Microeconomics II

April 20, 2020

Christopher Balding

Brief Introduction and Expectations

- We are going to be doing this via Zoom let us try and interact as much as possible despite the limitations we face

- I fully expect you to interact and be ready to ask questions throughout this class

- If you have questions, *please* ask. Whether it is because you need me to explain the English, speak slower, review the idea in greater detail *please* ask question. It does you no good to listen me lecture on these ideas and papers not understanding anything. *Ask* questions.

- I will call on you. Be prepared to answer questions.

- We want to focus on ideas and how you as a policy maker will approach problems you will face.

Nudge theory suggests consumer behaviour can be influenced by small suggestions and positive reinforcements.

Behavioral Economics and Nudge Theory

- Behavioral economics starts from a simple assumption: people are irrational
- This is actually a major break with traditional economics which assumes that people are rational economic agents
- Behavioral economics then attempts to research individuals based upon observing their individual behavior
- Questions start at very simple places but seek to have real insight into behavior: how price sensitive are consumers for milk? What if the milk is in red box or a blue box?
- A lot of behavioral economics expands into why consumers may not behave rationally in their choices

Behavioral Economics and Nudge Theory cont.

- Nudge theory expanded on behavioral economics into how to promote good decision making

- If people are irrational and will make bad decisions, how can we help them make good decisions?

- As policy makers we want to "frame" a decision or "nudge" people into making good choices

- Policy makers can frequently set the agenda for a decision so that actual decision makers are choosing from a constrained set

Would You Like to Supersize Your Order?

Where Do Grocery Stores Put The Highest Margin Products?

Putting Calories on the Menu Changes Eating Habits

Does "nudging" work and how can policy makers nudge consumers to make better decisions?

Indian Savings

- The possibility to provide banking services through mobile networks allows a rapid decrease in the number of unbanked adults in developing countries. In India, the government has made it a priority to provide a bank account to all households in the country. The next step is to pay public transfers directly into the recipient's bank account, instead of in cash.

Indian Savings

- We hypothesize that savings behavior will change once people receive income into a bank account, especially in an economy where most transactions are handled in cash. We know from other contexts that the default option—the outcome that results when people do not make an active choice—is a strong predictor of human behavior. When people are paid into their account, money is saved by default, unless they take the active decision to withdraw. By contrast, transfers given in cash are ready to be spent, unless people make the active choice to deposit, to keep cash under the mattress, or to save in other assets.

Indian Savings

- As a result of India's financial inclusion policies, formal banks have started operating in villages that were previously unbanked. We sampled 442 villagers in 17 of those villages. All of them either had an account, or opened one with our help. As a next step, we organized a practical information session for the 442 participants in the study. We showed them how to deposit and withdraw, and demonstrated how a fingerprint recognition tool protects their money. Once the villagers were familiar with the features of their account, we started weekly interviews that we conducted for about ten consecutive weeks.

Indian Savings

- At the end of each interview, the villagers received Rs 150, an amount equivalent to the salary for a day of work under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). The only difference was the payment method: we randomly allocated them to being paid into the account (treated) or in cash (control). The interviews provided detailed information on the financial life of the respondents. This allowed us to measure the impact of a differential payment method on expenditures and on savings tools, in addition to the bank account for which we obtained bank records.

Indian Savings

- The setting of the experiment is ideal. First, the transaction costs are negligible, and the bank is located at the villager's doorstep….Finally, the accounts are individually owned, do not require a minimum balance or any other commitment, and the clients are free to deposit or withdraw the amount they want. Therefore, if the individuals in our study behave like standard economic agents, we should not observe a difference in the savings behavior of the treated as compared to the control.

Indian Savings

- Our main findings contradict this. First, being paid into the account instead of in cash increases the account balance by around 131 percent (or Rs 463) after three months of weekly payments. Second, the effects are long lasting: five months after the last weekly payment, the balance of the treated is still twice the one of the control. Third, the villagers who were paid in cash do not save more in other assets, such as cash at home…we conclude that the treatment has a net positive impact on the respondent's total savings. Finally, the effects are uniform across different subsamples. The treatment has similar effects on men and women, and on old and new account holders, two characteristics on which we had stratified our sample.

Indian Savings

- We interpret our findings as the outcome of the default option: the account-based payments are saved by default, while the cash payments are ready to be spent unless the recipient takes the active step to deposit, to put aside money at home, or to save in other tools. We use our experimental design and rich data—from several surveys, lab experiments, and bank account details—to provide evidence that the default effect can be explained by a lack of self-control, and—to a certain extent— by transaction costs, i.e., the (minimal) time and effort it takes to do a transaction.

Indian Savings

- In the region where we conducted our survey, Axis bank appointed the financial inclusion company Basix Sub-K as a BC. Basix Sub-K, which is our main partner, is one of the pioneers in the BC model and already reaches 980,000 people. Its main responsibilities are selecting one grocery shop owner per village to become the BCSA, training the new local banker, and providing the necessary equipment: a mobile phone, a finger print recognition device, and a receipt machine that are interconnected through bluetooth. Basix Sub-K also pays the BCSA, helps wherever needed, and provides a customer service for the clients.

Indian Savings

- We use four sources of data. First, our baseline survey included questions on characteristics of the participants and their household members, such as education, marital status, occupation, land ownership, and membership of savings groups…Second, Basix Sub-K provided data on the use of the BCSA accounts…Third, we gathered detailed information on the evolution of the household composition and on all the expenditures of the household members over the past seven days…Finally, we conducted an endline survey to update the information from thebaseline.

Indian Savings

- When people are paid into their account, money is saved by default, unless they take the active decision to withdraw. By contrast, transfers given in cash are ready to be spent, unless people make the active choice to deposit or to save in other tools. As a result, a change in the payment method may affect savings and expenditures. Phase 1 of our experiment is designed to test this hypothesis.

Indian Savings

- We estimate the impact of being paid into the account by running the followingregression:

(1) $Y_{ij} = \beta_0 + \beta_1 T_{ij} + \beta_2 X_{ij} + V_j + \epsilon_{ij}$,

where Y_{ij} is a measure of the savings or expenditures of individual i in village j ; T_{ij} is a dummy indicating the respondent was paid into the account during Phase 1; and X_{ij} is a vector of baseline characteristics, which includes all but the last two variables that were presented in Table 1. We estimate equation (1) both with and without these individual controls. V_j are village fixed effects that control for differences in time-invariant unobservables across villages, and ε_{ij} is the error term.

Indian Savings

- We use four sources of data. First, our baseline survey included questions on characteristics of the participants and their household members, such as education, marital status, occupation, land ownership, and membership of savings groups…Second, Basix Sub-K provided data on the use of the BCSA accounts…Third, we gathered detailed information on the evolution of the household composition and on all the expenditures of the household members over the past seven days…Finally, we conducted an endline survey to update the information from thebaseline.

Indian Savings

- We use four sources of data. First, our baseline survey included questions on characteristics of the participants and their household members, such as education, marital status, occupation, land ownership, and membership of savings groups…Second, Basix Sub-K provided data on the use of the BCSA accounts…Third, we gathered detailed information on the evolution of the household composition and on all the expenditures of the household members over the past seven days…Finally, we conducted an endline survey to update the information from thebaseline.

Indian Savings

- We use four sources of data. First, our baseline survey included questions on characteristics of the participants and their household members, such as education, marital status, occupation, land ownership, and membership of savings groups…Second, Basix Sub-K provided data on the use of the BCSA accounts…Third, we gathered detailed information on the evolution of the household composition and on all the expenditures of the household members over the past seven days…Finally, we conducted an endline survey to update the information from thebaseline.

Indian Savings

- We use four sources of data. First, our baseline survey included questions on characteristics of the participants and their household members, such as education, marital status, occupation, land ownership, and membership of savings groups…Second, Basix Sub-K provided data on the use of the BCSA accounts…Third, we gathered detailed information on the evolution of the household composition and on all the expenditures of the household members over the past seven days…Finally, we conducted an endline survey to update the information from thebaseline.

Indian Savings

- We use four sources of data. First, our baseline survey included questions on characteristics of the participants and their household members, such as education, marital status, occupation, land ownership, and membership of savings groups…Second, Basix Sub-K provided data on the use of the BCSA accounts…Third, we gathered detailed information on the evolution of the household composition and on all the expenditures of the household members over the past seven days…Finally, we conducted an endline survey to update the information from thebaseline.

Indian Savings

- We use four sources of data. First, our baseline survey included questions on characteristics of the participants and their household members, such as education, marital status, occupation, land ownership, and membership of savings groups…Second, Basix Sub-K provided data on the use of the BCSA accounts…Third, we gathered detailed information on the evolution of the household composition and on all the expenditures of the household members over the past seven days…Finally, we conducted an endline survey to update the information from the baseline.

Indian Savings

- When people are paid into their account, money is saved by default, unless they take the active decision to withdraw. By contrast, transfers given in cash are ready to be spent, unless people make the active choice to deposit or to save in other tools. As a result, a change in the payment method may affect savings and expenditures. Phase 1 of our experiment is designed to test this hypothesis.
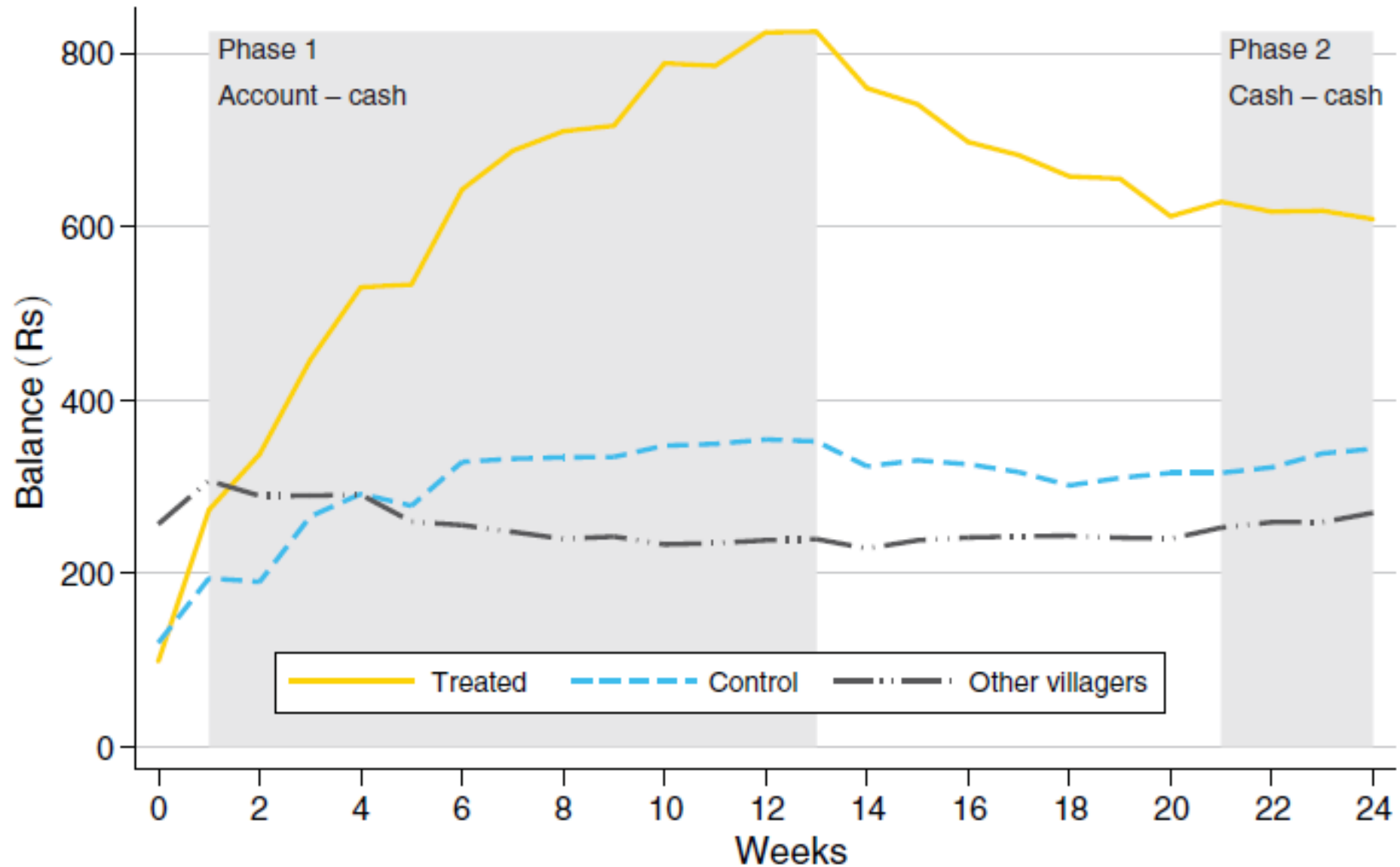
Indian Savings

FIGURE 1. EVOLUTION OF THE ACCOUNT SAVINGS OF THE TREATED AND CONTROL

Indian Savings

- We estimate the impact of being paid into the account by running the following regression:

- (1) $Y_{ij} = \beta_0 + \beta_1 T_{ij} + \beta_2 X_{ij} + V_j + \epsilon_{ij}$,

- where Y_{ij} is a measure of the savings or expenditures of individual i in village j ; T_{ij} is a dummy indicating the respondent was paid into the account during Phase 1; and X_{ij} is a vector of baseline characteristics, which includes all but the last two variables

Indian Savings

- With respect to consumption, there is a significant impact on frequent consumption only: the respondents paid in cash spend Rs 387 more. Remarkably, the size of the treatment effect is 84 percent of the impact on the respondent's final balance. The conclusion is similar for the impact on the conditional median: respondents paid in cash spend Rs 318 more, and have Rs 473 less in their account...In summary, these results confirm our hypothesis: respondents who are paid into the account save more, while respondents paid in cash spend more on frequently consumed goods. As there is no treatment effect on other savings, the respondents who were paid into the bank account have a higher level of savings at the end of our treatment.

Appendix Methodology

Methodology

- We estimate the impact on the conditional mean using ordinary least squares, and on the conditional median using quantile regressions. The latter is more robust to outliers. As the compliance is not perfect, we interpret the impact as intention-to treat estimates. Standard errors are calculated using nonparametric bootstrapping, but the significance levels are robust to the use of other methods (more details are provided in the online Appendix C).