Social and Financial Incentives for Overcoming Collective Action Problems

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Abstract

We study the effect of social and financial incentives on communities' ability to overcome collective action problems. Our specific context is a sample of 107 villages (approximately 19,000 households) in rural Bangladesh, and the collective action problem we study is investment in hygienic latrines and their subsequent maintenance and use. We randomized (1) whether and what type of incentive was provided – a financial reward or a non-financial "social recognition" reward, and (2) whether and what type of verbal commitment the households were encouraged to make – a private pledge vs. a public pledge. We measure short-term (3 months) and medium-term (12-15 months) effects, and investigate the mechanisms behind the effects.

The sample consists of 19,271 rural households in 107 villages in 4 unions (sub-districts) of Tanore district, Bangladesh. The 107 study villages were further divided into 1,236 groups of approximately 14-17 neighboring households, roughly 4-16 groups per village, and the intervention was conducted at this group level. While the unit of intervention was the group, treatment was randomized at the village level. There were 23 control villages (4,069 households, 256 groups) in which no intervention was conducted. All 980 treatment groups (15,202 households, 84 villages) received a common intervention consisting of a group-level meeting every month for 3 consecutive months with a health motivator to encourage investment in, maintenance of, and use of hygienic latrines. We randomized two different aspects of the encouragement: (1)whether and

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what type of incentive was provided, and (2) whether and what type of verbal commitment the households were encouraged to make. In the incentive dimension, households were provided either (a) no incentive, (b) a financial reward based on both the household's sanitation status and the group's average status at the end of the program, or (c) "social recognition", in which the household received a certificate of hygiene attainment from the local government, again based both on the household's sanitation status and the group's average status at the end of the program.The study area was chosen in part because of its low level of latrine coverage: at baseline, 30.8% of households reported some level of open defecation among adults,and only 50.4% reported that they had access to a hygienic latrine.

Preliminary reduced form estimates suggest that a small financial reward has the strongest impact. There is approximately a 10% increase in hygienic latrine ownership in villages in this treatment arm compared to control villages. The public commitment treatment, in which members would publicly commit to have a hygienic latrine at the end of a group meeting, induced an approximately 5% increase in hygienic latrine ownership. These effects are statistically significant at 1% level. The reward certificate treatment, in which group members were promised a 'certificate' for their individual and group compliance, had a relatively modest impact of around 2.5% increase (with p-value: 0.05) in hygienic latrine ownership (compared to control villages). However, this effect is not stable across specifications. The results suggest that some of these low-cost interventions that take advantage of social network dynamics can be included into existing group-meeting based health programs popular in developing countries, with potentially large effects.