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Individuals' Responses to Social Security Reform

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Abstract

The Social Security trust fund is predicted to be depleted by 2041. While there are several viable reform proposals to restore long-term solvency of the Social Security system, one important element that is critical to the success of any reform remains unknown: how will individuals respond to, for example, a cut of their Social Security benefits. Will they work longer or save more or both, and to what extent will their response make up for the cut in benefits? In this paper we use data from the HRS Internet Survey where we asked respondents directly what they would do if everyone's Social Security benefits were cut by 30 percent. At a qualitative level, we find important differences in the response by sex, marital status, and SES, among others. We conduct a detailed quantitative analysis of response to timing of Social security claiming and find that on average individuals would postpone claiming Social Security by 1.13 years. If this time was spent working by everyone then the annual Social Security benefit would drop on average by 20 percent rather than the initial 30 percent imposed by the reform. In other words the response to claim later and work longer would make up for one third of the initial cut in Social Security benefits.

Authors' Acknowledgements

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1. Introduction

The Social Security trust fund is predicted to be depleted by 2041. While there are several viable reform proposals to restore long-term solvency of the Social Security system, one important element that is critical to the success of any reform remains unknown: how will individuals respond, for example, to a cut of their Social Security benefits? Will they work longer or save more or both, and to what extent will their response make up for the cut in benefits? How would the adjustment be split across spending less and working longer?

It is important to understand how workers might respond to a benefit cut for at least two reasons. First, to evaluate its impact on the well-being of individuals, i.e., whether responses in behavior will be adequate to buffer the shortfalls in benefits and whether this would be the case across all groups of workers. Second, the response in individuals' behavior determines the size of benefit cuts required for a reform of Social Security. If all workers decided to work longer to make up for the shortfall then Social Security revenues would increase more than if workers decided to make up for the shortfalls by reducing spending, but otherwise sticking with their retirement (and Social Security claiming) plans in the absence of reform. For some workers additional Social Security contributions would only result in a minor increase of their annual Social Security benefits whereas for others the increase in benefits would be larger, depending on the worker's earnings history.

Despite the relevance from a policy perspective, very little is known about how people would adjust their behavior in case of a reform that would decrease their Social Security benefits. Workers have two main ways to respond: they can work longer and/or save more. In the absence of additional constraints, economic theory predicts that individuals should adjust both their saving and the length of their working life. However, it has been difficult to show empirically how important each one of these dimensions is and how these interact. Most studies focus on only one dimension of adjustment, either on the response to savings or on the response to labor force participation, but rarely on both. Broadly speaking, there are three types of empirical studies on this topic: *within* country studies, *cross*-country studies, and those adopting a structural approach. An important challenge for *within* country studies is that there tends to be no exogenous

variation in Social Security rules that could be exploited unless there is a major reform and adequate data covering the period before and after. However, policy makers would like empirical studies to inform the design of a reform *before* enacting it, rather than after. They therefore have to contend with evidence from other countries that have implemented reforms. Examples of within country studies are Attanasio and Rohwedder (2003) for the U.K., Attanasio and Brugiavini for Italy (2003), or Aguila (2008) for Mexico. Cross-country studies rely on variation in institutions, in particular retirement ages and pension formulas, as exogenous variation to identify the effects of interest. Gruber and Wise (1999 and 2004) adopt this approach to study the impact on labor force participation. Hurd, Michaud and Rohwedder (2008) use institutional variation in public pension schemes across countries to study variation in wealth accumulation.

Another way to assess individuals' responses to Social Security reform is to estimate a structural model and conduct policy simulations as in Gustman and Steinmeier (2007), but this is done at the cost of having to limit the set of covariates to keep the model tractable.

In this paper, we adopt a very different approach: we ask respondents directly what they will do in case of a cut of 30 percent of their Social Security benefits: whether they would work longer, claim Social Security later, reduce spending before retirement, and/or reduce spending after retirement. For each of these options we follow-up with questions to assess the size of the response. The success of such stated preferences questions to elicit responses that are as close as possible to individuals' actual behavior depends critically on the saliency of the event for respondents and whether they have already considered the scenario as a real possibility (McFadden, 1998). We argue that this is clearly the case in our context. The need for Social Security reform to restore the solvency of the program has been well advertised in the media and by political leaders for a number of years. Time and time again the message is repeated that under current law benefits will only be payable until about 2041. After that date only about 75 percent of benefits will be payable under the current structure of the system. Also workers' Social Security statements that are mailed out every year include this same message in bold face.

We collected these new data from a sub-sample of respondents to the Health and Retirement Study (HRS) who were interviewed over the Internet in the summer of 2007. We link their answers to the rich background information collected in the HRS core survey and to administrative Social Security earnings records.

We find that more than 75 percent of our respondents would definitely adjust their behavior in case of a 30 percent cut of their Social Security benefits. About a third report that they would only reduce spending, while another third report that they would both work longer and reduce spending, underscoring the importance of considering these options jointly. At a qualitative level, we find important differences in the response by sex, marital status, and socioeconomic status. Being male, living in a couple or being younger than 54 are associated with a significantly lower willingness to commit to reducing spending, while having an education at high school level or less and being in the lowest wealth tertile are associated with a higher willingness to commit to reducing spending. Working longer is more likely among respondents in the lowest Social Security Wealth tertile and the lowest tertile for other wealth, and less likely among couples.

We conduct a more detailed quantitative analysis of respondents' answers regarding delaying their claiming of Social Security benefits. On average Social Security claiming would be postponed by 1.13 years. If this time was spent working by everyone then the annual Social Security benefit would be adjusted upward due to additional earnings and due to less of an early claiming penalty or a higher delayed claiming credit. Rather than experiencing a 30 percent drop in the annual benefit, respondents would experience a 20 percent drop on average when taking into account their adjustments to claiming later and working longer.

1 Data: The HRS Internet Survey

The data on individuals' responses to a 30 percent Social Security benefit cut come from a module of the Health and Retirement Study Internet Survey which is a supplementary survey of the Health and Retirement Study (HRS). The HRS is a panel survey that is representative of the U.S. population age 51 and over. In the core survey the HRS collects data on close to 20,000 individuals and their spouses in about 13,000

households.[1] Eligibility for the second wave of the HRS Internet Survey, which we use in this study, is determined by whether a respondent reports regularly using the Internet in the core survey in HRS 2004 or HRS 2006. A random sub-sample of 7,207 respondents qualified, but only 77.5 percent were invited to participate in the Internet Survey; the remainder of the sample was retained as a control group.[2] The data for the second wave of the HRS Internet Survey was collected in two phases: the first part of the sample (34.4 percent or 1,919 respondents) was invited to participate in the spring of 2006 (Phase I) and the second part of the sample (65.6 percent or 3,667 respondents) was invited to participate in the summer of 2007.[3] In both phases the unit response rate, conditional on being invited to participate, was 70%.[4] We administered the module on Social Security reform in the second phase. A great advantage of the HRS Internet survey is that we can link respondents to the very rich information collected in the core HRS survey, such as earnings or job history.

The HRS Internet survey sub-sample eligible to answer the module on stated preferences is composed of respondents who at the time of interview did not yet receive Social Security benefits, but report a positive probability of receiving Social Security in the future. To find how representative the HRS Internet sample and our stated preferences sample are compared to the entire HRS population we compare their characteristics in Table 1. The first column shows the characteristics of respondents from the 2006 HRS core who do not currently receive Social Security benefits, the second column restricts the sample to those who are eligible to participate in the HRS Internet survey (wave II, phase 2) and do not receive Social Security benefits and the third column only includes our stated preferences sample. It shows that the stated preference sample and the Internet sample are closely comparable. Compared to all HRS respondents they tend to be

[1] More precisely, in 2004 the HRS interviewed 20,129 individuals in 13,645 households achieving a response rate of 87.8%; in 2006 HRS interviewed 18,469 individuals in 12,605 households and the response rate was 88.9%.
[2] The purpose of the control group is to allow HRS to study potential effects of participation in the Internet Survey on participation in subsequent interviews of the core survey.
[3] The reason for postponing the interview to a later second phase for one group of the sample was that this group had been previously assigned (at random) to participate in another supplemental study and would have had three HRS-related interviews within months of each other had their internet interview not been postponed.
[4] There were no breakoffs in phase I; however, in phase II a total of 60 respondents did not complete the entire survey.

slightly more educated and wealthier, but the differences are rather small. While generally Internet samples tend to be more educated and wealthier than the general population, which is also true in the case of the entire HRS Internet sample, this is not the case in our analysis. The reason is that we focus on respondents who do not yet receive Social Security, implying that our sample consists mostly of respondents age 65 or younger. At these younger ages there are no large differences by characteristics between Internet users and non-users. Note that the stated preference sample is not completely comparable to the other samples because the stated preference sample retains only respondents who report a positive subjective probability of receiving Social Security in the future and excludes those who report 0%. This subjective probability is not elicited in the core HRS (rather, a yes/no format question is asked) so that we cannot replicate the selection in an identical manner. Some of the differences in characteristics might therefore also be explained by this different selection criterion.

1.1 Survey Design

After a sequence of questions about respondents' expectations regarding their future Social Security benefits (timing of claiming and monthly amounts) we ask respondents how they would respond to a cut to Social Security benefits of 30 percent. In particular, we provide respondents with the following introduction:

> *In the next questions, we ask you to think about what you would do differently if everyone's Social Security benefits, including your own, were cut by 30 percent. Would you …?*

Figure 1 replicates the screen that respondents see on the survey and shows the various options presented to them: work longer (or return to work for respondents currently not working), claim Social Security benefits later, spend less before retirement or spend less after retirement. All options are purposely appearing on the same screen to ensure that respondents consider them jointly when answering. Respondents can answer "Definitely Yes", "Definitely No" or "Maybe" for each option. The answer "Maybe" is

introduced to allow for the fact that some respondents might still be uncertain about what they will do since their adjustment to a cut might depend on events that are not yet realized, such as health events, uncertainty about future earnings, stock market performance or job loss.

Item non-response on any of the options asked on the first screen is very low (see Table 2). It is less than 3 percent throughout, and less than 2 percent among respondents currently working for pay.

For each option to which they responded by "Definitely Yes" or "Maybe" we administered follow-up questions to elicit the magnitude of the adjustment that the respondent would envision:

- Work longer: *At what age would you expect to stop working*?
- Claim Social Security later: *At what age would you expect to start collecting Social Security benefit?*
  <We also collected a detailed visual elicitation of the subjective probability of claiming at various possible claiming ages.>
- Spend less before retirement: *By how much would you reduce your household spending?* (answer in percent or amount in dollars)
- Spend less after retirement: *By how much would you reduce your household spending in retirement compared to what you had anticipated it would be without the cut in Social Security benefits?* (answer in percent or amount in dollars)

1.2 Analytical sample

There are 1,020 observations in the stated preference sample. We exclude from the analysis in this paper respondents who are not currently working for pay (that is 178 observations) because this group responds in a very different manner to the Social Security benefit cut compared to those who are working for pay. However, the sample of non-workers is not big enough to study its responses in much detail. We therefore focus

on respondents who are currently working for pay. This results in an analytical sample of 842 observations.

1.3 Basic Response Patterns

Table 3 shows respondents' answers to the options "work longer" and "claim Social Security later." Working longer is undeniably an option considered by the vast majority of respondents in response to a 30 percent cut in benefits: 38 percent answered that they would definitely work longer, while 49 percent answered "Maybe." Only 13 percent completely disregard working longer as a potential adjustment. The answers to claiming Social Security later than originally planned follow a similar pattern: 22 percent answer "Yes" and 60 percent say "Maybe." In addition, respondents who answered "Yes" or "Maybe" to one of these adjustments tend to provide "Yes" or "Maybe" to the other. For example, among respondents who report "Definitely Yes" for claiming later, 82% also report "Definitely Yes" and 16% report "Maybe" to working longer. Similarly, respondents who answered "No" to one question are more likely to answer "No" to the other.

Table 4 shows the answers to the options "spending less before retirement" and "spending less after retirement." Respondents are more likely to "commit" (i.e., answer "Definitely Yes") to spending less in a longer time horizon, that is after retirement. Sixty-two percent of the respondents said "Definitely Yes" to reducing spending after retirement, compared to 41 percent to reducing spending before retirement. However, the difference of patterns of answers between spending less before or after retirement is due to complementary variation in the "Maybe"s and not due to large differences in the "No"s. Overall, more than 90 percent of respondents reported "Yes" or "Maybe" for spending less before or after retirement. Again, there is strong correlation in respondents' answers to the two options involving reductions in spending: respondents who answered "Yes" or "Maybe" to spending less before retirement are more likely to answer "Yes" or "Maybe" to spending less after retirement.

If we compare Tables 3 and 4, we conclude that respondents are more likely to consider spending less as an option. For example, only 4 percent would definitely not

reduce spending after retirement, compared to 13 percent who would definitely not work longer.

We are interested in examining all adjustment simultaneously. However, doing so is challenging because we consider four different options (work longer, claim Social Security later, spend less before retirement, spend less after retirement) and three answer categories (Definitely Yes, Maybe, Definitely No). This represents 81 possible combinations of answers. As noted earlier, the answers to working longer and claiming later are strongly correlated. In order to reduce the dimensionality, we combine them into one category which we will refer to as "working longer." Similarly, we found that spending less before retirement is correlated to spending less after retirement, so we also combine them into a "spending less" category. Table 5 illustrates the definition of the new variables of interest. The variable "Work longer" takes the value one if the respondent answered "Definitely Yes" to either "work longer" or to "claim Social Security later" and the value zero otherwise. Similarly, the second variable "reduce spending" takes the value one if the respondent answered "Definitely Yes" to either "reduce spending before retirement" or to "reduce spending after retirement" and zero otherwise. We are then left with analyzing respondents' four possible options: commit to neither adjustment, commit to both, only commit to spending less or only commit to working longer.

Table 6 shows the distribution of answers among these four options. The most frequent option is to only commit to spending less which is chosen by 34 percent of respondents, closely followed by committing to both which is chosen by 33 percent. The least preferred option is only committing to working longer (9 percent). A larger fraction of respondents are willing to commit to spending less (67 percent of respondents) compared to 42 percent who are ready to work longer.

Table 7 presents the distribution of answers for our analytical sample and respondents who are currently not working, that we have excluded from the main analysis. It highlights our earlier statement that the sample of respondents who are currently not working exhibit very different stated preferences: they are less likely to consider working longer (alone or jointly with spending less) as an option.

2 Multivariate Analysis of Qualitative Response

The response to a cut in Social Security benefits is likely to vary by individual and household characteristics. We investigate this in a multivariate framework using a bivariate probit model. This approach takes into account the fact that the decisions of whether to work longer or whether to reduce spending are determined jointly. As before, the dependent variable "work longer" takes the value one if the respondent answered "Definitely Yes" to either "work longer" or to "claim Social Security later" and the value zero otherwise. Similarly, the second dependent variable "reduce spending" takes the value one if the respondent answered "Definitely Yes" to either "reduce spending before retirement" or to "reduce spending after retirement" and zero otherwise. In addition to basic demographic characteristics we include among the independent variables tertiles of Social Security Wealth and of other wealth. Social Security Wealth is constructed as the expected present value of future Social Security Benefits derived from respondents answer to the question "how much do you expect your Social Security benefits to be?" Other wealth includes all bequeathable wealth, including housing, financial assets, other real estate, transportation, and business assets minus all debt. It does not include the value of Social Security and employer pensions. Table 8 shows the estimation results.

Being male, living in a couple or being in the age band "younger than 54" are associated with a significantly lower willingness to commit to reducing spending. A higher willingness to commit to reducing spending is associated with having a spouse who is more than a year older, education at high school level or less, being in the lowest wealth tertile and giving a high subjective probability that one's own Social Security benefits will be cut some time over the next 10 years. Saying "definitely yes" to "work longer" is significantly more likely among respondents in the lowest Social Security Wealth tertile, in the lowest tertile for other wealth and with a high subjective probability of one's own Social Security benefits being cut some time over the next ten years. However, couples are significantly less favorable towards working longer. Note that we find no significant differences by the respondent's own age for working longer. To assess the magnitude of the variation by characteristics we compute the associated marginal effects. Figures 2 through 6 give a graphical representation of the marginal effects for the characteristics with significant coefficients in the regression. Each graph

shows the likelihood relative to the reference group of the four combinations of the two binary outcomes: committing to neither; committing only to working longer; committing only to spending less, and committing to both working longer and spending less. They illustrate clearly that respondents largely make adjustments along both the working AND the spending dimension underscoring the importance of considering these jointly.

For example, in Figure 2, respondents in the lowest Social Security wealth tertile are over 6 percent more likely to commit to both working longer and spending less than the reference group, that is, people in the highest tertile. Conversely, those in the lowest tertile are almost four percent less likely than the reference group to commit to neither. As one would expect, the response of those in the second Social Security wealth tertile lies in between that of the lowest tertile and the reference group. The response by tertile of other wealth (Figure 3) shows the same pattern, but the magnitudes are larger. Those in the lowest wealth tertile are almost 15 percent more likely to commit to both working longer and spending less than the reference group of those in the highest wealth tertile.

Comparing the response of males compared to females (Figure 4) we find that males overall seem to dislike reducing their spending. They are more than six percent less likely to reduce spending. They rather commit to working longer (over three percent more likely) or commit to neither (four percent more likely). Figure 5 contrasts the response of couples to that of singles and shows that couples are substantially (18 percent) less likely than singles to commit to adjusting both dimensions, working longer and spending less. Instead, they are 12 percent more likely to commit to neither and 8 percent more likely to react by spending less.

The subjective probability of the respondents' own Social Security benefits being cut some time over the next ten years might reflect to what extent the respondent had already thought through the scenario of Social Security cuts prior to the interview. Individuals giving a high subjective probability on this question might therefore take the hypothetical scenario more seriously than those who give a low probability. In our sample 40 percent assess the chances of their own Social Security benefits being cut to be greater than 50 out of 100; 29 percent believe the chances are about 50/50 and the remaining 31 percent give a probability that is less than 50 percent. In the regression we distinguish the same three groups of respondents. Figure 6 shows the estimated marginal

effects. We find that indeed those with a high probability give a much stronger response than those with a low probability and that the response of those who give a 50 percent chance is in between the two. Respondents with a subjective probability of future Social Security benefits cuts greater than 50 percent are ten percent more likely to commit to working longer and spending less than those with a subjective probability of less than 50 percent, while they are about ten percent less likely to commit to neither. This could imply that if Social Security benefits were indeed cut by 30 percent the response in the population might be stronger than the one we estimate, because some fraction in our sample might have given less committal answers than if this scenario was real.

In summary, we find that there is substantial heterogeneity in the qualitative response to a 30 percent Social Security benefit cut, notably by sex, marital status and by socioeconomic indicators. There is also some suggestion that the effects we find might be underestimates compared to the response one might find if such a reform was in fact implemented.

3 Quantitative Assessment of the Response to Delay Claiming of Social Security Benefits

We now turn to quantifying individuals' response with respect to delaying claiming Social Security benefits. We focus on this particular aspect for two reasons: first, from the point of view of the Social Security program changes in the timing of claiming Social Security affect the finances and cash flow of the Social Security program directly and are therefore important in understanding the implications of the reform scenario. Second, the data for measuring the size of the response are the most detailed for the option "claim Social Security later."

We asked respondents who answered "Yes" or "Maybe" to the option of claiming Social Security later (see Figure 1) for a point estimate of their revised expected claiming age and also for the probability distribution of claiming at various possible ages using an innovative visual design. These follow-up questions took the following format (see Figures 7 through 9 for replications of the computer screens that respondents saw when answering these questions.):

"You said that you would consider claiming Social Security benefits later than originally planned.

At what age would you expect to start collecting Social Security benefits if Social Security benefits were cut by 30 percent? _____

<next screen>

Often people are uncertain about when they will start collecting these benefits. On the next screen we will show you 20 balls that you can put in eight different bins. Each bin stands for a particular age. Please put the balls in the bins to show the chances that you will start collecting at each age.

Figure 7 shows the screen that follows where respondents allocate the balls across the various bins. We developed this innovative visual format to elicit individuals' entire probability distribution of beliefs for the realization of an event (see Delavande and Rohwedder, 2008, for a methodological assessment of this approach). A main advantage of this approach is that it does not require respondents to be particularly proficient in the properties of probabilities; they just need to manage concepts as "more likely," "less likely" and what it means when there is no chance of something to happen. Respondents had a more detailed introduction to this "bins-and-balls" exercise when we elicited the same detailed probability distribution of respondents' expected Social Security claiming age, but without the reform scenario, earlier in the survey. Figure 8 replicates the introduction to that earlier elicitation of individuals' entire distribution of claiming ages and Figure 9 replicates the training example which we included at that time. As a result of these two elicitations – one without the reform scenario and one with the reform scenario – we have a prior and a posterior distribution for every respondents' subjective distribution of expected Social Security claiming ages. We use this information in two ways. First, we asses the aggregate response to the timing of Social Security claiming in the population. Second, we compute how much individual annual Social Security benefits change after taking into account that respondents might work longer and claim later.

3.1 Aggregate effect on the timing of Social Security claiming

We compute the average distribution of claiming ages in the population with and without reform by averaging the number of balls in each bin over all respondents. We also include those respondents who indicated that they would definitely not claim Social Security later by assigning them as the post-reform distribution of possible claiming ages the same distribution that they gave when asked for their distribution without reform. In Figure 10 we have converted these population distributions into cumulative distributions. The posterior distribution is located to the right of the prior distribution implying that at a population level respondents have shifted their expected timing of claiming towards claiming later. Integrating over the area between the two distributions yields the size of the aggregate response which amounts to a difference of 1.13 years in total. This implies that on average a 30 percent cut in Social Security benefits would prompt people to claim Social Security 1.13 years later.

One question arises with respect to the group that said "Maybe" to the option of claiming Social Security benefits later. What did they assume when allocating the balls across the bins to indicate their revised distribution of expected claiming ages? Did they provide the distribution conditional on the event that they might postpone claiming so that we would need to know the chances that they would postpone for deriving the unconditional distribution or did they provide the unconditional distribution in the first place? The question wording gave no indication that they should have given the conditional distribution. To shed light into this issue we compared the posterior distribution of those who said "Definitely Yes" to that of those who said "Maybe." We find that the posterior distribution of the Yes's is substantially further to the right of the posterior distribution of the Maybes. We take this to suggest that respondents who answered "Maybe" did provide the unconditional distribution which is what we assumed when constructing the aggregate distribution in Figure 10.

3.2 Impact on Respondents' Annual Social Security Benefit

The vast majority of workers claims Social Security at the same time as they retire from their job. Assuming that claiming Social Security later would also imply working

longer by the same length of time, respondents would increase their Social Security benefits due to two effects:

- additional earnings entering the calculations of their benefits;
- a smaller early claiming penalty or a higher delayed claiming credit.

The size of the benefit increase due to additional earnings will vary across individuals due to differences in their earnings histories. For about half the sample we are able to link respondents' data to their Social Security earnings records allowing us to assess the impact additional earnings would have on their benefits. Applying the exact Social Security formula to respondents' earnings histories we compute each respondents' Social Security benefit for each potential claiming age and weight the result by the respondents' subjective probability distribution of possible claiming ages using the prior distribution (i.e. without reform). This gives us the annual Social Security benefit the respondent would expect to receive *without* the reform scenario. In a second calculation we reduce the Social Security benefit associated with each claiming age by 30 percent and weight these applying the posterior distribution of expected claiming ages (i.e., the distribution respondents gave under the Social Security reform scenario). This gives us the annual Social Security benefit would expect to receive *with* the reform scenario. We use the individuals' expected annual Social Security benefit with and without reform to compute the change ((SS with reform – SS without reform) / SS without reform). Respondents who said they would definitely not delay claiming Social Security benefits are assigned a change of minus 30 percent. Averaging this change over the entire population (and not just those who considered delaying claiming) we find that individuals' annual Social Security benefit would be 20 percent lower on average once we take into account their response to the reform. In other words, individuals' response of working longer and claiming later would make up for about one third of the initial 30 percent cut in benefits. However, this average masks the substantial heterogeneity in the population. Table 9 shows the deciles of the distribution of changes in annual Social Security benefits in the population. These span from minus 30 percent for those who said they would definitely not claim later to minus 9 percent at the 90^{th} percentile.

4 Conclusions

Using stated preferences data we analyze what individuals in their 50s and 60s say they would do if everyone's Social Security benefits were cut by 30 percent. In particular, we investigate whether individuals would work longer or reduce spending or both. More than 75 percent of our respondents report that they would definitely adjust their behavior in case of a benefit cut. About a third report that they would only reduce spending, while another third report that they would do both work longer and reduce spending. About 9 percent would only consider working longer as a response to the cut in benefits.

There is substantial heterogeneity in the response by sex, marital status, education and wealth. Being male, living in a couple or being younger than 54 are associated with a significantly lower willingness to commit (i.e. say "definitely yes") to reducing spending, while having an education at high school level or less and being in the lowest wealth tertile are associated with a higher willingness to commit to reducing spending. Being in the lowest Social Security Wealth tertile and the lowest tertile for other wealth and being single are associated with a higher willingness to commit to working longer.

Analyzing respondents' answers regarding delaying their claiming of Social Security benefits, we find that Social Security claiming would be postponed by 1.13 years on average in response to a 30 percent Social Security benefit cut. Working longer and claiming Social Security later would compensate partially for the loss in benefits. We find that respondents would experience on average a 20 percent drop rather than the 30 percent drop in the annual benefits.

The results of this study provide unique information on individuals' responses to a Social Security reform that would implement a cut of 30 percent of benefits. Note however that we observe variation in the strength of individuals' responses as a function of their subjective probability of the chances that their own Social Security benefits would be cut some time over the next ten years. Respondents who give a high subjective probability for this event are more likely to commit to working longer and reducing spending. It is possible that respondents with lower subjective probabilities for the event of Social Security reform cutting their own benefits would respond more strongly should this event occur in real life than indicated by their responses in our survey in the context

of a hypothetical situation. Should this be the case then our results would be underestimates of the full response in the population.

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Figure 1: Main Screen from the Internet survey asking about individuals' responses to a 30 percent Social Security benefit cut

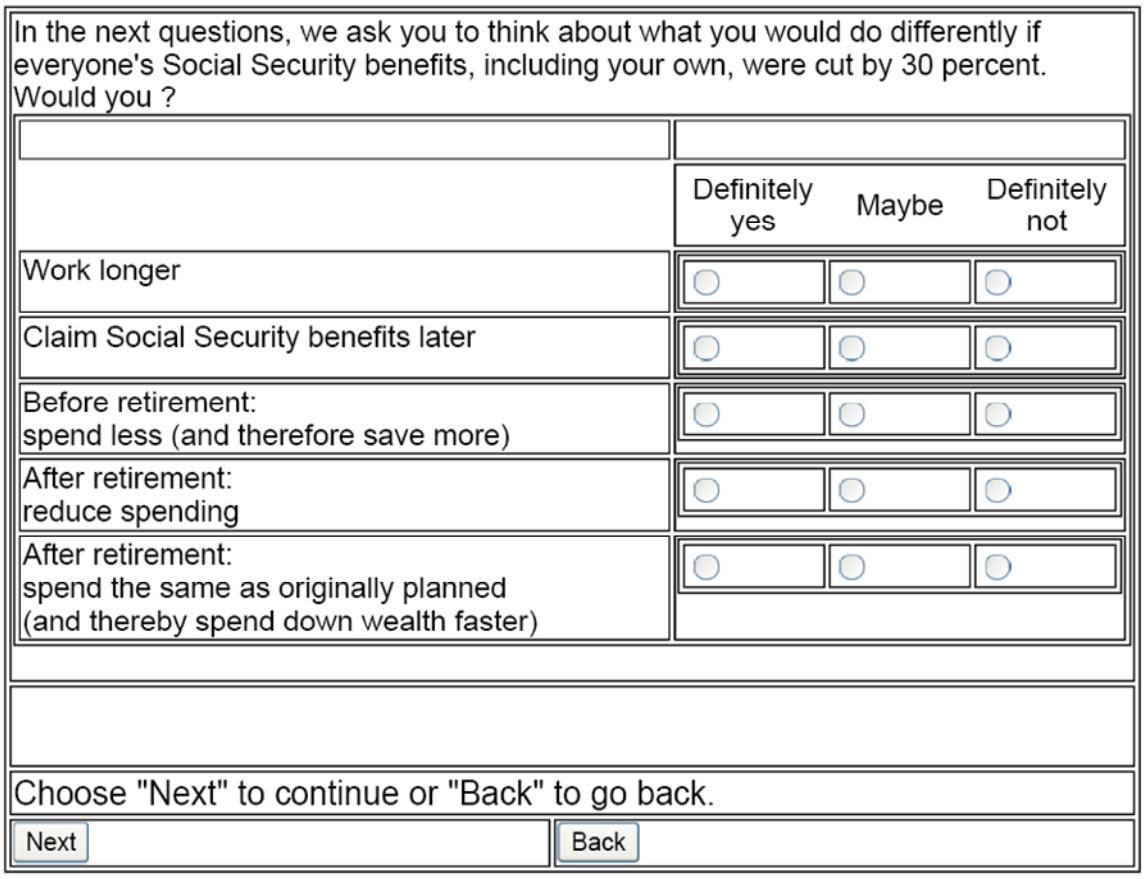

Figure 2:

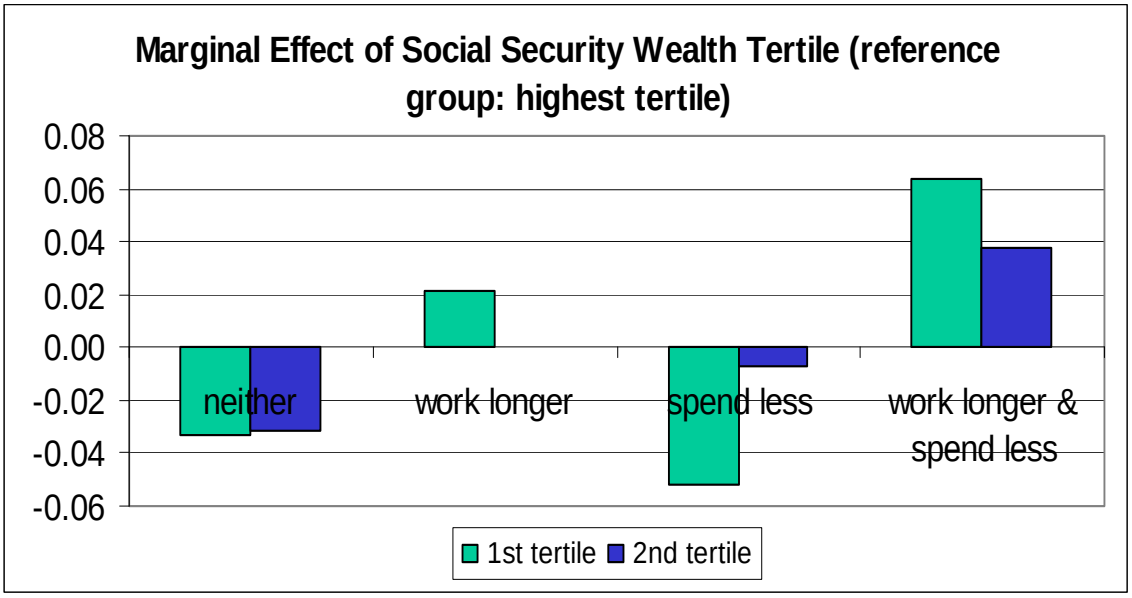

Figure 3:

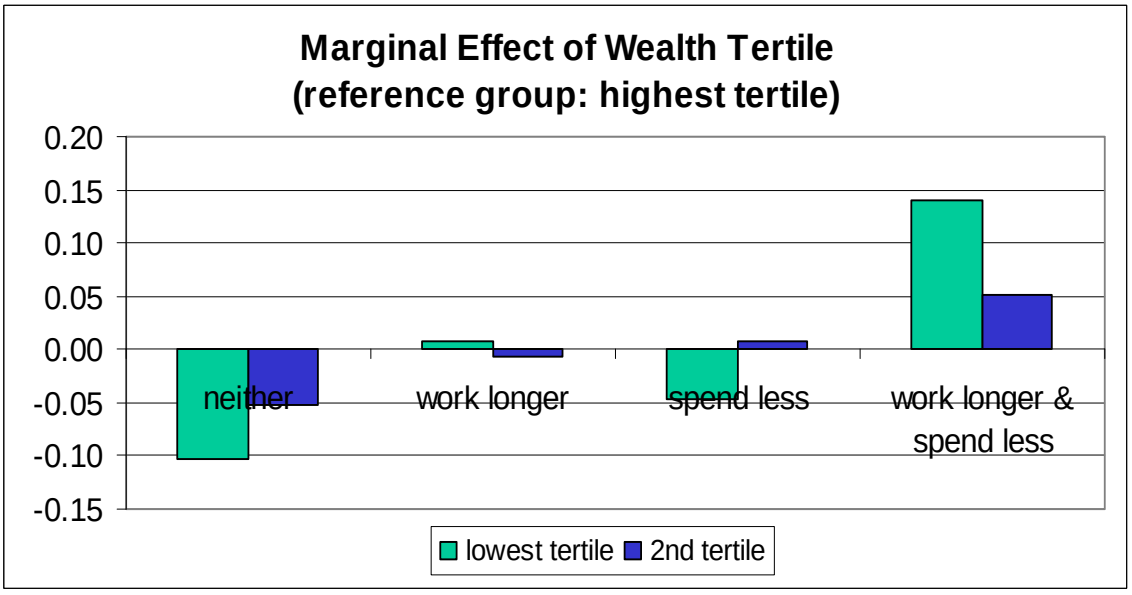

Figure 4:

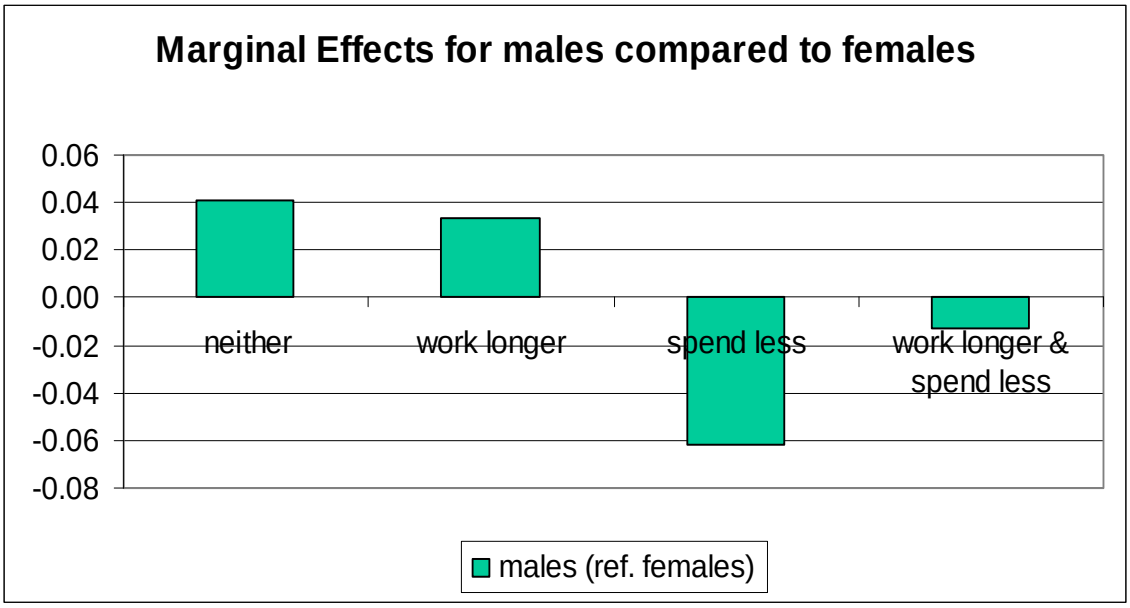

Figure 5:

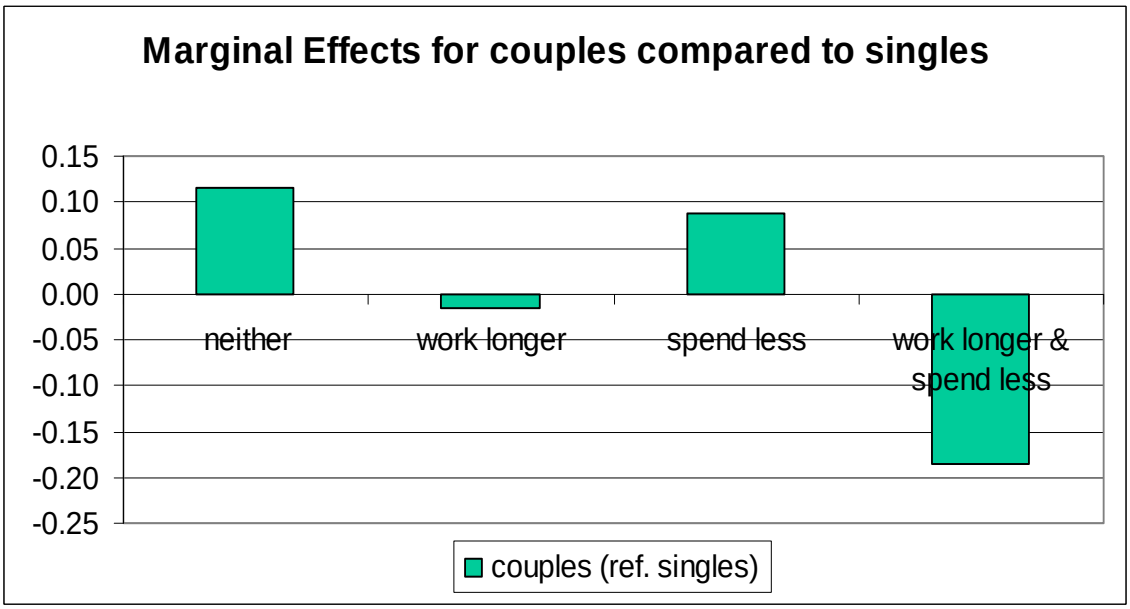

Figure 6:

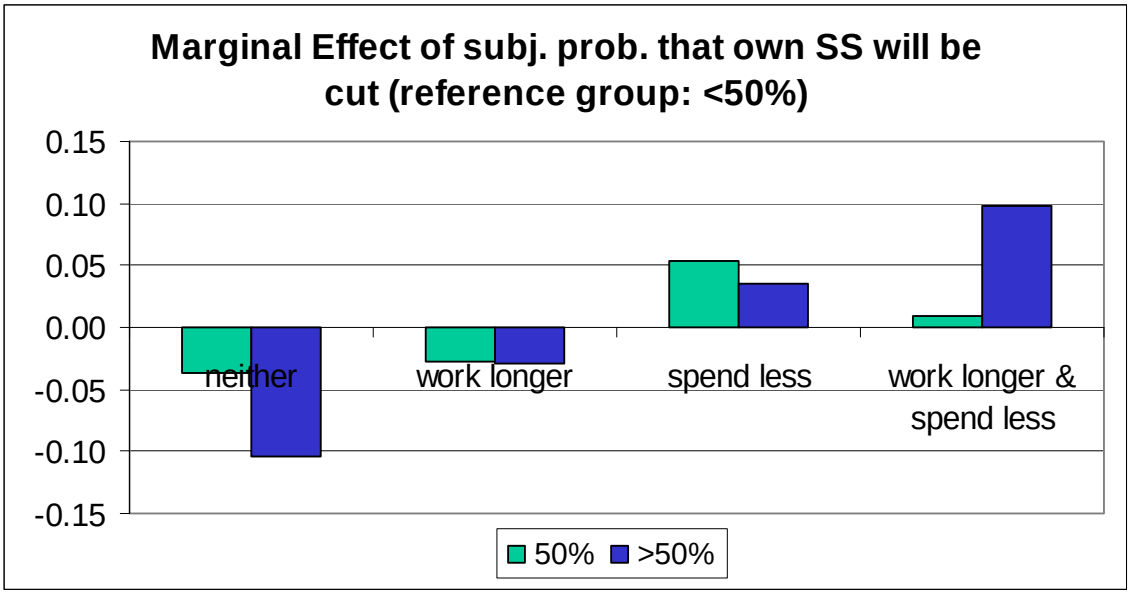
Marginal Effect of subj. prob. that own SS will be cut (reference group: <50%)
0.15
0.10
0.05
0.00
-0.05
-0.10
-0.15
neither
work longer
spend less
work longer & spend less
50%
>50%

Figure 7:

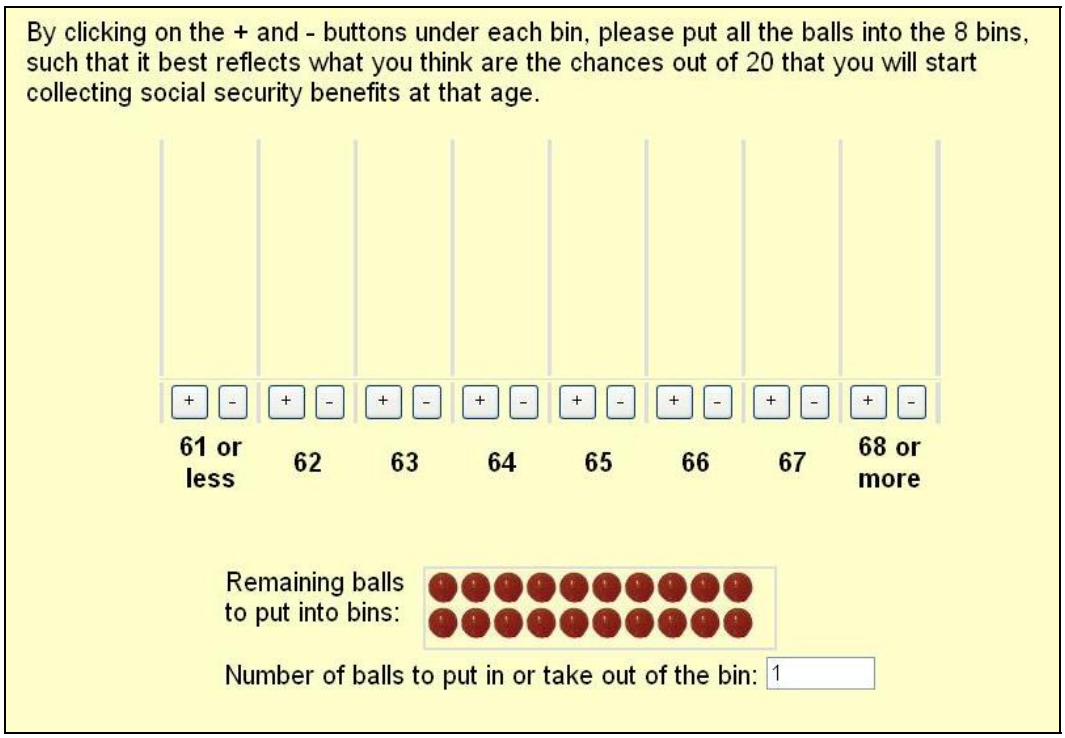

Figure 8:

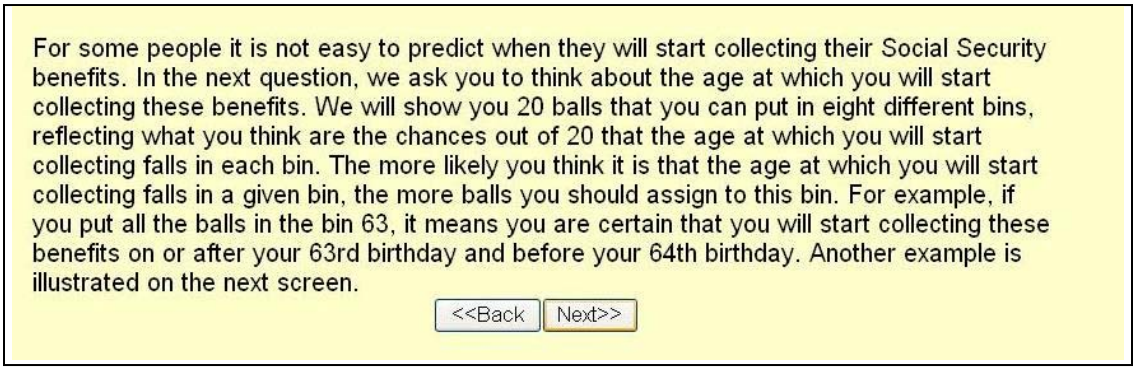

Figure 9:

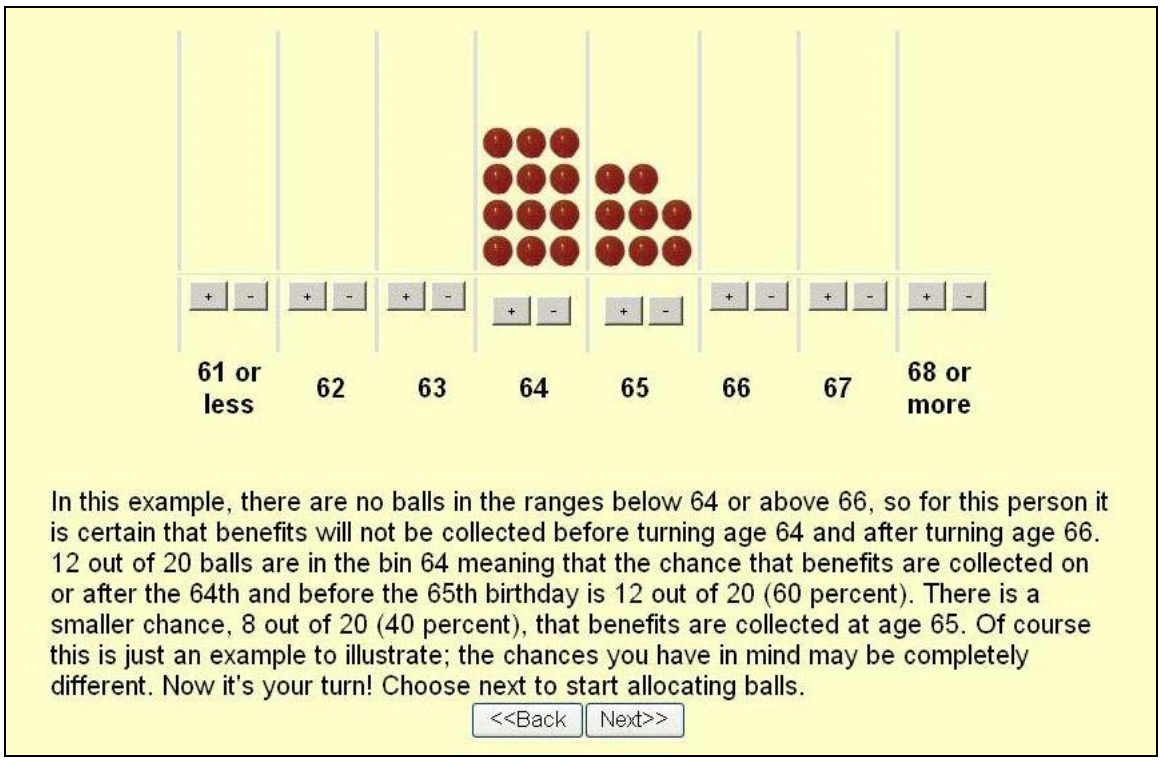
61 or less
62
63
64
65
66
67
68 or more
In this example, there are no balls in the ranges below 64 or above 66, so for this person it is certain that benefits will not be collected before turning age 64 and after turning age 66. 12 out of 20 balls are in the bin 64 meaning that the chance that benefits are collected on or after the 64th and before the 65th birthday is 12 out of 20 (60 percent). There is a smaller chance, 8 out of 20 (40 percent), that benefits are collected at age 65. Of course this is just an example to illustrate; the chances you have in mind may be completely different. Now it's your turn! Choose next to start allocating balls.
<<Back
Next>>

Figure 10:

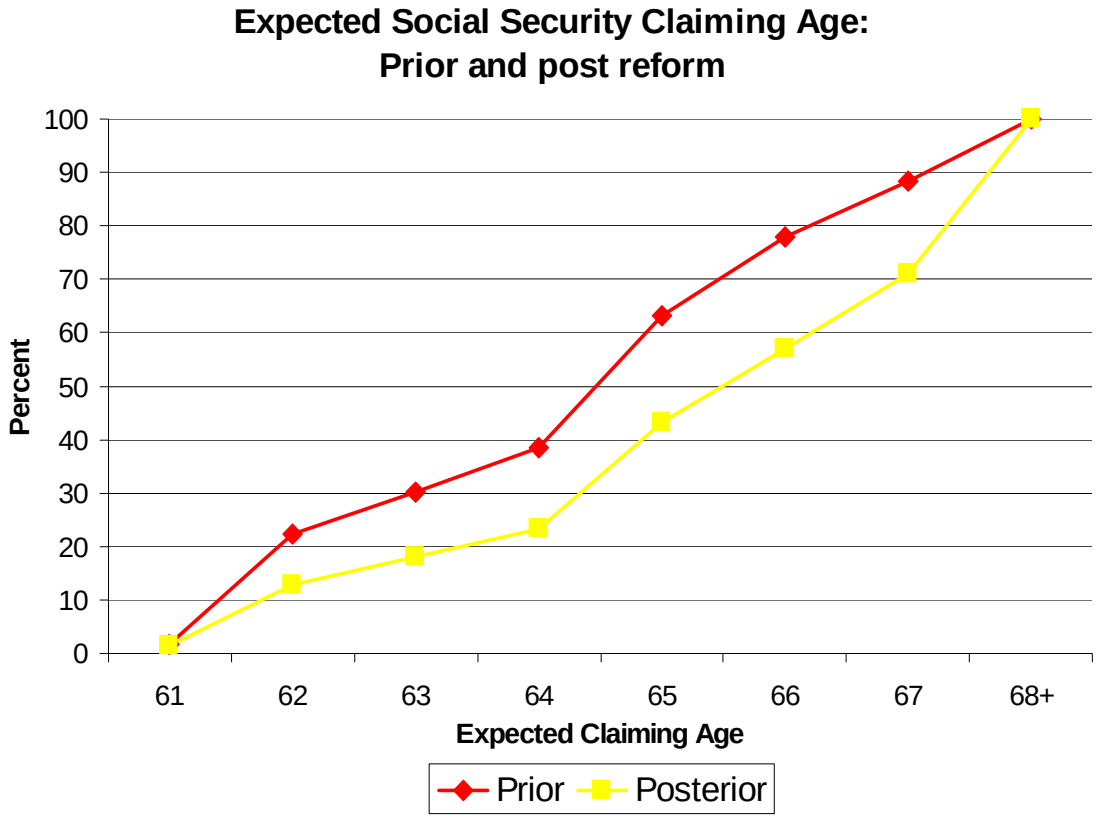
Expected Social Security Claiming Age:
Prior and post reform
Percent
100
90
80
70
60
50
40
30
20
10
0
61
62
63
64
65
66
67
68+
Expected Claiming Age
Prior
Posterior

Table 1: Sample Characteristics

Variable	HRS Core 2006, No Social Security	Internet eligible, No Social Security	Stated preference sample
	N=5529	N=3355	N=1020
Age in July 2007	58.111	57.985	57.357
Male	0.487	0.474	0.476
Years of education	13.593	14.518	14.558
Wealth Quartile	2.561	2.808	2.795
Work for pay (core)	0.783	0.831	0.863
Work for pay, HRS Internet data	.	.	0.817

Table 2: Item non-response on main stated preference questions, in percent

	Currently Working for Pay		
	Yes	No	All
Working longer	1.0	0.0	0.8
Claim Social Security later	1.8	1.1	1.7
Reduce spending before retirement	2.0	2.8	2.2
Reduce spending after retirement	1.9	1.7	1.9

Table 3:

	Claim Social Security later			
Work longer	Definitely YES	MAYBE	Definitely NO	All
Definitely YES	47.3	43.9	8.8	100.0
	82.0	27.9	19.2	38.3
MAYBE	7.4	79.6	13.1	100.0
	16.4	64.9	36.3	49.1
Definitely NO	2.9	34.6	62.5	100.0
	1.6	7.2	44.5	12.6
Total	22.1	60.2	17.7	100.0
	100.0	100.0	100.0	100.0

Table 4:

Before Retirement:	**After retirement: reduce spending**			
spend less	Definitely YES	MAYBE	Definitely NO	All
	296	43	1	340
Definitely YES	87.1	12.7	0.3	100
	58.4	15.4	2.8	41.3
	36	5.2	0.1	41.3
	197	209	13	419
MAYBE	47	49.9	3.1	100
	38.9	74.6	36.1	50.9
	23.9	25.4	1.6	50.9
	14	28	22	64
Definitely NO	21.9	43.8	34.4	100
	2.8	10	61.1	7.8
	1.7	3.4	2.7	7.8
	507	280	36	823
Total	61.6	34	4.4	100
	100	100	100	100
	61.6	34	4.4	100

Table 5: Scheme for reducing dimensionality

	"Work longer" dimension:		
	= 1 if Definitely YES to work longer or claim SS later		
		0	**1**
"Reduce Spending" dimension: **= 1 if** Definitely YES to ↓ spending before retirement or ↓ spending after retirement.	**0**	**Commit to neither**	**Only commit to working longer**
	1	**Only commit to reducing spending**	**Commit to both**

Table 6: Distribution of Responses to Working Longer and Reducing Spending, reduced dimensionality

		Work longer = 1 if YES to work longer or claim SS later		
		0	1	All
Reduce Spending = 1 if YES to Reduce spending before or after retirement	0	196	78	274
		71.5	28.5	100.0
		40.9	22.4	33.1
		23.7	9.4	33.1
	1	283	271	554
		51.1	48.9	100.0
		59.1	77.7	66.9
		34.2	32.7	66.9
	All	479	349	828
		57.9	42.2	100.0
		100.0	100.0	100.0
		57.9	42.2	100.0

Table 7:

	Working	Not working
Commit to neither	23.7	38.6
Work longer	9.4	4.0
Spend less	34.2	42.1
Work longer & spend less	32.7	15.3
All	100.0	100.0

Table 8: Bivariate Probit

	Work longer		Reduce spending	
Right-hand variables	Coefficient	P-Value	Coefficient	P-Value
Male	0.052	0.623	-0.205	0.058
Couple	-0.512	0.000	-0.287	0.046
Age <54	0.078	0.528	-0.246	0.054
55-59	(ref)		(ref)	
60 or older	0.180	0.135	0.027	0.829
Spouse's age				
> 1 year younger	0.315	0.021	0.058	0.671
within one year	(ref)		(ref)	
> 1 year older	0.211	0.117	0.268	0.051
High school or less	-0.025	0.834	0.356	0.005
Some college	-0.003	0.975	0.098	0.374
College or more	(ref)		(ref)	
Social Security Wealth				
Lowest tertile	0.219	0.063	0.033	0.784
Second tertile	0.099	0.371	0.087	0.444
Highest tertile	(ref)		(ref)	
Other Wealth				
Lowest tertile	0.379	0.002	0.263	0.037
Second tertile	0.118	0.270	0.159	0.143
Highest tertile	(ref)		(ref)	
Own health: fair or poor	-0.242	0.187	-0.070	0.712
Spouse's health: fair or poor	-0.063	0.706	-0.128	0.450
Probability own SS benefits cut				
< 50 %	(ref)		(ref)	
= 50%	-0.047	0.689	0.170	0.154
> 50 %	0.176	0.110	0.372	0.001
Constant	-0.267	0.076	0.262	0.092

Number of observations = 826

Regression also included an indicator for missing values on Social Security wealth.

Table 9: Distribution of changes in annual Social Security Benefit taking into account individuals' response to reform

Percentile	Centile
10	-0.300
20	-0.292
30	-0.269
40	-0.245
50	-0.225
60	-0.196
70	-0.169
80	-0.137
90	-0.091

N= 353

Mean = -0.205