial education programs. The income and wealth questions allowed the respondent to select dollar ranges rather than force them to give a specific dollar amount. The survey contains a series of questions that test the knowledge of the respondent concerning the characteristics and generosity of their employer retirement programs, Social Security, Medicare, and financial markets. The surveys were sent to all retirement eligible employees via e-mail and they responded using an electronic survey. The responses were completely confidential with neither the company nor the researchers being able to identify the respondents.

From the three employers, we had a total of 1,724 individuals complete some or all of both surveys. Using our baseline regression equation, 1,701 individuals provided responses to all of the demographic questions included as explanatory variables in our analysis. Where appropriate, we classified non-response as either an incorrect answer or as the omitted category. Appendix 1 provides more detailed information on the samples from each employer an dhow we handled various data questions.

Table 1 reports the mean values of responses to some of the important socio-economic questions from the pooled sample. Almost all of the employees of these three companies were covered by the firm's defined benefit pension plan and virtually all participated in the 401(k) plans, so those statistics are not reported. They tended to own their own homes with over 75 percent reporting the equity in their house to be over $50,000. About 66 percent had over $25,000 in other assets including stocks, bonds, and savings account, while 74 percent had a balance in their 401(k) or 403(b) account of at least one year's salary. Over 70 percent of the employees in all three companies were married. As they approach retirement, over 40 percent of these older workers report being in very good or excellent health. The bottom rows of Table 1 report the mean planned retirement age of the total sample along with the mean expected age for beginning Social Security benefits. The average expected retirement age is 63.3 and the mean expected date for starting Social Security benefits is 64.7.

[Table 1]

These older workers report a substantial degree of uncertainty concerning their retirement plans and level of retirement income (see Table 2). There is considerable uncertainty among the employees at each of the three firms over whether to annuitize 401(k) plan balances and/or whether to take a lump sum distribution from the defined benefit plan. For the entire sample, 75 percent do not know whether they wanted to accept a lump sum distribution from their pension plan or accept the life annuity; however, 16 percent of the total sample planned to take a lump sum and only 10 percent reported that they expected to accept the annuity benefit. Almost two thirds of the respondents indicated that they had not decided on whether to annuitize any of their 401(k) account balances. These data indicate considerable uncertainty among these retirement eligible workers over how best to use their retirement benefits.

[Table 2]

Retirement income expectations for these older workers are also shown in Table 2. For these employees, 60 percent did not know how much income to expect from their company pension in relationship to their final salary. When asked to indicate their total income replacement rate in retirement, 44 percent thought they would have 60 percent or less income in retirement compared to their final salary compared to 13 that thought they would have over 80 percent of their final salary. Thirty percent of the respondents thought that they could maintain their living standard in retirement and 28 percent thought they could not while a surprisingly large 41 percent did indicated that they did not know whether they could continue their same lifestyle into retirement.

Another interesting finding is the substantial uncertainty over post-retirement work plans reported by the participants. For example, 35 percent of the respondents indicated that they wanted to work full or part-time after retiring from their career employer and only 23 percent stated that they did not plan to work after retirement. However, 42 percent of these workers on the verge of retirement indicated that they were uncertain whether they would seek employment after leaving their current employer. Thus, these workers on the verge of retirement indicate a lack of understanding on the level of income they can expect in retirement. This uncertainty must be due, in part, to a general lack of financial knowledge and retirement planning. We now turn to a more direct assessment of the level of financial knowledge exhibited by these retirement eligible employees.

IV. WHAT DO OLDER WORKERS KNOW ABOUT RETIREMENT PLANS?

Older employees formulate their retirement plans based on their earnings, wealth, health, and their expectations concerning benefits from their pensions, Social Security, and 401(k) plans. If their beliefs or knowledge about these programs are incorrect, they may make choices that are suboptimal given their actual situations. To explore the relationship of worker knowledge and retirement plans, we included a series of questions in the survey about employer and national retirement plans. Each question has a correct answer. Appendix 2 provides a list of the 14 questions, possible answers in the survey (correct answers shown in bold), and the proportion of these retirement eligible employees who answered each question correctly. Data are provided for each company since the correct answer to the employer-provided benefit questions vary across the three firms. The mean number of correct answers for the entire sample is 6.6, or approximately 50 percent correct answers on average.

Earlier, we noted the expectation that the overall level of knowledge is important to the retirement decision making process; however, the direction of errors also could yield an asymmetric influence on retirement choices. Some of the survey questions are particularly well suited for examining this latter issue. Table 3 reports some of the answers to the knowledge questions. There are three questions asking about the ages of eligibility for Social Security and Medicare benefits. The responses to these questions provide interesting insights into potential informational errors. For example, workers are asked to report the normal retirement age for Social Security (NRA); the correct answer for workers of this age is 66. Among these respondents 30 percent reported a younger age, 23 percent reported an age above 66, and 15 percent failed to answer this question. Thus, only 32 percent of the sample answered this question correctly. Our hypothesis, which we test below, is that, all else equal, workers who think that the NRA for Social Security is younger than 66 will plan to retire at an earlier age than those that think the NRA is greater than 66. The survey indicates similar confusion concerning the age of early retirement benefits for Social Security (age 62) and age of eligibility for Medicare benefits (age 65).

[Table 3]

The survey we sent to these retirement eligible workers contained two basic finance questions about risk and inflation. Over three-quarters of the surveyed employees at these companies correctly answered these two questions. The sample of employees examined in this paper is drawn from three large employers. All respondents are currently employed, covered by a pension, and aged 49 to 65. We assess how our sample compares with the more nationally representative HRS sample in their financial knowledge by comparing the characteristics of the two data files and the levels of financial literacy exhibited by the respondents in each.

The HRS sample used by Lusardi and Mitchell (2006) is composed of individuals that participated in the 2004 Planning Module. This module included a set of questions that were the same (or similar) to the financial knowledge questions that we included in our survey. In this comparison of knowledge between the employees in our three firms to the participants in the HRS, we do not apply sample weights to the HRS data. We directly compare our results to the data reported by Lusardi and Mitchell (2006); then we adjust the HRS sample to be comparable to our sample in terms of age, job status, and participation in a pension plan.

Table 4 shows the results of this comparison. The top panel of the table shows the basic characteristics of our sample and that of the HRS and the bottom panel shows the proportion of the sample providing correct answers to the questions on stock market risk and inflation. The first column shows data from our sample and the second column reports data from the full HRS sample. The HRS sample has a much larger age range (31 to 96) and includes many young spouses and retirees over age 65. The lack of comparability in the demographic characteristics is a key difference. The second column of HRS results reduces the HRS sample so that it includes only persons of the same age as our sample. The third column further limits the HRS sample to include only persons age 49 to 65 who are currently employed and are covered by a pension plan. This last HRS sample includes only respondents who have the same basic characteristics as our sample. Comparing the data in columns one and four, our sample (column one) is more highly educated and has more years of service at their current employer than the HRS sample shown in column four.

[Table 4]

The bottom panel of Table 4 shows the responses to the two financial literacy questions included in our data. The first question has identical wording between the two surveys:

Stock Risk (Identical Question):

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."

The second question has slightly different wording, but a similar theme:

Inflation (Similar Question)

(HRS) 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, exactly the same as, or ***less than*** today with the money in this account?

(Our survey) Assume that your retirement income increases by 2 percent per year and that the annual rate of inflation is 4 percent per year. After one year, will you be able to:

a) buy more goods and services?
b) buy fewer goods and services?
c) buy exactly the same amount of goods and services?
d) don't know

Compared to the full HRS sample, we find much higher scores on the stock risk question. A full eighty percent of our sample answered correctly, which is statistically significantly higher than the percent correct in the HRS samples. The difference in the proportion with correct answers between the two surveys is substantially reduced by restricting the HRS sample to those respondents who are similar to the employees in our sample. However, even after restricting the HRS to individuals with pension plans, our sample still has a statistically significant higher level of financial knowledge as measured by these questions.

The ability to answer this question correctly appears to be correlated with the sample restrictions in the HRS, so that the higher educated and younger sample is scoring higher than the full sample. It may be the case that the employees in our survey have more experience with stocks, since they are, on average, wealthier and more highly educated. In contrast to higher scores on stock risk, our sample scored very similarly to the HRS sample on the inflation question. Thus, the evidence indicates that the survey data used in this analysis indicate a level of financial knowledge that is reasonably close to the level of knowledge exhibited by the nationally representative data used in Lusardi and Mitchell (2006).

It is interesting to note that workers in our sample exhibited a much higher degree of accuracy on the financial questions than they showed on questions concerning their own retirement benefits and national retirement programs. Workers who had a rather high understanding of the stock market risk and inflation questions were much less knowledgeable about their own employer provided retirement plans, Social Security, and Medicare. Future work will compare the levels of knowledge of pension plan characteristics and other aspects of financial literacy to other studies that have measured financial literacy in this way using the HRS.

To further assess the general state of knowledge of these older workers, we have constructed an index of knowledge based on the questions shown in Appendix Table 2. The entries in the table indicate the average number of correct answers, out of a possible 14 questions, for respondents with various characteristics. The average number of correct answers for the entire sample was 6.6. The level of knowledge follows expected patterns across economic and demographic characteristics. Workers aged 59 to 65 had a higher knowledge level than those 50 to 58 by answering 7 questions correctly compared to 6.5 questions for the younger workers**.** Similarly, workers who expected to retire within 5 years had a knowledge index of 8.1 compared to only 6.0 for those who expected to retire further in the future. Workers with more education, greater wealth, and higher earnings also had a greater success rate in answering these questions. Interestingly, workers who thought they had a greater knowledge of their retirement programs actually did have a great level of understanding of these programs. Note that the differences in means by each category are statistically significantly different at the 1% level.

[Table 5]

To further understand the distribution of knowledge across older workers, we estimated an index of knowledge regression where the dependent variable is the number of correct answers the respondent had out of the 14 questions described above. The estimated coefficients are reported in Table 6. Once again, we find that older workers have a higher level of knowledge although the age effect is relatively small with an additional 10 years of age increasing the number of correct answers by 0.6. This represents about a 10 percent increase in the knowledge index. Years of service also has a significant, positive effect on the level of knowledge with 10 additional years of adding 0.3 to the knowledge index. On average, college graduates score 0.4 higher on the index while those planning to work after retirement from their career job also have positive and significant higher scores. Other findings indicate those with greater balances in their 401(k) plans are more knowledgeable as are those that are closer to retirement. Another very interesting finding is that individuals who think they are more financially literate have significantly higher knowledge scores on our 14 questions.

[Table 6]

In summary, financial literacy varies significantly by worker characteristics even among employees in the same firm who are covered by the same retirement benefit plans. This finding has implications for the quality of retirement decisions among older workers and how financial education programs in the work place should be organized. We now turn to the issue of how financial knowledge and errors in knowledge affect the retirement plans of older workers.

V. EXPLAINING PLANNED AGE OF RETIREMENT

As workers pass age 50, they near the time when they will have to make a series decisions that define the transition from a full-time, career jobs to complete retirement. Planning for this transition and the decisions that are ultimately made will determine economic well-being during the retirement years. The past thirty or so years of work, saving, and investment choices by individuals have determined their current financial and housing wealth and have created a substantial component of lifetime pension and Social Security wealth. While the next few years may marginally affect lifetime wealth, many of the key decisions facing older individuals concern how to use their wealth accumulated by a lifetime work to effectively maximize well-being in retirement.

Economic theory and substantial research on the retirement decision indicates that the timing of retirement is a function of accumulated wealth, current earnings opportunities, health, pension and Social Security wealth, and access to retirement benefits from these programs. A unique aspect of this study is that we are able to test the impact of financial literacy and knowledge of retirement programs on the retirement plans of older workers holding these economic factors constant. Using the survey data described above, we estimate the planned age of retirement and the planned age of starting Social Security benefits as a function of standard socioeconomic variables along with an index of financial and retirement knowledge. Inaccurate or incomplete knowledge is not symmetric in its effect on retirement decisions. A further innovation of this research is that we are able to examine the impact knowledge errors associated with believing that benefits are available at younger ages than they actually are versus believing that benefits can only be accessed at older ages.

To illustrate the asymmetric effect of informational errors, Table 7 reports the mean expected retirement age and planned age for starting Social Security benefits by answers to four knowledge questions concerning the age of eligibility for retirement benefits. Respondents who thought that the early retirement age for Social Security was younger than age 62 had a planned retirement age 1.5 years earlier than those that believed that they could not begin Social Security benefits until after age 62. Similarly, those that thought the normal retirement age was younger than it actually was planned to retire 1.6 years earlier than those that thought the normal retirement age was higher than it actually was. For Medicare, the expected retirement age difference was 1.2 years between those that underestimated the age of eligibility compared to those that thought they must wait until after age 65 to be enrolled in Medicare. Beliefs concerning the earliest age for starting benefits from the employer pension had a similar but slightly smaller effect (less than one year). Examining the planned age for starting Social Security benefits, these differential knowledge errors have similar effects

[Table 7]

Next, we estimate a series of regressions for planned retirement age and the age of starting Social Security benefits. The regressions do not include pension wealth variables because all workers from each firm are covered by the company pension and the expected benefits from each plan are uniquely determined by the earnings and tenure of the respondents. Thus, the tenure and earnings variables capture the impact of future pension benefits as well as their own direct effect. We estimate three regressions for both the planned retirement age and age for starting Social Security benefits and report the results in Table8. The first equation for each of the two retirement decisions (columns 1 and 4) includes only the demographic and economic variables. The second equation (columns 2 and 5) add the knowledge index described earlier. The third equation (columns 3 and 6) omits the knowledge index but includes the individual knowledge variables including the differential responses for the four ages of eligibility questions.

[Table 8]

In general, the estimated effects of the explanatory variables conform to expectations and estimates from earlier studies of the retirement decision. Employees with more years of tenure are planning to retire at younger ages and start their Social Security benefits sooner. First, consider the equations without any knowledge variables (Columns 1 and 4, Table 8). The tenure effect includes the impact of tenure on future pension benefits and the fact that more years of tenure can allow the worker to become eligible for unreduced pension benefits at younger ages. The estimates indicate that an additional 10 years of tenure with the current employer implies that the worker will retire 0.6 years sooner and start Social Security benefits about one quarter year earlier. The estimated coefficient of higher annual earnings on planned retirement is insignificant which is not unexpected as the higher value of working reflects both an income and substitution effect on the decision to remain in the labor force. Male employees plan to retire about a half year later than female workers. Those with college degrees also expect to retire and begin Social Security about two thirds of a year later.

An important factor influencing the decision to retire from a career job is expectations by the respondent on their post-retirement plans. Persons who anticipated working after they leave their career employer plan to retire from their career jobs about a half year earlier than those that do not, although post-retirement work plans do not affect the desired age for beginning Social Security. Surprisingly, self-reported health status does not significantly influence retirement plans; however, those reporting a low expected probability of surviving to age 85 plan to retire about one year earlier than those reporting a high probability of living until 85. One should remember that this is a sample of full time workers who overwhelmingly report they are in good to excellent health.

The wealth variables all indicate that higher wealth is associated with earlier retirement. Medium account balances in 401(k) plans result in a 0.5 year earlier retirement compared to those with low account balances while high account balances indicated a 1.5 year earlier planned retirement. Similar effects are shown for higher values on homes and greater financial wealth outside of pension plans. In total, a worker with high account balance in the 401(k) plan, a high price home, and with a high value of financial wealth planned to retire three and a half years earlier than a worker with low values in each of these types of wealth.

How does financial literacy and knowledge of retirement plans affected planned retirement? We investigate this important relationship by including our knowledge index and several specific variables indicating the age of eligibility for accessing retirement benefits.

When just the knowledge index is included in the regressions (Columns 2 and 5, Table 8), the estimated coefficient indicates that those with a higher level of financial literacy intend to retire and start their Social Security benefits at earlier ages. For example, as the number of correct answers in the 14 questions increases by one, the expected retirement age declines by 0.2 years.

Perhaps the most interesting finding of this analysis is that the effect of inaccurate knowledge concerning the age of eligibility for national and company retirement programs. These estimates reported in Table 8, Columns 3 and 6 indicate that the effect of being wrong in one's belief of the age of eligibility depends on whether one thinks that the age of eligibility for the retirement benefit is younger or older than the actual age of eligibility. Consider first the respondents' beliefs concerning the normal retirement age (NRA) for Social Security. Individuals that thought the NRA was at a younger age planned to retire about a half a year sooner than those that knew the correct NRA. In contrast, those that thought the NRA was at an older age planned to retire almost 0.6 years later than those who knew the correct NRA.

A belief that the early retirement age (ERA) for Social Security was greater than 62 resulted in a later planned retirement age of 0.7 years while underestimating the ERA for Social Security had no effect on the timing of retirement. Errors in assessing the age of eligibility for starting benefits from the employer pension plan also had a significant impact on planned retirement. Respondents who thought that the age of eligibility was older than it actually was planned to retire more than 1.6 years later compared to those with a correct assessment of the age of eligibility for these benefits. The effect of thinking that one could start pension benefits at a younger age had a small, negative but insignificant effect on planned retirement. If the worker believed that Medicare coverage started at an age over 65, planned retirement was one third of a year later.

The results for the planned age of starting Social Security benefits are shown in the column 6 of Table 8 and illustrate that knowledge errors also play a significant role in the planned age of starting Social Security benefits. Individuals that believed the Social Security ERA, the NRA, and the age of eligibility for Medicare are higher than the actual ages plan to start benefits at older ages, as did those that believed that that could only start receiving their employer pension benefit at an older age. Among the effects of expecting that benefits could be accessed at younger ages only a low estimate of the Social Security normal retirement age had a significant effect of the planned age for starting benefits.

VI. CONCLUSIONS AND POLICY IMPLICATIONS

Economists have long been concerned about the timing of retirement. There is a large theoretical literature centered around the use of the lifecycle model where individuals are assumed to make choices on work, leisure, saving, and consumption in order to maximize lifetime utility. These theoretical models assume or predict retirement ages and individual choices are driven market variables, risk aversion, and discount rates. Rarely do these models consider the fact that workers make have inadequate or incomplete knowledge about Social Security, Medicare, and their employer pensions. Similarly, empirical studies describe the estimated effects of explanatory variables as if workers made decisions based on the actual characteristics of these plans.

Using a unique data set covering retirement eligible workers at three large employers, we show that older workers nearing retirement are not well informed about company and national retirement plans and that incorrect knowledge affects retirement plans. The impact of informational errors are asymmetric: workers who believe that benefits can be access at earlier ages than allowed by these plans expect to retire earlier than workers who know the true age of eligibility for retirement benefits. In contrast, older employees who think that benefits can only be obtained at later ages plan to retire at older ages.

Our analysis shows that knowledge varies with individual characteristics and that knowledge errors matter in developing retirement plans. This finding has important policy implications for developing retirement planning and financial literacy programs and provides initial evidence on the impact for such programs on future retirement behavior.

REFERENCES

Berhheim, Douglas and Daniel Garrett. 2003. "The Effects of Financial Education in the Workplace: Evidence from a Sruvey of Households," *Journal of Public Economics,* 87:7, pp. 1487-1519.

Chan, Sewin and Ann Huff Stevens. 2008. "What You don't Knoow Can't Help You: Pension Knowledge and Retirement Decision-Making," *Review of Economics and Statistics,* 90:2, pp. 253-66.

Clark, Robert and Madeleine d'Ambrosio. (2003). 'Ignorance is Not Bliss,' TIAA-CREF *Research Dialogue.*

Clark, Robert, Madeleine d'Ambrosio, Ann McDermed, and Kshama Sawant. (2006). 'Retirement plans and saving decisions: the role of information and education,' *Journal of Pension Economics and Finance*, 5:1, pp. 45-67.

Clark, Robert, Melinda Morrill, and Steven Allen. (2009). 'Employer-Provided Retirement Planning Programs," presented at *Reorienting Retirement Risk Management,* 2009 conference sponsored by the Pension Research Council.

Gustman, Alan, and Thomas Steinmeier. 2004. "What people Don't Know about Their Pensions and Social Security," in William Gale, John Shoven, and Mark Warshawsky (eds.), *Private Pensions and Public Policies,* Washington: Brookings Institution, pp. 57-125.

Luchak, Andrew and Morley Gunderson. 2000. "What do Employees know About Their Pension Plan?" *Industrial Relations,* 39:4, pp. 646-670.

Lusardi, Annamaria (ed.). (2008). *Overcoming the Saving Slump: How to Increase the Effectiveness of Financial Education and Saving Programs.* Chicago: University of Chicago Press.

Lusardi, Annamaria and Olivia Mitchell. (2007). 'Baby Boomer retirement security: The roles of planning, financial literacy, and housing wealth,' *Journal of Monetary Economics.* 54, pp. 205-224.

Lusardi, Annamaria and Olivia Mitchell. (2006). 'Financial Literacy and Planning: Implications for Retirement Wellbeing.' Unpublished working paper.

Mitchel, Olivia. (1988). "Worker Knowledge of Pension Provisions," *Journal of Labor Economics*, 6:1, pp. 21-39.

ENDNOTES

---

[1]More information about the employers can be found on their websites: http://www.bbt.com/, http://www.williams.com/, and http://www.wakemed.org/.

Table 1. Mean Values of Respondent Characteristics

Variable	
Number of Obs.	1701
Age	56.5
Male	48.7%
Married	77.8%
Years of Service	17.8
College Degree	52.8%
Plan to Work After Retire	35.0%
Annual Earnings of $50,000 to $100,000	46.6%
Annual Earnings of $100,000 and over	29.0%
Account Balance in 401(k)/403(b) plans between 1 & 5 years of earnings	56.1%
Account Balance in 401(k)/403(b) plans over 5 years of earnings	18.4%
Home equity $50,000 and $200,000	50.6%
Home equity over $200,000	25.5%
Financial Assets $25,000 to $100,000	25.8%
Financial Assets over $100,000	40.8%
Fair or Poor Health	8.5%
Very Good or Excellent Health	43.4%
Probability of living to 75: 0-24 percent	4.2%
Probability of living to 75: 75 to 100 percent	56.1%
Probability of living to 85: 0 to 24 percent	20.3%
Probability of living to 85: 75 to 100 percent	24.5%
Num Obs. Valid Ret. Age	1172
Mean Ret. Age	63.3
Num Obs. Valid SS Age	1208
Mean SS Receipt Age	64.7

Table 2. Retirement Expectations and Plans of Respondents

Response	Percent
Plans to Take Lump Sum Distribution of Pension Benefits	
Yes	15.6
No	9.7
Don't Know or Blank	74.7
Plans to Annuitize 401(k)/403(b) Account	
Yes	20.1
No	17.6
Don't Know or Blank	62.3
Expected Annual Pension as Percent of Final Salary	
10-25%	22.2
26-50%	11.8
51-75%	4.1
76-100%	1.5
Not Covered, Don't Know or Blank	60.4
Expected Income Replacement Rate in Retirement	
Less than 50%	21.8
50-60%	22.5
61-70%	14.8
71-80%	15.9
81-90%	6.5
Over 90%	6.6
Don't Know or Blank	11.9
Expect to Maintain Living Standard in Retirement	
Yes	30.4
No	28.3
Don't Know or Blank	41.3
Expect to Work for Pay after Retirement	
Plan to work full-time	4.9
Plan to work part-time	30.2
Do not plan to work	22.8
Uncertain or Blank	42.2
Number of Observations	1701

Table 3: Mean Responses Knowledge Questions*

Question	Percent Answering as Indicated
Response on earliest age for Social Security	
Age lower than 62	7.1
Age high than 62	17.8
No response	14.2
Correct Early Retirement Age (Age 62)	60.9
Response on normal retirement age for Social Security	
Age lower than actual	29.9
Age higher than actual	22.9
No response	14.8
Correct Normal Retirement Age Given (Age 66)	25.4
Response on age of eligibility for Medicare	
Age lower than 65	14.4
Age higher than 65	14.4
No response	19.5
Correct Age of Medicare Eligibility (Age 65)	51.7
Response to earliest age one can receive a pension	
Earliest age for pension eligibility is too low	8.5
Earliest age for pension eligibility is too high	38.0
No response	18.7
Correct age is given (answer varies)	34.8
Percent with correct responses to other questions	
How much are benefits reduced if started at earliest age?	14.3
Is reduction for starting benefits early permanent?	51.1
Are benefits increased after retirement?	24.3
Is single stock safer than diversified portfolio?	80.4
Impact of inflation on purchasing power	75.4
Can retiree take lump sum distribution from pension?	41.9
Can retiree stay on company health plan?	47.1
Does company offer phased retirement?	13.1
Are pension benefits increased after retirement?	46.8
Are you covered by the company pension?	90.0

*More detailed description of each of these questions is present in Appendix Table 2.

Table 4. Mean Values of Respondent Characteristics by Employer

	Employer Sample	HEALTH AND RETIREMENT STUDY		
Variable		**Full Sample**	**Age 49-65 currently employed**	**Age 49-65, currently employed, has pension plan**
Number of Obs.	1701	1269	458	141
Age (Years)	56.5	65.5	57.9	54.0
Male	48.7%	39.95%	41.05%	45.39%
Married	77.8%	63.12%	68.34%	67.38%
Widowed	2.2%	18.68%	7.64%	1.42%
Years of Service	17.8	11.7	11.10	12.08
College Degree	52.8%	22.54%	30.57%	41.13%
Has a Pension Plan	100%	35.08%	39.39%	100%
Stock Risk	0.80	0.52	0.61	0.68
	(0.40)	(0.50)	(0.49)	(0.46)
Inflation	0.75	0.75	0.83	0.79
	(0.43)	(0.43)	(0.38)	(0.40)

Notes: For stock risk, the estimate is statistically significantly higher in the FINRA pooled sample as compared with each of the HRS samples. For the inflation question (which has slightly different wording), the responses are statistically significantly different between the FINRA pooled sample and the sample from the HRS of individuals age 49-65 that are currently employed.

Table 5. Index of Knowledge

Characteristic	Categories	Knowledge Score
Full Sample		6.6
Age	49-58	6.5
	59-65	7.0
Gender	Male	7.2
	Female	6.1
Marital Status	Single	6.1
	Married	6.8
Education	High School or Less	6.1
	Some College	7.1
Earnings (Q8)	$50,000 or Less or Blank	5.7
	More than $50,000	6.9
Years of Service	Less than 20	6.3
	20 or More	7.1
401(k)/403(b) Wealth	Less than 1 year of salary, missing or none	5.4
	More than 1 year of salary	7.1
Housing Wealth	$49,000 or Less, no house or blank	5.7
	More than $50,000	6.9
Other Assets (Stocks, Bonds, etc)	Less than $25,000, Missing or None	5.7
	More than $25,000	7.1
Self-Assessed Knowledge (lowest 1; highest 7)	1-4 or Blank	5.7
	5-7	8.3
Years from Planned Retirement	Less Than 5	8.1
	Five or More or Blank	6.0
Number of Observations		1701

Notes: Coefficients are mean scores out of an index 0-14. Note that for all pairs the differences are statistically significant at the 1% level.

Table 6. Index of Knowledge Regression

Variable	**Knowledge Score**
Age (Years)	0.058
	[0.017]***
Male	-0.088
	[0.133]
Married	0.100
	[0.135]
Years of Service	0.030
	[0.005]***
College Degree	0.411
	[0.121]***
Plan to Work After Retire	0.205
	[0.113]*
Annual earnings between $50,000 to $100,000	0.074
	[0.149]
Annual Earnings over $100,000	0.304
	[0.190]
401(k)/403(b) account balance equal to 1 to5years of salary	0.671
	[0.140]***
401(k)/403(b) account balance greater than 5 years of salary	0.519
	[0.189]***
Home equity between $50,000 to $200,000	0.161
	[0.142]
Home equity greater than $200,000	0.236
	[0.174]
Financial assets between $25,000 and $100,000	0.133
	[0.141]
Financial assets greater than $100,000	0.092
	[0.146]
Self-Assessed Knowledge Score (lowest 1; highest 7; 0 if missing)	0.867
	[0.033]***
Years from Planned Retirement (0 if missing)	-0.082
	[0.018]***
Indicator for Missing Planned Retirement Age	-1.776
	[0.183]***
Constant	-0.947
	[1.118]
Number of Observations	1701
R2	0.500

Notes: Dependent variable is knowledge score (0-14). The regression includes company fixed effects as explanatory variables. Standard errors are in brackets. Variables marked with *** are significant at one percent, ** at 5 percent, and * at 10 percent.

Table 7. Mean Age of Retirement and Social Security Receipt by Responses to Age of Eligibility Questions

Variable	Mean Retirement Age	Mean Social Security Receipt Age
Full Sample	63.2	64.7
Response on earliest age for Social Security		
Age lower than 62	62.5	64.2
Age higher than 62	64.0	65.9
No response	63.1	64.6
Response on normal retirement age for Social Security		
Age lower than actual	62.2	64.0
Age high than actual	63.8	65.5
No response	62.1	64.4
Response on age of eligibility for Medicare		
Age lower than 65	62.8	64.4
Age higher than 65	64.0	65.4
No response	62.4	64.6
Response to earliest age one can receive pension		
Earliest age for pension eligibility is too low	63.2	64.3
Earliest age for pension eligibility is too high	64.3	65.1
No response	64.6	65.8
Number of Observations	1172	1208

Table 8. Retirement Plans Regressions

Variable	Retirement Age			Social Security Receipt Age		
	(1)	(2)	(3)	(4)	(5)	(6)
Male	0.429	0.436	0.497	0.098	0.118	0.209
	[0.238]*	[0.236]*	[0.225]**	[0.177]	[0.176]	[0.168]
Married	-0.389	-0.360	-0.339	-0.364	-0.328	-0.348
	[0.238]	[0.236]	[0.224]	[0.174]**	[0.173]*	[0.165]**
Years Service	-0.061	-0.056	-0.048	-0.028	-0.025	-0.022
	[0.009]***	[0.009]***	[0.010]***	[0.007]***	[0.007]***	[0.007]***
College Degree	0.645	0.771	0.429	0.769	0.839	0.569
	[0.208]***	[0.208]***	[0.202]**	[0.154]***	[0.155]***	[0.149]***
Plan to Work after retirement	-0.505	-0.497	-0.561	0.014	0.014	-0.063
	[0.185]***	[0.184]***	[0.175]***	[0.136]	[0.135]	[0.129]
Annual earnings between $50,000 and $100,000	0.248	0.352	0.246	0.050	0.113	-0.076
	[0.250]	[0.249]	[0.240]	[0.184]	[0.184]	[0.177]
Annual earnings over $100,000	-0.146	0.068	0.131	0.181	0.295	0.208
	[0.324]	[0.325]	[0.312]	[0.241]	[0.242]	[0.232]
401(k)/403(b) account balance equal to 1 to 5 years of earnings	-0.551	-0.431	-0.423	-0.473	-0.399	-0.401
	[0.242]**	[0.241]*	[0.232]*	[0.177]***	[0.178]**	[0.171]**
401(k)/403(b) account balance greater than 5 years of earnings	-1.475	-1.316	-1.131	-0.800	-0.716	-0.570
	[0.322]***	[0.321]***	[0.309]***	[0.239]***	[0.239]***	[0.230]**
Home equity between $50,000 and $200,000	-0.006	0.050	0.077	0.026	0.047	0.021
	[0.252]	[0.250]	[0.238]	[0.185]	[0.184]	[0.175]
Home equity over $200,000	-0.522	-0.445	-0.374	0.065	0.093	0.082
	[0.305]*	[0.302]	[0.287]	[0.226]	[0.225]	[0.214]
Financial assets between $25,000 and $100,000	-0.589	-0.553	-0.455	-0.311	-0.277	-0.248
	[0.243]**	[0.241]**	[0.230]**	[0.179]*	[0.179]	[0.170]
Financial assets over $100,000	-1.439	-1.372	-1.310	-0.495	-0.447	-0.472
	[0.245]***	[0.243]***	[0.232]***	[0.183]***	[0.183]**	[0.175]***
Fair or poor health	0.077	0.087	0.032	0.227	0.235	0.266
	[0.351]	[0.348]	[0.331]	[0.258]	[0.257]	[0.245]
Very good or excellent health	0.020	0.004	-0.088	0.179	0.174	0.140
	[0.200]	[0.198]	[0.189]	[0.146]	[0.145]	[0.139]
Probability of living to	-0.130	-0.147	0.016	-0.394	-0.429	-0.310

Variable	**Retirement Age**			**Social Security Receipt Age**		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
75: 0 to 24 percent						
	[0.501]	[0.497]	[0.473]	[0.351]	[0.349]	[0.333]
Probability of living to 75: 75 to 100 percent	-0.014	-0.022	0.009	0.068	0.070	0.086
	[0.238]	[0.236]	[0.224]	[0.176]	[0.175]	[0.166]
Probability of living to 85: 0 to 24 percent	-0.496	-0.513	-0.348	-0.491	-0.491	-0.472
	[0.270]*	[0.267]*	[0.255]	[0.198]**	[0.197]**	[0.188]**
Probability of living to 85: 75 to 100 percent	0.580	0.533	0.590	0.215	0.194	0.213
	[0.232]**	[0.230]**	[0.219]***	[0.172]	[0.171]	[0.163]
Knowledge Index		-0.177			-0.101	
		[0.039]***			[0.029]***	
Early SS age less than 62			0.135			-0.204
			[0.335]			[0.257]
Early SS age greater than 62			0.741			1.163
			[0.234]***			[0.175]***
No response to early SS age question			1.646			0.423
			[0.588]***			[0.442]
Normal SS retirement age less than actual			-0.56			-0.409
			[0.232]**			[0.171]**
Normal SS retirement age higher than actual			0.625			0.706
			[0.228]***			[0.167]***
No response to normal retirement age question			-1.299			-0.489
			[0.578]**			[0.429]
Age of eligibility for Medicare less than 65			0.223			0.005
			[0.253]			[0.184]
Age of eligibility for Medicare greater than 65			0.19			0.329
			[0.241]			[0.178]*
No response to Medicare age question.			-0.818			0.011
			[0.370]**			[0.282]
Percent reduction in SS for early acceptance			-0.359			-0.326
			[0.235]			[0.172]*
Is reduction in SS benefits permanent?			-0.286			0.044
			[0.212]			[0.156]
Are SS benefits increased after they have begun?			-0.156			-0.182

Variable	Retirement Age			Social Security Receipt Age		
	(1)	(2)	(3)	(4)	(5)	(6)
			[0.195]			[0.143]
Single stock vs. diverse portfolio			-0.027			0.045
			[0.303]			[0.229]
Inflation and purchasing power			0.452			0.276
			[0.272]*			[0.200]
Can you take lump sum distribution from pension?			-0.166			0.080
			[0.214]			[0.159]
Can you stay on the company health plan after retirement			-0.751			-0.392
			[0.187]***			[0.138]***
Does company offer phased retirement?			0.125			0.226
			[0.238]			[0.177]
Are pension benefits increased after retirement?			0.201			0.188
			[0.192]			[0.141]
Are you covered by the company pension?			0.294			-0.093
			[0.364]			[0.274]
Estimate of earliest age of eligibility for pension is too low			-0.292			-0.270
			[0.334]			[0.248]
Estimate of earliest age of eligibility for pension is too high			1.554			0.587
			[0.214]***			[0.158]***
No response to age of pension eligibility			1.623			0.945
			[0.316]***			[0.237]***
Observations	1172	1172	1172	1208	1208	1208
R2	0.350	0.360	0.440	0.190	0.200	0.300

Note: All specifications include a constant, age fixed effects, and company fixed effects. A detailed descriptions of the variables included in these regressions is provided in Appendix Table 2 and the means of the variables are shown in Table 1..

Data Appendix

Appendix Table A1 shows how the sample was created for each employer. We had a total of 1724 observations with valid birth year within the range 1943-1959 (baby boomer generation). We restricted the regression sample to individuals that had valid entries for gender, marital status, tenure with the company, and education level, creating a working sample of 1701 observations.

[Appendix Table A1]

For the missing values we imputed a value equal to the omitted category in the regression in order to keep the sample large and representative. Future work will demonstrate the sensitivity of estimates to only including individuals with valid responses for all variables. The following table shows the imputations made.

[Appendix Table A2]

Appendix Table A3 explains the knowledge questions in further detail and includes the percent answering correctly by company. Note that the final company-specific question states both the age and vesting requirements for each company. For the correct responses to this question, we calculated the vesting age for each individual (age at start plus vesting period) and set the correct answer to be the minimum of the vesting age and age 55.

[Appendix Table A3]

Appendix Table 1A: Response Rate and Sample Creation

	BB&T	WakeMed	Williams
Criteria for Receiving Survey	All employees about age 55 with at least 10 years of service (the criteria for retirement). Anyone without email access was excluded.	All employees were sent the survey. We restricted the sample to individuals born 1943-1959.	Active employees age 50 or older.
Employees Sent Survey	2,475	approximately 7700, 2088 age 49-65	1,592
Completed a Portion of Survey	605 (Response Rate: 24%)	487 Total (6%) 237 Age 49-65 (11%)	952 (Response Rate: 60%)
Born 1943-1959	572	237	915
Full Demographic Information	564	233	904
Valid Expected Retirement Age	499	187	486
Valid Expected SS Age	500	189	519

Appendix Table A2: Missing Value Imputations

Variable	Imputation
Earnings and wealth variables	"low" categories
Work after retirement	No or uncertain
Life expectancy and health	"medium" categories
Knowledge questions (except when categorized as high/low/correct/blank)	Incorrect

Appendix Table A3. Percent Answering Correctly for 14 Knowledge Questions

Survey Question	BB&T	WakeMed	Williams
Financial Knowledge			
True or false? "Buying a single company stock usually provides a safer return than a diversified portfolio." ***False***	75.9%	70.8%	85.6%
Assume that your retirement income increases by 2 percent per year and that the annual rate of inflation is 4 percent per year. After one year, will you be able to: a) buy more goods and services? ***b) buy fewer goods and services?*** c) buy exactly the same amount of goods and services? d) don't know	74.6%	72.1%	76.7%
Social Security and Medicare Programs			
What is the earliest age that you can start Social Security benefits? ***62***	69.9%	44.6%	59.6%
What is the age that you can receive a full or unreduced Social Security benefit ("normal retirement age")? ***66***	45.0%	27.9%	25.6%
If you start Social Security benefits at the earliest possible age, you will receive a benefit that is __ percent of the benefit you would have received at the normal retirement age. ***75%***	12.4%	15.5%	15.3%
Is the reduction in Social Security benefits for early retirement permanent or does the reduction end when you reach the normal retirement age? ***Permanent***	58.2%	44.6%	48.3%
After you start receiving Social Security benefits, these benefits are: a) the same for the rest of my life ***b) increased annually by the rate of inflation*** c) increased annually but by less than the rate of inflation d) increased annually but by more than the rate of inflation e) Don't know	31.6%	16.3%	21.9%
What is the earliest age that you will be eligible for Medicare? ***65***	53.3%	53.3%	41.6%
Company-Specific Questions			
Can you take a lump sum distribution of some or all of your pension plan (do not include income for your 401(k) account)?	Yes: 18.3%	Yes: 29.6%	Yes: 59.7%
Does your company offer you the opportunity to stay in the company health plan after you retire?	Yes: 53.5%	No: 40.3%	Yes: 44.9%
Does your company offer any type of phased retirement, flexible work options, or the opportunity to work part-time after you retire?	No: 12.6%	Yes: 24.5%	Yes: 10.5%
The monthly pension benefit that you will receive from your current employer will: a) stay the same for the rest of your life b) be increased annually by the rate of inflation c) be increased annually by the same rate as wages for active workers d) don't know	(a): 54.1%	(a): 36.5%	(a): 44.9%
Are you covered by a pension plan offered by your company?	Yes: 94.0%	Yes: 76.8%	Yes: 90.9%
What is the earliest age that you can retire and start receiving benefits from the plan?	55 (+10 yrs service) 34.4%	55 (+ 3 yrs service) 12.9%	55 (+ 3 yrs service) 40.6%
Average Knowledge Score (Out of 14)	6.9	5.5	6.8