

Social Security Literacy and Retirement Well-Being

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Abstract

We build upon the growing literature on financial literacy, which studies the prevalence of lack of knowledge about various financial issues, and propose to analyze how much people know about the Social Security rules using both a small pilot survey we have already conducted, and a follow-up and extended survey funded by MRRC. We then assess the consequences of the apparent prevalence of lack of information by individuals about the rules governing the Social Security system using a realistic and empirically-based life-cycle model of retirement behavior under uncertainty. We investigate the individual's retirement and savings decisions under incomplete information and unawareness, in which a portion of the population does not know some or all of the rules of the system. We compare the outcomes in these cases to the outcome under full information, computing the average welfare gain resulting from the acquisition of information regarding the Social Security system. Our analysis can illuminate the need for policies that foster knowledge of the system, which can improve welfare among Americans of all ages.

1. Introduction and Research Questions

For decades a large body of literature in economics has tried to explain the relationship between social insurance, labor supply, savings and consumption behavior of individuals. An increasingly influential branch of this literature tries to accomplish this by solving complex models of rational behavior. A critical assumption of these models is that people know and understand the complex set of rules of the Social Security system. In this paper we first investigate in detail how much people know about some of the most basic rules of the Social Security system, and then modify the standard life-cycle model to incorporate imperfect information, and study the consequences on retirement, savings decisions, and ultimately on welfare.

We believe that investigating people's knowledge of the Social Security rules, and the role of this knowledge on retirement and savings outcomes, is crucial from a policy perspective because the incentives generated by the Social Security rules are dependent on people's understanding of these rules. If individuals do not know the rules of the Social Security system, or do not understand the implications of the rules on the value of their benefits, models that assume perfect information of the Social Security system would not yield accurate measures of the incentives created by the social insurance system.

We investigate how much people know about the Social Security rules, how they incorporate this knowledge in their retirement and savings decisions, the extent to which their information regarding the Social Security rules affects their retirement and wealth outcomes, and the implications of their imperfect knowledge on their welfare. We will also explore policies for improving Social Security literacy.

In this paper we first study people's knowledge of the Social Security system by analyzing data from two pilot surveys funded by a Seed Grant from Stony Brook's Center for Survey Research (CSR) and MRRC. The first survey we put on the field in late August of 2007, collected information on 500 individuals about their knowledge of some of the most basic Social Security rules and how that knowledge was acquired. The follow-up was in the field in December of 2008, and we collected 507 observations. The follow-up part of the new survey allows us to test whether the respondents have retained the particular information which was given to them during the initial survey, and help us when modeling the information problem faced by individuals.

Second, we provide a measure of the cost brought about by Americans' lack of information on the Social Security system's rules. To that end, we present a framework in which we can compute the individuals' welfare gain from acquiring information regarding the Social Security system. We accomplish this by solving and simulating a life-cycle model of retirement behavior under different informational assumptions, and allowing for the endogeneity of the individuals' level of knowledge regarding the rules of the system.

Third, based on our results from these analyses, in particular the assessment of the cost of imperfect information, and equivalently the gains from full information regarding the Social Security system, we analyze possible strategies that might increase individuals' awareness of the rules of the system, and evaluate which strategies would lead to more welfare-improving outcomes.

2. Project Methodology, Results, and Policy Implications

We have used a Seed Grant obtained from Stony Brook's CSR and funding from MRRC to conduct two phone surveys on a small representative sample of the U.S. adult population to gather information on respondents' knowledge of Social Security rules. The

survey included about 20 questions on respondents' knowledge of several rules that affect their Social Security benefits, such as the age of early and normal retirement and the reduction factors with respect to the normal retirement, how they obtained their information, and their level of financial literacy with respect to calculations involving social security benefits, among others. A randomly chosen sub-group of respondents were also given the correct answer to one of the Social Security rule questions on the survey. One of the advantages of this survey is that it is not limited to an older subpopulation, so we can assess people's knowledge of Social Security over an entire age profile.

We have analyzed the data from the original and new surveys to assess 1) the extent of the information problems regarding the basic rules of the Social security system, 2) whether the prevalence of informational gaps differs across demographic and socioeconomic groups, and 3) how it varies with the level of financial literacy in the population. The pilot survey also included a standard battery of socio-economic, and demographic questions, as well as health and longevity expectations questions.

The results from the survey show that there is significant variation in people's knowledge of Social Security rules, and that this knowledge varies by the year of the survey. For example, only 42% percent of the respondents interviewed in 2007 correctly answered the question "*What is the youngest age at which an eligible worker can apply for his or her own Social Security retirement benefits?*" but this percentage goes above 54% in 2008, and almost to 56% among those re-interviewed in that year. We can see in the case of this relatively simple question, a 2008 effect, which we interpret as showing that due to being an election year it might be that even among new interviewees the level of knowledge had increased, appears. The percentage of individuals answering correctly varies considerably by age, and in 2008 varies from around 20% among those 18 to 34, to around 72% for those 55 to 64. The variation with respect to income is considerably lower.

A much lower percentage, 22.8%, gave the correct answer in 2007 to "*What is the maximum age at which you can claim Social Security retirement benefits so that Social Security will adjust your benefits upward?*" and the percentage is almost identical to the

new respondents of 2008, however, it goes up to 45% among those re-interviewed in 2008.

The latter pattern appears throughout the survey, for example regarding the minimum number of years necessary to be eligible to receive benefits, or the incidence of the earnings test, showing a large increase in knowledge among the re-interview sample, which we interpret as implying considerable promise of policy recommendations the objectives of which is to encourage individuals to go and find out information which could be relevant to them.

Additionally, we find that 55.7% of the individuals who were already receiving some kind of government benefits, responded ‘yes’ to the question “*Do you think that you should have had more information about possible changes to the system that could affect you?*” suggesting that the informational problems may have resulted in costs, which were observed by the individual ex post.

The second step in our methodology is to compute the cost that an individual incurs due to his/her lack of information on Social Security rules by comparing his/her welfare under full information to the welfare under imperfect information. We use the full information characterization of the model as the benchmark model. In that case, individuals choose how much to consume and save, how much to work and when to retire, and when to claim benefits from Social Security under the assumption that they have perfect knowledge of all the retirement incentives.

We then present departures from the full information assumption and provide several possible characterizations of partial information regarding Social Security rules by incorporating recent advances in decision theory and game theory. Generally speaking, under incomplete information individuals aggregate all possibilities without differentiating them (for example assuming that the adjustments for early and late retirement are identical), resulting in biased assessments of the trade-offs they face. On the other hand, under unawareness, they completely ignore some of the possibilities, and thus cannot exploit any relevant information. One key characterization we explore, which is an extreme case of unawareness, is when individuals do not know anything about the details of the system, and they decide when to claim Social Security benefits based on what they observe others to be doing.

The comparison of individuals' welfare in full information and partial information cases allow us to compute the welfare gain resulting from moving from unawareness to the full information solution. Using this approach, we also compute bounds for the social cost of financial illiteracy regarding the Social Security rules, and at the same time provide a policy tool for the government when considering policy interventions about information issues of the social insurance system.

We characterize the individual's problem using a structural dynamic life-cycle model of retirement behavior under uncertainty. The structural approach employed in the project allows us to control for the possible endogeneity of information on Social Security. An individual's information on Social Security may have been endogenously determined based on his/her cost of acquiring information. Therefore, we incorporate into the model the individual's cost of knowledge acquisition, which is likely to vary with education and income.

The dynamic nature of the model allows us to follow changes in wealth accumulation and labor supply decisions over time. When people make decisions under imperfect knowledge, they may change behavior and take corrective measures when they find out that their expectations diverge from actual realizations. In our model, people may invest more in learning about their Social Security benefits as they near retirement. If they realize that their expectations of benefits are different from their actual benefits, they may accelerate wealth accumulation or postpone retirement.

The final step of our research uses the results from the pilot and new surveys, and the welfare implications of the dynamic structural model to discuss policy alternatives aimed at increasing the public's knowledge of the Social Security system. The policies that we consider include customizing the Social Security statement highlighting different messages according to the individual's characteristics, such as age, family situation, or earnings. For example, young individuals might receive highlighted messages regarding the features of the system on which they lack information based on our findings from the pilot and new surveys, while older individuals might receive more detailed information about the consequences of claiming benefits and continuing working. We hypothesize that we will find considerable heterogeneity in the information structure of individuals,

and Social Security can exploit this heterogeneity to reach the population with more targeted messages.

This paper is one of the first studies that we are aware of, which investigates the implications of people's knowledge of Social Security rules on their wealth, retirement outcomes, and welfare using a structural life-cycle model. The methodology outlined in this proposal allows us to go beyond documenting the extent of the knowledge within the population regarding the rules of the Social Security system. It allows us to provide, in a life-cycle framework, a formal characterization of the role of information on Social Security rules in the individual's decisions-making, the likely costs attached to acquiring it, and the welfare costs of not obtaining it.