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THE EFFECT OF LIFETIME INCOME DISCLOSURES ON RETIREMENT SAVINGS

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EXECUTIVE SUMMARY

Given the widespread transition from defined benefit (DB) to defined contribution (DC) retirement plans, Americans increasingly face the challenge of assessing whether their saving behavior is likely to provide a secure retirement. Appropriate saving choices in one's working years requires understanding how current saving choices translate into income in retirement, which requires a high level of financial sophistication. Using a large-scale field experiment involving university employees, we measure how an intervention designed to inform individuals about the relationship between current contributions and retirement income affects their saving behavior. We find that individuals sent an informational mailing regarding how contributions translate into retirement income along with general retirement planning and enrollment information increased their annual contributions by approximately \$85 per year, on average, relative to individuals who were not sent a mailing. Our results suggest that projections of how current contributions generate retirement income can influence the level of contributions into tax-deferred saving plans, and that people do not fully understand how saving today translates into income in retirement. The fact that people who were sent information about this translation *increased* their rate of saving suggests that, on average, people tend to overestimate the level of retirement income that current saving generates and, therefore, may save less than intended. This finding is of interest to policymakers as it suggests that a similarly-designed, widespread policy initiative may modestly increase retirement savings.



Financial Services

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FROM RETIREMENT SAVINGS TO RETIREMENT INCOME

The well-documented shift toward defined contribution (DC) retirement plans requires individuals to manage their own retirement security. As a result, many Americans must make choices about their retirement saving faced with uncertainty about future rates of investment return, inflation, health status, income, and other factors and about how current contributions will translate into retirement income. This kind of projection and planning is challenging for the financially sophisticated, much less those who struggle with basic financial concepts.

As illustrated in the diagram below, there are two main steps involved in evaluating whether one's current saving choices will provide a secure retirement. First, an individual must project how large an account balance she will have at retirement based on her current age, saving rates, and assumptions on investment returns and retirement age. This period can be thought of as the *accumulation phase* of retirement planning. Second, an individual must determine how much annual income this account balance can finance in retirement such that the money will last through her retirement years. This period can be thought of as the *decumulation phase*. Judging whether current contributions are likely to finance an individual's desired lifestyle in retirement requires understanding both the accumulation and decumulation phase for the input values that seem likely. If an individual assesses her contributions to be inadequate, she would consider increasing her saving rate.



An increasing number of studies show that Americans' financial literacy is limited, even with respect to basic financial concepts. Given this, is there a role for public policy? The U.S. Congress is considering policies aimed to help Americans assess their level of retirement saving, including the recently proposed Lifetime Income Disclosure Act (S. 267; HR. 1534). This Act would require DC plan administrators to annually provide income disclosures that include the projected annual income an individual's current retirement savings would provide if the accumulated assets were annuitized at retirement. The proposed policy has bipartisan and commonsense appeal as it may help people make more informed decisions at a relatively low cost. In particular, employers may see tailored financial education as a less costly alternative to automatic enrollment, which increased in prevalence after the passage of the Pension Protection Act in 2006.

However, the extent to which information disclosures would affect saving behavior is unknown. On one hand, income disclosures may be pivotal in highlighting under- or over-saving. Converting account balances into terms of annual retirement income may provide information that many Americans would find useful. This information may lead Americans to take time to make a broad assessment of their financial situation, to revise their savings plans, and to get more on target to hit their retirement goals.

On the other hand, there are two factors that cast doubt on the potential effectiveness of income disclosures. First, the large influence of default options on retirement saving choices provides evidence of widespread inertia in retirement planning. Even if Americans find the income disclosures informative, they may not change their saving choices due to this inertia. Second, while this policy aims to improve understanding, it may have unintended consequences. Inherent in any policy that provides income disclosures will be assumptions regarding contribution rates, investment returns, and one's retirement age used to calculate the projections. This raises the possibility that the effects of the policy on saving may

differ depending on the assumptions used. In addition, the assumptions may inaccurately distort individuals' beliefs about these values, for example, by reducing the perceived uncertainty of future rates of investment returns or anchoring beliefs on a particular value. This could lead people to make worse decisions.

THE IMPACT OF LIFETIME INCOME DISCLOSURES

We recently led a new study, conducted in cooperation with the University of Minnesota, that measured how providing a retirement income projection affects individuals' retirement saving contributions. This report is based on some of the findings from that study. A complete set of results can be found in Goda, Manchester, and Sojourner (2013).

DESCRIPTION OF STUDY

Our study involved faculty and staff at the University of Minnesota who were eligible to participate in either of two Voluntary Retirement Plans (VRPs), each of which allows employees to make tax-deferred contributions of up to \$16,500 annually on top of their mandatory retirement plans. Our sample consisted of nearly 17,000 employees dispersed among 1,385 departments across 5 different campuses and extension offices. The study took place between October 2010 and May 2011.

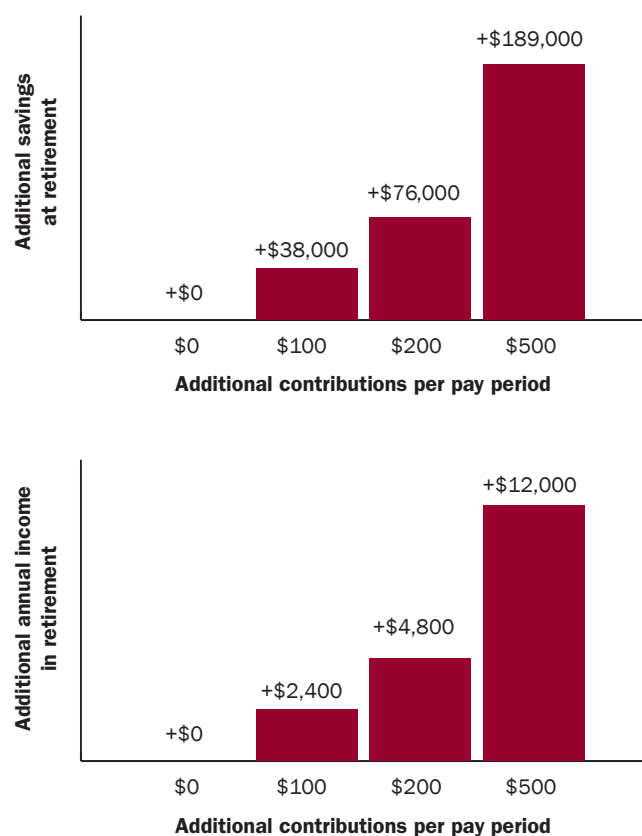
We took an experimental approach and randomly assigned employees into either a control group or a treatment group. The treatment group was sent an informational intervention that we designed, while nothing was sent to the control group. The informational intervention consisted of a four-page color brochure sent through internal mail. The first page prompted individuals to think about their retirement goals and general information about saving for retirement. The second page contained a customized projection of the account balance achieved and retirement income projections from different hypothetical additional contribution levels. Figure 1 illustrates how the information was displayed to the employees in the treatment group. We framed the projection as the effect of hypothetical increases in savings because it describes the marginal decision individuals face and because we did not observe employees' current asset levels. Finally, the brochure also provided a step-by-step guide of how to either enroll in the plan for the first time or to change one's current contribution level.

The account balance and income projections were customized based on the employee's current age. Constructing the projections required assumptions about the rate of return on investments, retirement age, and contribution amount. To address the important policy question of how the effect of the intervention may differ with assumptions used, we randomized the assumptions used across individuals in order to test the effect of providing different rates of return, retirement ages, and additional contribution amounts on different saving outcomes.^{1,2}

1 The assumed investment return was 3 percent, 5 percent or 7 percent and we used two different retirement ages: 65 and 67. The set of hypothetical additional contribution used in the projection was either {\$0, \$50, \$100, \$250} or {\$0, \$100, \$200, \$500} per pay period.

2 Individuals in the treatment group were also provided with access to an online customization tool designed to mimic the information provided in the brochure, but with the added ability to adjust assumptions regarding marital status, expected retirement age, and expected investment returns. Visitors to the online tool could add in other sources of retirement income and expected Social Security benefits to get a more comprehensive picture of their retirement savings portfolio.

FIGURE 1
EXAMPLE PROJECTIONS FOR AN INDIVIDUAL IN THE TREATMENT GROUP



FINDINGS

We measure the effect of our informational intervention by comparing changes in saving outcomes of individuals in the treatment group to those in the control group. This method is superior to one that involves sending the treatment materials to all employees because in that case we could not say whether changes in saving behavior were influenced by the treatment or by something else that changed in the environment during the time of the intervention (for instance, economy-wide conditions). Furthermore, by randomizing employees into the treatment group, we ensure that any difference in saving behavior is not due to inherent differences in the group's composition.

We measured the effect of our intervention on contributions to VRPs using administrative records prior to and following the informational intervention. We compared whether people in each group made changes in their contributions to VRPs and the size of any changes made using four measures constructed for each employee:

- *Any change in participation status*, which indicated whether VRP participation status in Period 1 (October 2010) is different from participation status in Period 2 (April 2011);
- *Any change in contribution election*, which indicated whether any change was made in the contribution amount, including changes in participation status;
- *Change in contribution (rate)*, which measured change in the contribution rate as a percent of salary; and
- *Change in contribution (amount)*, which measured the change in the annual contribution dollar amount.

The graph in Figure 2 show the percentage of employees in the control and treatment groups who changed their participation status or their contribution election, adjusting for differences in gender, age, salary, tenure, faculty status, and campus location across the two groups. The informational intervention had an effect on behavior. People in the treatment group were 29 percent more likely to make a change in their participation or contribution election relative to the control group.

FIGURE 2
CHANGES IN PARTICIPATION STATUS AND CONTRIBUTION ELECTION ACROSS TREATMENT GROUPS

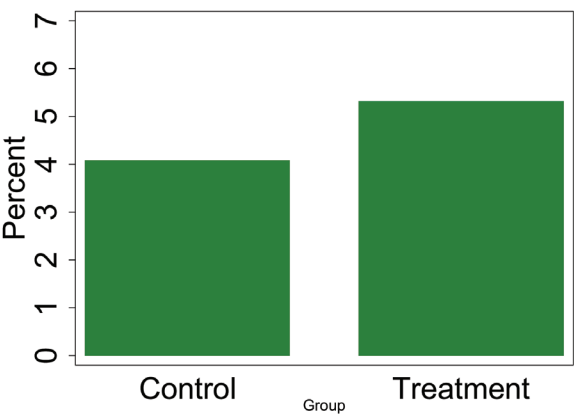
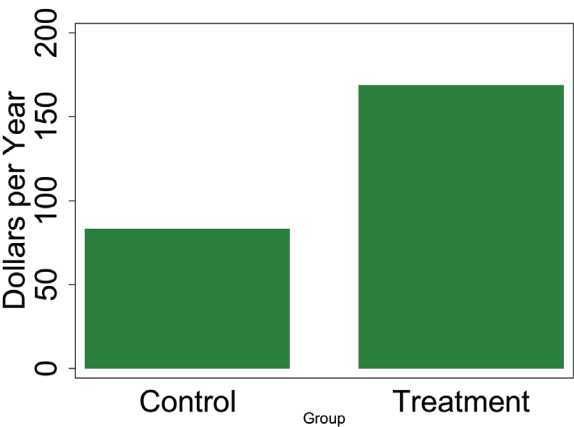


Figure 3 depicts the average changes in contribution amounts for the two groups as a change in the annual dollar amount contributed. The treatment group increased contributions by an average of \$85 per year more than the control group did. This represents an increase of about 3.6 percent of the average level of contributions in Period 1.

FIGURE 3
CHANGE IN CONTRIBUTION LEVELS ACROSS TREATMENT GROUPS



Interestingly, we found that the effect of the intervention on saving differed depending on the assumptions used in the projections. Individuals sent projections that used higher contribution amounts (i.e. increments of \$100 versus increments of \$50) made significantly larger increases in their contribution levels. In addition, we found evidence that individuals sent projections based on the later retirement age of 67 had significantly larger increases relative to those based on age 65; this effect was concentrated among employees who were non-participants prior to the intervention. Both findings indicate that employees are more likely to increase their savings rates when they are sent higher-value projections, which underscores the important role the assumption guidelines will have on the impact of such income disclosures.

In order to generate insight into which components of the treatment generated the effects observed, we also randomly assigned other employees to two separate partial-treatment groups in addition to the groups described thus far. The differences between these groups are highlighted in Table 1. A *planning* treatment group was sent all the same general information on setting retirement goals and how to change one’s current contribution level, but all personalized retirement balance or income projections (i.e. the graphs shown in Figure 1) were omitted. A *balance* treatment group was sent these same materials plus a projection of account balance at retirement (Figure 1, top panel), but the retirement income projection (Figure 1, bottom panel) was omitted. Individuals sent the partial or full treatments were more likely to make a change in their contribution election relative to the control group, suggesting that the difference between the treatment and control groups in the likelihood of making a change was due to receiving materials about retirement planning more generally. However, the planning group showed no evidence of a systematic increase in their level of savings and, while the balance group experienced a statistically significant increase, it was less than that experienced by the treatment group. Therefore, our findings suggest that the information contained in the full income projections led people to increase their level of savings.

TABLE 1
DESCRIPTION OF INFORMATION SENT TO VARIOUS TREATMENT GROUPS

	CONTROL	PLANNING	BALANCE	INCOME
General information on savings for retirement and signing up for VRP		X	X	X
Customized information regarding conversion of hypothetical additional contributions to additional account balance at retirement			X	X
Customized information regarding conversion of hypothetical additional contributions to additional income in retirement				X

Note: Employees in the Control group received no information, while employees in the Planning, Balance, and Income treatment groups were sent information as indicated by the X-mark.

While the effect of the disclosure on contribution levels was modest, the intervention may have had a larger impact on the saving process by improving the employees’ ability to assess their financial security. We supplemented our experiment with a follow-up survey of employees to explore the impact of the intervention on additional aspects of the saving decision-making process. Among survey respondents, those in the treatment group were more likely to report having recently engaged in retirement planning, feeling better informed about retirement planning, and feeling more certain about the amount of income they expect to have in retirement compared to those in the control groups.³ In addition, individuals in the treatment group reported greater satisfaction with their financial condition. These results indicate that, among survey respondents, individuals sent the income disclosure were systematically more likely to achieve important milestones in the saving decision-making process. We did not, however, find evidence that individuals in the planning and balance groups, who received partial interventions, differed from the control group in their responses to our follow-up survey questions about the saving process.

3 The response rate for our survey was 22 percent and differs in some observable dimensions from the overall sample. Despite the selected sample, we do not find evidence that there are systematic differences across our experimental treatment groups among survey respondents.

DISCUSSION

Our findings indicate that providing income disclosures along with general retirement planning information induces individuals to increase their savings. If there had been no effect of the treatment on contributions, we would have concluded that the relationship between saving and retirement income may be well-understood. However, given that the treatment group increased their level of contributions by an amount greater than the control group, our experiment suggests that people may not fully understand how rates of saving translate into retirement income. The direction of the change in the saving rate shows that in the absence of information about the relationship between saving and retirement income, people save less. This result is consistent with the idea that people tend to overestimate the amount of annual retirement income that results from current contributions and, consequently, under-save relative to what they would do with a better understanding.

An important part of any policy aimed at requiring the disclosure of retirement income projections is the decision about what assumptions will be used in the calculation. Assumptions regarding the rate of investment return and retirement age affect the magnitude of the projected values and could affect people's responses to the information or beliefs about those uncertain future values. In addition, any hypothetical contribution amounts used to illustrate the projections may anchor and affect the behavior of individuals. Our analysis, using randomly-assigned variation in the assumptions used, shows some evidence that people respond differently to different assumptions.

CONCLUSIONS

With more and more individuals relying on defined contribution retirement plans, much of the responsibility for retirement security is in the hands of individuals. Optimal retirement saving behavior in this current landscape requires an understanding of how current contributions will translate into income in retirement.

We evaluate the effect of an intervention aimed at increasing individuals' understanding of this relationship using a large-scale field experiment. We find that individuals sent informational materials on retirement savings and plan enrollment increased their level of contributions relative to those were not sent a mailing, but the average increase was only statistically meaningful among those whose mailing also included information on the accumulation and decumulation phases of retirement planning. This finding suggests that people tend to, on average, overestimate the amount of annual retirement income supported by current saving rates. Furthermore, the results indicate that the amount by which an individual responds is somewhat sensitive to the assumptions used in formulating the projected savings at retirement and income in retirement.

The results of our study are relevant to policies aimed at helping individuals better understand the relationship between saving today and income in retirement. For instance, the U.S. Congress is considering the Lifetime Income Disclosure Act (S. 1145; HR 2171), which would require DC plan administrators to annually disclose the value of a lifetime annuity, that is, the stream of monthly retirement payments that a plan participant could purchase at retirement given his or her current retirement savings.

While our study is the first to evaluate the effect of this type of information on saving behavior, our intervention differs in some dimensions from these recent policy initiatives. In particular, our intervention was a one-time mailing, while the proposed initiative would likely include information in every quarterly statement. Second, the population we examined, University of Minnesota employees, already engages in a relatively high amount of mandatory saving and is more highly educated than the national population. Both of these factors might be expected to dampen the effect of income disclosures compared to one implemented nationally. In addition, our projections were based on hypothetical additional contributions rather than current contribution rates or asset levels. Finally, while the policy proposes that DC plan administrators send information to account holders only, our intervention was also sent to individuals not currently contributing in the voluntary retirement saving plan.

REFERENCES

Goda, Gopi S., Colleen F. Manchester, and Aaron J. Sojourner. (2013). "What's My Account Really Worth? The Effect of Lifetime Income Disclosure on Retirement Savings." Working Paper.

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