Summary: The Effect of Providing Peer Information on Retirement Savings Decisions

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We report the results of a field experiment that evaluates a social norms marketing approach to influencing retirement savings decisions. Social norms marketing campaigns aim to encourage a behavior by informing individuals that the behavior is prevalent among their peers. We find some evidence that social norms marketing can increase savings rates, but our overall results suggest that social norms marketing may have limited power and can even produce the opposite of the intended effect in important settings.

Theoretical work on peer effects suggests that an individual may mimic her peers' actions because those actions reflect private information unavailable to the individual yet relevant for her payoffs (Banerjee, 1992; Bikhchandani, Hirshleifer, and Welch, 1992; Ellison and Fudenberg, 1993), because peers' actions contain information about social norms from which deviations are costly due to social sanction or identity considerations, (Akerlof, 1980; Bernheim, 1994; Akerlof and Kranton, 2000), or because of strategic complementarities (Glaeser and Scheinkman, 2003). Empirical research has documented that peer effects have a large impact in a range of settings, and our paper joins the line of work that asks whether peer effects can be harnessed by policymakers hoping to encourage certain types of behavior.

Our field experiment was conducted at a large manufacturing company and included all non-participating and low-saving U.S. employees of the firm between the ages of 20 and 69. Non-participants were defined as employees who were eligible for but not participating in the company 401(k) plan, and low savers were defined as employees who were participating in the plan at a before-tax contribution rate less than both their employer match threshold and 6%.[1] In August 2008, these targeted employees received letters encouraging them to enroll in or increase their contribution rate in the 401(k) plan. By checking a box on the letter and returning it to the company, employees would begin contributing 6% of their pay to the plan. Previous work has shown that these simplified enrollment and contribution escalation mechanisms significantly increase savings plan contributions (Choi, Laibson, and Madrian, 2009; Beshears et al., 2006).

We randomly assigned employees to three peer information conditions. Employees in the first condition received letters containing no peer information. In the second condition, the letters offered information about the aggregate savings decisions of coworkers in the recipient's five-year age category (e.g. ages 25-29). In the third condition, the letters were identical to those in the second condition, except they offered information about coworkers in the relevant ten-year age category (e.g. ages 20-29). For non-participating recipients in the peer information conditions, the letter stated the fraction of coworkers in the five-year or ten-year age category who were already enrolled in the plan; for low-saving recipients in the peer information conditions, the letter stated the fraction of plan participants in the five-year or ten-year age

[1] The match threshold, which is the minimum employee contribution rate at which an employee receives all available employer matching contributions, varied from employee to employee. For many employees (including all non-unionized employees), it was equal to 6%.

category who were already contributing at least 6% of pay to the plan. For all age groups, these peer information numbers were greater than 70%.

We use plan administrative data to track contribution rate changes over the two months following our mailing. We measure the effect of the *presence* of peer information by comparing the extent to which employees in the peer information treatment groups increased their contribution rates against the corresponding behavior of the control group. We also estimate the effect of the *magnitude* of the peer information number that employees saw. To do this, we exploit two sources of variation. First, two employees of the same age were exposed to different peer information numbers if one was randomly assigned to a peer comparison group with coworkers in her five-year age category and the other to a peer comparison group with coworkers in her ten-year age category. Second, if two employees were similar in age but on opposite sides of a boundary separating adjacent five-year or ten-year age peer comparison groups, those employees would see different peer information numbers because of the discontinuity at the boundary.

Employees in our study naturally fell into four subpopulations: (1) unionized non-participants, (2) non-unionized non-participants, (3) unionized plan participants with low contribution rates, and (4) non-unionized plan participants with low contribution rates. We evaluate unionized employees separately from non-unionized employees because the latter were automatically enrolled in the retirement savings plan at a 6% contribution rate unless they opted out, while unionized employees were not subject to automatic enrollment. Prior research has found that automatic enrollment has a large impact on 401(k) enrollment, contribution rates, and asset allocations because employees often passively accept the default options (Madrian and Shea, 2001; Choi et al., 2002 and 2004). Non-unionized employees at our study firm who passively accepted the 6% contribution rate default did not receive letters. Therefore, among the four subpopulations who received a mailing, only unionized non-participants had never made an active 401(k) savings decision; the other three subpopulations had actively chosen their low savings rate.

We find that the effect of peer information in our experiment was mixed. Among non-unionized non-participants, exposure to peer information increased the likelihood of enrolling in the plan from 0.7% to 3.4%, and among the subset of non-unionized non-participants who received peer information, a one percentage point increase in the reported fraction of peer coworkers already enrolled in the plan increased the response rate by 0.9 percentage points. Both effects are statistically significant at the 10% level. However, the impact of peer information was reversed among unionized non-participants: the presence of peer information decreased the enrollment rate from 10.4% to 6.5%, and a one percentage point increase in the peer information number reduced the likelihood of enrollment by 1.8 percentage points, with both effects statistically significant at the 5% level. We do not find statistically significant effects among either unionized or non-unionized participants with low contribution rates.

The negative response of unionized non-participants to peer information is somewhat surprising. This contrary reaction is probably not due to their learning that their coworkers had a lower plan participation rate than expected, since the enrollment rate and contribution rate changes of

unionized non-participants were also decreasing in the size of the peer information value they received. We discuss three possible explanations for these findings.

First, unionized non-participants may have perceived their optimal savings behavior to be negatively correlated with that of the coworkers used to construct the peer information number. Because unionized workers constitute only one quarter of the firm's workforce, company-wide 401(k) participation rates largely reflect the choices of non-unionized workers. If union employees identify themselves in opposition to non-union employees, they may prefer savings choices that are atypical by company standards. The difficulty with this hypothesis is that it does not parsimoniously explain why unionized participants with low initial contribution rates did not exhibit similar contrary behavior. One would need to additionally assume that unionized participants' oppositional identity is weaker than that of unionized non-participants.

Second, unionized non-participants may have believed, due to an antagonistic collective bargaining relationship with the firm, that savings messages sent to them by the company were likely to be counter to their own best interests. A related explanation, in line with psychological reactance theory (Brehm, 1966), is that mistrust caused unionized non-participants to perceive the peer information as coercive, leading them to act contrary to the peer information in an effort to assert their independent agency. This set of hypotheses also suffers from the inability to parsimoniously explain the results we obtain for unionized participants. Furthermore, it is not clear why the inclusion of peer information would induce greater mistrust relative to the control letter, which also strongly encouraged 401(k) participation, nor why mistrust would be increasing in the magnitude of the peer information value.

Finally, unionized non-participants may have been discouraged and demotivated by the size of the gap between their savings behavior and their peers'. This single mechanism would lead to negative effects from both the presence and the size of the peer information value. The weakness of this hypothesis is that it does not parsimoniously explain non-unionized workers' reactions. One must additionally assume that non-unionized workers are less susceptible to such discouragement, allowing the social learning effect to dominate within that population. However, an advantage of this hypothesis is that is offers a natural explanation for our results for unionized participants. Because unionized participants are already contributing to the plan, the gap between their savings behavior and their peers' is relatively small. We would therefore expect unionized participants to experience less discouragement and to exhibit a weaker reaction than unionized non-participants when they receive peer information. Of course, despite this hypothesis's advantages, it is possible that other explanations are primarily responsible for the different responses to peer information exhibited by the unionized and non-unionized non-participants.

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