

Between Intention and Action: An Experiment on Individual Savings

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ABSTRACT. This study provides experimental evidence about the barriers to adoption of formal savings in Africa. In collaboration with a large commercial bank, I conduct an experiment designed to measure the relative importance of convenience and information on the adoption of formal savings. When individuals can open an account at their place of business they are much more likely to open an account. Novel information about the benefits of savings has a slight but insignificant negative effect on account opening. While over half (55%) of individuals report an interest in opening an account when initially approached, only 2% of individuals are using the accounts 2 months later. I explore several potential explanations between individuals' self-reports of interest in the accounts and their later behavior. I argue that individuals' behavior in the experiment is consistent with social pressure to conform to the encouragement to open an account and some projection bias in predicting their future behavior. The results illustrate that for individuals struggling to save, encouraging enrollment in formal finance may be less effective than tools which help individuals follow-through with self-reported savings intentions.

PRELIMINARY AND INCOMPLETE: PLEASE DO NOT CITE

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I. Introduction

Many interventions in the developing world have relatively low take-up. Banerjee, Duflo, Glennester and Kinnan (2009) see an 8% increase in the take-up of microcredit loans from the offer of a new microcredit project in India. Cole, Gine, Tobacman, Topalova, Townsend and Vickery (2009) find 5-10% take-up of rainfall insurance in India. Ashraf, Karlan and Yin (2006) find 28% take-up of a standard commitment savings product in the Philippines and an 11% take-up of a smoking cessation commitment savings product among smokers.

Standard economic theory would imply low demand from these examples of low-take up. However, there is evidence that take-up can be driven by marketing. Dupas and Robinson (2009) see clear evidence of demand for savings accounts when they are offered during a door-to-door offer campaign (60% of those offered an account opened and used an account when offered). However, this apparently high demand during a marketing campaign cannot explain low take-up of accounts (0.5%) prior to the marketing campaign. It would appear that the marketing had a highly significant impact on take-up, whether by reducing transaction costs, providing information or increasing the motivation.

In this paper, I take advantage of a marketing campaign offering a new savings technology, formal savings accounts with reminders, to vendors in a market in Ghana. I randomize whether individuals receive information about the effectiveness of reminders and whether they can conveniently open new accounts at their place of residence. Among those who receive information, I randomize the information content so that individuals receive information that indicates either high or low increases in saving with reminders. I then examine how information and convenience influence the take-up and use of savings accounts.

The experiment makes two important contributions. First, I provide about the determinants of integration into formal finance. Second, I provide detailed evidence about how and why individuals' self reports about their intentions differ from their later action. This analysis has implications about the optimal marketing of products where individuals' are assumed to have behavioral biases.

A recent body of evidence has shown that access to savings accounts have a number of positive benefits including alleviate the burden of shocks and reducing debt for households in Chile (Abraham, Kast and Pomeranz 2011), increasing income from business investments in Kenya (Dupas and

Robinson 2009) and increasing assets in Nepal (Prina 2012). However, we know little about the predictors of demand for formal financial services. Evidence from Cole, Sampson and Zia (2010) suggests that financial education does not increase the take-up of financial service. Nonetheless, some financial products have been successful in the developing world, with Kenya's mobile money M-Pesa system growing to an almost 80% penetration rate (Jack and Suri 2012). This paper provides evidence about the effectiveness of different types of marketing of formal financial products: targeted information and increased convenience.

Previous studies on the effect of information on take-up have shown evidence that individuals who receive information about the returns to education positively update their beliefs and complete more years of schooling (Jensen 2010). Furthermore, information about the expected returns to schooling is more effective when delivered by a peer from the community (Nyugen 2010). These results show that specific targeted information about program benefits can encourage non-participants to participate in programs.

Evidence suggests that hassle costs, factors which make enrollment less convenient, can have a large impact on the take-up of social programs. Bertrand, Mullainathan and Shafir (2010) argue that seemingly small hassle costs from account opening may prevent individuals who would otherwise benefit from enrollment of savings accounts from realizing their full benefits.

Across all experimental treatments, there is a large divergence between individual self reports about their intention to open an account (55%) and their eventual behaviors with 12% of individuals opening an account and (2%) still using the account three months later. I find that individuals are less likely to report an intention to open an account but more likely to actually open an account when they can complete the process at work. Targeted information has little effect on the likelihood of opening an account, with some evidence that less optimistic information has a negative effect on opening and using an account. Individuals who receive less optimistic information are more likely to cite an intention to use another savings account as their reason for not opening an account with text message reminders.

I examine various hypotheses for the divergence between stated intentions and behavior. First, I present evidence that individuals' self reports about a desire to open an account are evidence of more

than just a demand effect to say what they believe a market hopes to hear. Over half of respondents whose stated intention to open an account are not borne out in their behavior bet on their own ability to save regularly when their beliefs are elicited using incentive compatible measures. The evidence is consistent with a large degree of projection bias (individuals incorrectly predict that they will use accounts) but don't follow through unless the costs are extremely low (accounts opened at their own place of business).

The evidence is also consistent with some version of social pressure, where individuals report what they expect the marketer wants to hear when the costs are low (when the action required to open an account is delayed). While individuals' elicited beliefs about the likelihood that they will save regularly are wildly wrong in magnitude they do predict relative differences in behavior. Among those who self report an intention to open an account, individuals who ultimately open an account report higher confidence that they will save regularly than individuals who do not. Individuals are likely to "lose motivation" to save when they indicate at baseline that they are intimidated by banks, have easy access to loans from friends and family and already have a good place to save. It could be that the costs of such an account outweigh the benefits, but individuals indicate an interest in the account because of the presence of the marketer. While the possibility of social pressure effects has recently been considered in the field of charitable fundraising (DellaVigna, List and Malmendier 2011; Andreoni, Rao and Trachtman 2012), this possibility has not been carefully considered in the context of the many marketing campaigns of governments and NGOs selling beneficial financial and health tools.

While recent theoretical research in behavioral economics has focused intensively on beliefs, with some exceptions empirical economists have long shied away from using data on subjective expectations because of the difficulty in collecting high quality data. In order to understand a divergence between reported intentions and ultimate actions, collecting accurate measures of individuals beliefs about their own behavior is crucial. Manski (2004) argues that subjective expectations are such a crucial component of individual decision making that economists should make more concerted attempts to measure subjective expectations. Delvande, Gine and Mackenzie (2009) review advances and challenges faced by development economists attempting to incorporate the measurement of ex-

pectations into research in the developing world. This paper represents a contribution to serious attempts to treat and measure beliefs as well as developing a new incentive compatible measure of individual confidence.

The role of beliefs also has a potentially important role to play in the design of randomized control trials. Chassing, i Miquel and Snowberg (2010) argue that evaluations face external validity concerns when the success of an intervention depends on an observable dimension (take-up) and an unobservable dimension (costly effort). The evidence provided here supports the view marketing campaigns, especially ones that are optimistic about the benefits of social programs may encourage greater take-up without translating into increased use of a product. The welfare benefits of door-to-door marketing campaigns may not be so clear if marketing campaigns tip the cost-benefit calculus in favor of benefits.

The remainder of the paper is as follows. I discuss the experimental design and hypotheses in Section 2. Section 3 presents the results and discussion. Section 4 provides a simple model of marketer social pressure. Section 5 concludes.

II. Experimental Design

In order to evaluate how information and convenience influence take-up of a savings account, I design an intervention that randomly assigns individuals to differing levels of convenience and different information about the benefits of saving.

Experimental Setting The experiment was conducted in Tamale, Ghana with Zenith bank, an international commercial bank located in Tamale, Ghana. The bank is located directly outside the market. The account has no minimum balance requirement, no transactions fees and no opening fee. The account provides a 3% annual interest rate. In order to open an account, individuals needed to fill out a form, provide some form of identification and have their picture taken. All accounts featured weekly text message reminders.

The sample population for the study was vendors in the central Tamale Old Market. Using market rental records, we estimate that approximately 2000 vendors work in the market. We conducted a baseline survey in which 1601 vendors participated. The baseline survey collected basic demographic

information, information about the clients' business, baseline saving behavior and a series of questions designed to elicit time preferences and attitudes toward banks and saving. While many studies elicit time preferences directly by asking individuals to make a series of hypothetical choices over payoffs in the present and future, new evidence from Jamison and Karlan (2010) suggests that qualitative questions eliciting problems of self-control are more predictive of real decisions than hypothetical or incentivized tradeoffs over time.

Approximately one month after the baseline survey, Zenith-affiliated marketers conducted a door to door marketing campaign with individuals surveyed, a total of 1,219 individuals. All individuals were provided with information about Zenith's savings accounts and encouraged to open an account. Individuals who did not open an account were asked whether they did not open an account because they are not interested, because already have an account to use, because they prefer to save informally or for some other reason. After the account offer, all individuals were asked a series of survey questions designed to elicit their attitudes toward the future.

In order to measure individuals' beliefs about their use of savings accounts, I design an incentive compatible measure of individuals' beliefs. While Manski (1993) argues that collecting beliefs is not as challenging as many researchers believe. While an ideal research design would include a measure of beliefs about ability collected for all individuals, such a measure would face the limitation of being difficult to link to objective outcomes. Therefore, I design measures of beliefs about saving with the bank. Unfortunately, this means that beliefs measures are collected *only* for those individuals who open an account.

I designed an incentive compatible measure of individuals' beliefs about what they will save.

Everyone who opens an account will get this 2G\$ phone credit prize in January for saving with Zenith. If you make 2 deposits¹ every month between now and January you can get this 5G\$ phone credit prize. You must decide now whether you want to try for the 5G\$ prize. If you don't make 2 deposits a month you will get neither the 2G\$ phone credit nor the 5G\$ phone credit. Will you go for the 2G\$ prize for sure in January or the 5G\$ prize in January you will get only if you make 2 deposits a month?

Individuals should only choose the larger prize if they are confident that they will be able to make 2 deposits a month every month until January.

¹Deposits of any size will qualify individuals for the 5G\$ prize for making 2 deposits a month.

Prior to the account offer process, individuals were randomly assigned to one of three treatment conditions designed to test the effect of information. Individuals were randomly assigned to a control treatment (*control*) and an information treatment (*info*). Within the *info* treatment, individuals were randomly assigned to one of two timing conditions and one of two content conditions. For the content conditions, all individuals in the *info* treatment were provided with the following information:

Some people who save with text message reminders save [*low,high*]% more than those who do not.

Individuals in the *high* treatment were told that reminders increased savings 47% for some, while individuals in the *low* treatment were told that reminders increased savings 16% for some.² Because many of the population in our study have low levels of education and literacy we illustrated the information treatments using stacks of pebbles that represent average savings for individuals who receive reminders and average savings for those who do not.

We also randomized some blocks in the market to complete all paperwork and open an account at their stall or to go to the Zenith branch to open an account. In order to open an account, a respondent had to take a picture, have a photocopy of their id made and fill out a bank form. For respondents who could open their accounts at their workplace all of the account opening requirements were performed at their workplace, with Zenith marketers going on-site to make copies of IDs and carrying cameras for photo identification. When respondents had to go to the branch to open an account, they could perform all of the activities at the branch. The branch office is no more than a ten minute work from anywhere in the market. Therefore we think of the treatment which allows individuals to open an account at their workplace as representing a small change in hassle costs, with all requirements being taken care of without having to leave a stall.

In Table 1 we report some validation checks on the integrity of the randomizations for the major treatment category *open at work* and *info* and the subtreatment categories *low*.

²These estimates were based on evidence from Karlan, McConnell, Mullainathan and Zinman (2010) on the impact of reminders to save. We estimate a 16% increase in savings balances for reminders that focused on specific expenditures, while we estimate a 47% increase in savings balances for reminders sent to individuals who appear time inconsistent.

Table 1: Orthogonality Verification

VARIABLES	Mean	Obs	P-value: regression test on whether characteristic predicts open at work treatment	P-value: regression test on whether characteristic predicts info treatment	P-value: regression test on whether characteristic predicts low info treatment
Male	0.25 (0.433)	1216	0.443	0.762	0.660
Age 18-25	0.145 (0.352)	1216	0.037	0.126	0.331
Age 26-40	0.528 (0.459)	1216	0.107	0.372	0.552
Age 41-60	0.285 (0.451)	1216	0.879	0.680	0.922
Age 61 and older	0.041 (0.198)	1216	0.851	0.699	0.480
Married	0.755 (0.430)	1204	0.690	0.369	0.961
Pays School Fees	0.718 (0.450)	1209	0.301	0.929	0.897
Not present biased	0.709 (0.455)	1213	0.366	0.497	0.254
Have Bank Account	0.390 (0.488)	1214	0.294	0.457	0.864
Unintimidated by Banks	0.513 (0.493)	1031	0.636	0.514	0.183
Gets loans from friends or family	0.324 (0.468)	1214	0.833	0.051	0.043
Has a good place to save	0.495 (0.500)	1207	0.992	0.876	0.044

IV. Results

EFFECT OF INFORMATION AND CONVENIENCE ON TAKE-UP

In Table 2 we examine the effect of information on take-up. In column 1 we see that individuals' are less likely to report an intention to open an account when they could open the account immediately at their place of work. However columns 3,5 and 7 illustrate that individuals are significantly more likely to actually open and use an account when the account could be opened with less hassle costs.

We see no statistically significant impact of information on either reporting an intention to open an account or actually account opening and use. However, we do see suggestive evidence that at the time of reporting intentions, less optimistic information leads to a 9% decrease in the probability of reporting an intention to open an account (p-value = 0.12).

REASONS FOR LACK OF INTEREST IN ACCOUNTS

To better understand the impact of the treatment on perceptions about the account, we consider the impact of all treatments on the probability of not being interested in opening an account for different reasons. The most common reasons for declining an account are 1) that an individual already has a savings account and 2) that they are not able to save at the moment because of other financial needs. We therefore examine three variables: the probability of declining an account because the respondent already has an account, declining to open an account because they are unable and all other reasons for declining an account. We find that *low* information increases the probability of declining an account because the respondent already has an account. There are no significant differences for other excuses. These responses suggest that when presented with *low* information, individuals may be inclined to decide that the benefits of the account do not justify the costs of opening an account. The evidence suggests that when individuals are provided with *low* information, the account with text reminders becomes slightly less attractive relative to high or no information. It could be that individuals who receive *low* information negatively update their beliefs based on this information.

Table 2: Treatment Effects on Account Opening and Use

VARIABLES	Reported Intention to Open	Opened Account	Used Account at Least Once	Using account at 3 months
Any Info	-0.00172 (0.0463)	-0.0158 (0.0436)	-0.0144 (0.0279)	0.0197 (0.0164)
Low Info	-0.0914 (0.0585)	-0.0224 (0.0557)	0.0101 (0.0349)	-0.0267 (0.0182)
Open at Work	-0.163*** (0.0501)	0.394*** (0.0280)	0.138*** (0.0130)	0.0251*** (0.00518)
Constant	0.694*** (0.0451)	0.0492*** (0.0173)	-0*** (0)	0*** (0)
Observations	1,219	1,219	1,219	1,219
R-squared	0.014	0.004	0.023	0.004
Mean of dependent variable	0.555	0.384	0.117	0.021

Robust standard errors in parentheses, standard errors clustered by block
 *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	Already have account		Not able to save		Other reasons	
Any Info	-0.0418		0.0438		-0.0375	
	(0.0273)		(0.0298)		(0.0318)	
Low Info	0.0810**		-0.0159		0.0543	
	(0.0409)		(0.0352)		(0.0416)	
Open at Work	0.0802***		0.0149		0.0545	
	(0.0246)		(0.0239)		(0.0367)	
Constant	0.0656***	0.134***	0.0710***	0.0746***	0.120***	0.169***
	(0.0209)	(0.0127)	(0.0213)	(0.0102)	(0.0330)	(0.0170)
Observations	1,219	1,219	1,219	1,219	1,219	1,219
R-squared	0.007	0.004	0.000	0.003	0.003	0.001
Mean of dependent variable	0.134	0.134	0.084	0.084	0.167	0.167

Robust standard errors in parentheses, standard errors clustered by block

*** p<0.01, ** p<0.05, * p<0.1

We also consider the probability of reporting different types of reasons for not opening an account when accounts can be opened immediately. We find that the most commonly cited reason is not having an account though we don't see statistically significant divergences across the potential reasons.

EFFECT OF TREATMENTS ON BELIEFS ABOUT THE FUTURE

In Table 4 I examine how information provided after opening an account affects measures of individuals beliefs about the future. I examine two measures. First I consider a very general self report to whether or not individuals identify with the statement "I feel hopeful about the future." Because this question is quite vague, it can be answered regardless of whether individuals chose to open an account. Secondly, I consider a binary measure of whether individuals chose to benefit on their likelihood of making regular deposits. The second measure can only be conducted with the sample of individuals who report that they intend to open an account.

In column 1, I see no evidence that opening an account at work changes self-reported hopefulness. In column 2 I see that less optimistic information makes individuals feel relatively less hopeful. This tendency, combined with slightly less interest in the account does point toward a slightly demotivating effect of information when it is relatively less positive.

VARIABLES	Hopeful Future		Predict Using Account	
Any Info		-0.0141		0.0495
		-0.0354		-0.0442
Low Info		-0.0975*		
		-0.0533		
Open at Work	0.00977		0.142**	
	-0.0387		-0.0619	
Constant				0.0234
				-0.0453
	0.792***	0.817***	0.472***	0.571***
Observations	1,219	1,219	677	677
R-squared	0.000	0.009	0.013	0.003
Mean of dependent variable	0.801	0.801	0.326	0.326

Robust standard errors in parentheses, standard errors clustered by block
 *** p<0.01, ** p<0.05, * p<0.1

In column 3, I see that when individuals can open an account in the field they are significantly more likely to bet on the likelihood that they will make regular deposits. Since this equation can be estimated only for those who indicate an intention to open an account, the estimated coefficient contains both potential changes in beliefs as well as selection from the treatment. The difference in confidence in making deposits could indicate the possibility that some individuals who reported that they would go to open an account at the bank never intended to do so. However, it should be noted that across both groups, individuals incentivized measures of beliefs are highly divergent from their later behavior. Though over half of individuals bet that they are likely to make frequent deposits, three months later only 3% of the original sample is doing so. Information has no significant effect on the probability of betting on your own ability to make regular savings deposits as seen in column 4.

One important question left open by these results is the implications for welfare of providing “motivating information.” In part, this is because it is difficult to determine what level effect one might expect from reminders and the effect of reminders may differ for different individuals. In Karlan, McConnell, Mullainathan and Zinman (2010), hereafter KMMZ, we estimate a 6% increase in balances when we consider pooled estimates across three countries from receiving monthly re-

mindings. This might suggest that even the *low* information is optimistic in terms of the average effect of reminders. However, this belies some heterogeneity. In Peru, KMMZ find that the most effective reminders increase savings by 16% which is the motivation used for the *low* treatment. In the Philippines KMMZ find that reminders increase balances by 47% for individuals with time inconsistent preferences. Using our qualitative measure for individuals who are hyperbolic, 70% of individuals in the sample of market vendors identify as hyperbolic. Therefore, the *low* information might be considered insufficiently optimistic. The sample size of my experiment does not allow me to draw many conclusions about heterogeneous treatment effects but this is an area for future research.

Finally in Table 5 we consider the determinants of account opening and stating an intention to open an account but never using the account. In terms of demographics, older individuals and those who are married are more likely to report that they intend to open accounts. Behavioral factors are not a determinant of account opening, but reporting that you have a good place to save at baseline make you less likely to report an intention to open an account.

Demographic characteristics do not predict a divergence between intentions and actions. However, individuals who report at baseline that they are intimidated by banks are less likely to use the account. Furthermore, individuals who report at baseline that they are able to secure loans from friends and family are more likely to never use the account, even when they report an intention to open an account. One interpretation of these correlations is that the individuals who show some divergence between stated intentions and actions are those have lower valuations for accounts, whether because of their impressions of banks or their outside financing options. This could give further evidence that stated intentions are more likely to represent a response to encouragement than a valuation of the product.

IV. Modeling Social Pressure from Marketing

In order to determine whether our the behavioral patterns in our experiment are consistent with individuals feeling social pressure to open an account, we write down a simple model of the utility at various stages of account opening in the workplace compared to at the bank.

Let Y be the perceived benefits of opening a savings account and $C_w < C_b$ be the perceived costs

Table 5: Predictors of Intention to Open and Actual Account Use				
VARIABLES	Reported Intention to Open		Intended to Open but Never Used Account	
Male	-0.0492 (0.0429)		0.0305 (0.0427)	
Age 26-40	-0.0228 (0.0502)		0.00232 (0.0515)	
Age 41-60	-0.0422 (0.0557)		0.00689 (0.0589)	
Age 60 and older	-0.206** (0.0831)		0.116 (0.0904)	
Married	0.0680* (0.0368)		0.0355 (0.0424)	
Pays School Fees	-0.00946 (0.0331)		0.0195 (0.0361)	
Not present biased		0.0280 (0.0329)		-0.0546 (0.0394)
Have Bank Account		0.0143 (0.0345)		-0.0337 (0.0370)
Unintimidated by Banks		0.0373 (0.0320)		-0.0919** (0.0373)
Gets loans from friends or family		0.0143 (0.0338)		0.0700** (0.0337)
Has a good place to save		-0.0774** (0.0319)		0.0379 (0.0335)
Constant	0.546*** (0.0483)	0.538*** (0.0419)	0.740*** (0.0565)	0.857*** (0.0401)
Observations	1,219	1,219	677	677
R-squared	0.021	0.017	0.013	0.030
Mean of dependent variable	0.555	0.555	0.555	0.555

Robust standard errors in parentheses, standard errors clustered by block

*** p<0.01, ** p<0.05, * p<0.1

of opening an account at your workplace and at the bank respectively. We assume that having a marketer visit your stall and complete all paperwork is meaningfully less costly than having to find the time to go into the bank yourself. Therefore individuals would choose to open an account if and only if the benefits of opening are greater than the costs and we would predict more accounts opened when individuals can open an account at their workplace.

Consistent with DellaVigna, List and Malmendier (2012)'s model of the social pressure to give during door to door fundraising, we consider that there is a cost S to individuals who decline to open an account when the marketer is present. While their model focuses on a charitable giving context, where individuals may have some self-image or social-image benefits from not saying no to a request to make a charitable contribution, in the context of the developing world, individuals may get some disutility from saying no to someone associated with a financial institution.

We model two stages of the decision to open an account: 1) stated intentions and 2) account opening. For individuals who open an account at their workplace the decision to open an account is simultaneously stated and executed. Therefore for individuals will open an account at their workplace if and only if $Y - C_w > -S$.

For individuals who must go to the bank to open an account we assume that they face no costs to stating an intention to open an account. Therefore they receive zero if they say they will open an account and $-S$ if they say they will not open an account. Therefore we would always expect individuals to report an intention to open an account when the account opening happens later at the bank, while individuals will open in the field only if their perceived net benefits are larger than the social pressure costs of declining. In contrast, in the second stage, more individuals will follow through with opening an account when they can do so at their workplace because the costs $C_w < C_b$. This simple model illustrates how social pressure can generate a potentially divergence between behavior and self-reports as we see in our experiment.

This modeling exercise also illustrates the difficulty of making welfare comparisons when considering the behavioral effects of marketing campaigns. This model illustrates that social pressure could mean that individuals who can open an account at work do so even when the expected net benefits are negative. In the absence of other behavioral biases, this treatment could clearly lead to

negative welfare outcomes, causing individuals from investing in a technology that is not worth their effort. On the other hand, it could be that pushing individuals into adopting could be positive in the long-run if they face some time inconsistency in their behavior and opening an account has long term benefits. That is, individuals might face present bias or procrastination in opening accounts and the extra push of social pressure could be optimal from the point of view of their more patient selves.

V. Conclusion

I present evidence from a field experiment on marketing of formal savings accounts where the convenience of account opening and information about the benefits of opening accounts are randomly assigned. On average, targeted information about the expected increases in savings from saving with reminders has no effect on demand an account with reminders. When information less positive, I see suggestive evidence that it decreases the probability of opening an account.

Convenience has a large effect on the probability of opening an account. When individuals can conveniently open an account at their place of business they are less likely to report an intention to open an account but more likely to actually open and use the account. Furthermore, individuals who open an account at their business are more likely to bet on their regular use of the account, indicating that some individuals who reported an intention to open an account may not have believed they would use the account. The weight of this evidence suggests that individuals self-reports may have reflected some psychological cost of saying no to a marketer. I provide a simple theoretical framework which shows the easy intuition behind why the divergence in behavior across the two convenience treatments could easily be explained by some cost of saying no to marketers.

There are potential alternative explanations for why individuals may have reported an intention to use accounts but never used them. For one, Dupas and Robinso (2011) document substantial difficulties faced by individuals interacting with banks in Kenya. Indeed, we see some evidence from focus groups that individuals didn't feel that using bank accounts was as easy as it could have been. This could have explained an initial excitement about accounts that is tempered by repeated interaction with accounts. However, this would not easily explain the tendency of individuals to be

report that they would like to open an account when they have to do so right away since this would seemingly indicate a bank that was easy to work with.

Another alternative explanation is that individuals may not use their accounts as they expected because of some combination of projection bias and present bias. Our incentivized measure of individuals' beliefs about their likelihood of savings indicates that individuals are overly optimistic about how often they will be making deposits. It could be that individuals who face difficulties with self regulation need more than just a nudge to open an account to help them accumulate more savings.

I cannot rule out that individuals' self reports are a better gauge of their true interest in the product than their behaviors but I do provide some evidence consistent with individuals' self reports not reflecting their true intentions as individuals are more likely to bet on their intentions when their intentions and actions are elicited and performed simultaneously (when accounts are opened immediately at work). Understanding the reason for a divergence between self reported intentions and behaviors is crucial. If self-reports represent individuals' hopes for self-improvement, more help is needed to get them on a long-term savings path with a formal financial institution. Alternatively, it could be that low up-take correctly reflects low valuation of bank services and marketing activities should be judiciously used in pushing social programs as they may encourage individuals into programs that do not have high enough benefits to justify their costs.

As argued by Chassing, Pardo i Miquel and Snowberg (2010), one challenge to external validity in randomized control trials is that project impacts may have differential effects based on unobservable effort. Experimental evaluations focus on estimating the effect of product take-up on secondary outcomes such as health or wealth, even though health or wealth outcomes will only materialize based on product *use*. Individuals prior beliefs may affect how much effort they putting into using the technology. Our experiment analyzes the take up of a technology, saving with text reminders, where it is easy to observe both take-up (opening an account) and use (making deposits in the account). Chassing, i Miquel and Snowberg (2010) make the case for "selective trials" where individuals willing to undertake some cost to receive a product should be more like to appear in the treatment group.

The results reported here provide suggestive evidence that removing all barriers to product take-

up may have the unfortunate side effect of making it more difficult to distinguish which individuals actually put in the effort to learn about and use the product. The analysis of product take-up from stated intentions to continued use has the potential to shed insight into a number of puzzles in development where the impacts of social programs are estimated in situations with relatively low take-up.

APPENDIX

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