Dynamics of Individual Information about Social Security

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Extended Abstract

Several studies have raised concern about respondents' lack of pension knowledge (Mitchell, 1988; Gustman and Steinmeier, 1999 & 2001) and low engagement in retirement planning activities (Lusardi, 2001). This observation is at odds with the simple life-cycle model which assumes individuals to be forward looking. If people do not have the information required to optimize their economic decisions over their life-cycle they are bound to make sub-optimal economic choices and risk reaching retirement with inadequate resources associated with low levels of well-being in old age.

In this paper we use panel data to study the dynamics of individual information about Social Security. We will track how individuals' information changes over time as they approach retirement. We suspect that existing cross-sectional studies overestimate the lack of individual knowledge about future pension benefits.

Studying changes in information over time might also allow us to reconcile two seemingly contradictory findings: that individuals update their retirement expectations in a way that is consistent with the rational expectation hypothesis (Benítez-Silva and Dwyer, 2003) while, at the same time, their expectations are biased (Mastrogiacomo, 2003).

Retirement planning is a very complex process due to its intertemporal nature, the long planning horizon, and the presence of uncertainty. It consists of two main ingredients: the decision when to retire and the required level of resources to support one's living standards into old age; both components are clearly related. Very little is known about how people arrive at these decisions and what type of information they take into consideration.

One method of finding evidence about the effectiveness of planning is to assess economic outcomes. At the population level one can argue that the outcomes give a satisfactory picture given that adjusted income and poverty rates are about the same among the retired and the working age population. But there is dispute about this: some say that many individuals are inadequately prepared for retirement (Bernheim, 1993). Even if adequately prepared such acceptable outcomes do not imply optimal planning. At the individual level, there is some evidence for bad outcomes and that some people are not well prepared. However, this could be the result of bad luck in an uncertain environment (Engen,Gale and Ucello, 1999).

A second method of finding evidence about planning is to observe the planning process in the working-age population. In trying to understand retirement planning and the information used therein, the most promising population to study should be those close to retirement. Several studies have used the Health and Retirement Study (HRS), a survey of 51 to 61 year olds, to study the accuracy of pension information and retirement planning activities (Gustman and Steinmeier, 1999 & 2001, Lusardi, 2001). The HRS asks respondents about the value of their Social Security entitlements and their employer pensions. Specifically, the survey first inquires whether the individual expects to receive any benefits from Social Security and if so, when and how much. Gustman and Steinmeier (2001) have analyzed these self-reports on Social Security and pension entitlements for their accuracy. For the HRS data collected in 1992 they find high rates of item non-response on these variables and also wide-spread large deviations from estimated actual entitlements. For expected Social Security benefits 48.9% of the individuals in their analytical sample report that they do not know how much to expect. Among pension holders 41.3 % do not know the value of their plan. Only just over one fourth of respondents reported a value within 25% of estimated actual Social Security benefits. In the case of employer pensions Gustman and Steinmeier find that only 15.9% report a value within 25% of the estimated actual entitlements. The authors conclude that

"misinformation, imprecision and lack of information about retirement benefits is the norm."

These findings of lack of pension knowledge have several caveats and are likely to overstate its extent:

Issues related to data quality

When measuring lack of knowledge as the difference between an individuals' expected benefits and his or her actual entitlements measurement error in either component will be falsely attributed to lack of knowledge. Both components are affected by measurement error. In the HRS actual benefits are not observed and have to be estimated. The error component of each fitted value is attributed to lack of knowledge. The self-reports of expected benefits, like any variable in a survey, also contain measurement error which is not related to lack of knowledge, like recall error.

Interpretations of item non-response

Another caveat in previous studies is that item non-response has been used as a direct indicator of lack of knowledge. This conclusion is premature, as item non-response can also be due to deficiencies in the survey design (e.g. lack of clarity) or genuine uncertainty about an event that lies in the future.

Findings based on cross-sectional data

All studies on pension knowledge or retirement planning activities that we are aware of are based on cross-sectional observations which has several weaknesses. For one, they interpret indicators of lack of knowledge for somebody who is eight years from expected retirement in the same way as for somebody who is within a few months of retirement. Controlling for age deals with this issue only in a limited way. Moreover, the occurrence of recall error and item non-response has a stochastic component. A respondent who does not answer the expected benefit question in one wave or answers it poorly (large error) will be classified as poorly informed in a cross-sectional study; yet the same respondent may give reasonably accurate answers in prior or subsequent waves. Panel observations allow distinguishing this type of person from one who responds "don't know" or "refuse" in all waves. We cannot find from cross-sectional studies whether lack of knowledge is a permanent state or whether individuals' knowledge improves over time. In order to learn about what information people use in their retirement planning we need to study time-patterns of their information status.

This research will adopt a dynamic approach to studying Social Security information exploiting the data collected in all waves of the HRS between 1992 and 2002. In every wave respondents were asked whether they were currently receiving benefits from Social Security. If not, the follow-up question was whether they expected to receive any benefits from Social Security in the future; if so, at what age they anticipated receiving these and how much they expected them to be.[1] On the basis of these variables we will study patterns over time in individual expectations and relate them to their real outcome equivalent, that is, the reported benefit amount when the respondent is first observed receiving it. The motivation for choosing these self-reported amounts as the benchmark rather than a calculated amount based on Social Security records is twofold. First, people who have just claimed Social Security benefits have also just gone through what is likely the most intensive interaction of their life with the respective system; this interaction is bound to positively impact the accuracy of their reports. Survey experience lends further support to this approach as respondent reports of regularly received amounts, like earnings or Social Security checks, have proven to be quite accurate. Hurd, Juster and Smith (2003) show for currently received Social Security benefits that the

[1] If the spouse was not currently receiving any benefits from Social Security the financial respondent was answered the same sequence of questions for the spouse.

self-reports in the HRS are very accurate, and significantly more accurate than in the Current Population Survey. Second, using observations on actual receipts we do not have to rely on assumption on future employment and earnings to obtain a measure of actual entitlements.

Nevertheless, as with any survey variables there remains reporting error at the individual level in the values that we choose as the benchmark. The statistical methods will need to take this into account. Hurd, Juster and Smith (2003) find that the reporting error is symmetrically distributed around the median which is close to 0.[2] This suggests that taking averages across groups of observations will be sufficient in most cases to mitigate the effects of measurement and reporting error.

We will restrict our analysis to the case of Social Security benefits. All of the analysis described can be applied to expected benefits from pension plans as well, but their analysis is more complex due to the heterogeneity of plan features and difficulties of linking observations of the same plans over time. Other advantages of restricting the analysis to Social Security benefits are the almost universal coverage of the program (about 95%); that the rules are the same for everybody and that they have been stable over the period of observation; and that respondents' future benefits are only subject to limited sources of risk (no investment risk, only limited or no earnings risk).

The guiding principle of the empirical analysis will be to consider the first available self-report on received Social Security benefits as the most accurate observation available for each respondent. Defining the evolution of observations as people approach retirement as trend, we will study trends in individual reports on expected Social Security benefit, and the importance of item non-response, as well as trends in means and variances by education and other personal characteristics. Furthermore, we will investigate trends in the deviations of expected benefit amounts from actually received amounts and assess whether these indicate convergence towards the individual's received benefit amount, suggesting increases in accuracy in the expectations

We will align the observations with reference to the date of first receipt of Social Security benefits, which ensures that comparisons are made across individuals with about the same distance from the date of first benefit receipt.[3] Note that while we compute deviations at the individual level we do not use single individual-level deviations as measures of lack of knowledge, only group averages defined in various ways.

The descriptive analysis will also devote attention to the role of inflation in respondents' answers about expected benefits. The cues in the question wording required them to report expected amounts in "today's dollars." This may not be the most natural concept for many respondents, also in view of the fact that Social Security statements state expected benefit amounts in future dollars (nominal amounts referring to a date in the future). If respondents did follow the survey instructions literally then answers from one wave to the next should change in line with the CPI plus any effects of resolved uncertainty or changes in knowledge. We will find how expectations evolve over time with the inflation rate.

In 1999 the Social Security Administration started sending statements to future beneficiaries. We will investigate whether there is any evidence in the data of this change having a positive effect on the accuracy of respondents' self-reports on expected benefits.

We will investigate further whether lack of pension knowledge is related to inadequate retirement resources or unanticipated retirement outcomes that translate in reduced levels of well-being in retirement. We will use questions from the HRS on whether respondents are worried about having enough income to get by in retirement, an overall assessment of how retirement turned out for them and how they compare retirement years to pre-retirement years. This information is included in all 6

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[2] It is $57 relative to median annual Social Security income of $9,600.

[3] Recall that cross-sectional studies analyze answers about expected benefit receipt of a person, say, eight years from benefit receipt in the same way as answers from a person who counts on receiving them in a years' time.

waves of the HRS. In addition we will consider more objective measures of outcomes. For example, we will construct a measure that compares post-retirement income adjusted for household size and retirement wealth to pre-retirement incomes and cross-classify it by pension knowledge. The challenge in this type of analysis is to control for cognitive status, because it is likely to influence economic status in retirement as well as retirement planning itself.

In this way this research will contribute to improving our understanding of retirement planning and information acquisition which is of great importance for researchers as well as policy makers. For researchers it will give insight into the reliability of self-reports of expected benefits. Prior findings on the lack of knowledge have led many researchers not to use self-reports and to favor data derived from Social Security records and from the HRS pension calculator. The resulting studies rely on selected small samples raising concerns about whether their findings apply to the population at large and about statistical power due to small sample size. For policy makers, it would be very valuable to have ways of identifying those individuals in the population who are at greatest risk of reaching retirement with inadequate resources due to lack of knowledge as it would allow them to target efforts of improving financial education on those who would benefit most.

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