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Catalyzing Financial Inclusion

Using Incentives to Promote Mobile Money Use in Ethiopia

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Abstract

Mobile money can be a vehicle for improving financial access, particularly among disadvantaged populations. For mobile money systems to play this role, though, members of disadvantaged groups must both enroll in and begin to use mobile money systems. In this paper, we describe a randomized trial conducted in collaboration with a bank in Somali region, Ethiopia, that attempted to stimulate use among recent mobile money enrollees in areas near refugee camps. We provide one group with a small transfer to their mobile money account and another group is told they will receive a small transfer if they first make three transactions of any type within a promotional period. The unconditional transfer induces a 9.3 percentage point increase in customers making at least one transaction, while the conditional transfer has no significant effect. The effect is larger among men, but there is evidence that it also induces use among women. .

Key words: Transfers, Ethiopia, Mobile money

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Catalyzing Financial Inclusion: Using Incentives to Promote Mobile Money Use in Ethiopia

Financial inclusion is an important building block for many of the Sustainable Development Goals (Klapper, El-Zoghbi, and Hess, 2016). Yet in much of sub-Saharan Africa, the majority of adults lack access to formal financial services (Global Findex, 2021). Expanding financial access in sub-Saharan Africa may help reduce poverty and increase food security (Karlan and Morduch, 2010); and, if access to financial services can be extended to women, promote gender equality (Ashraf et al., 2010; Aker et al., 2016). Yet women often trail men in access to financial services in sub-Saharan Africa (Demirgüç-Kunt et al., 2018).

Mobile money, or other digital financial services, can be a vehicle for improving financial inclusion, particularly in areas and among populations where existing financial services and infrastructure are limited (Suri and Jack, 2016). Mobile money has several features that make it an effective platform for promoting financial inclusion, including low entry costs, broader access to money than from brick-and-mortar banks, the ability to carry money more discretely than cash, ease of use as a form of payment, ability to keep a record of transactions, and easy access to financial products like savings and credit. These advantages suggest that widespread adoption of mobile money facilitates basic economic activity and could support a deepening of local economies and greater economic inclusion. Thus, it is important for governments and mobile money operators to identify approaches to promote opening and use of mobile money accounts, including in more remote or marginalized parts of the economy.

Operationally, to build mobile money services, operators must simultaneously convince customers to adopt the platform to store their money, convince merchants to accept mobile money for payment, and identify and train agents who can provide cash in and out services, converting cash to mobile money and vice versa. Operators will work to set up this infrastructure in areas that they think will be financially viable, but will ignore areas that they do not expect to be profitable.

However, social goals such as promoting women's empowerment or, more broadly, financial inclusion of marginalized groups, may not be a core objective of profit-maximizing operators without external subsidization or intervention (e.g. de Brauw et al., 2023). Promoting mobile money use among refugees, for example, to better integrate them into the local economy, might require specific investments near refugee populations. These investments could even be profitable for mobile money operators, but they may be considered higher risk, particularly if refugees live

in more remote areas with more limited infrastructure and weaker economies. Here, fixed costs, such as those related to operator licensing or recruiting staff, might hinder entry into markets that would otherwise be profitable. If an external intervention comes in and covers those fixed costs, then entry occurs and is sustainable, if providing the service to those markets is profitable.

Even where services exist and service agents and vendors are available, individuals may hesitate to enroll in and use mobile money services. As with any new technology, individuals need to learn about the existence of the service as well as how to use it and its potential benefits and value to them as a consumer. Additionally, widespread adoption and use requires that people trust mobile money services as a safe store of value. They need to be confident that if they put money into their account, it will still be there when they later want to use it (Bachas et al 2021). In both cases, an opportunity to use and experiment with emergent financial services may play an important role in resolving information gaps and building trust in the security of mobile money as an instrument for savings. This logic suggests a potential role and business case for a temporary payment or bonus to promote use and learning among potential mobile money customers.

In this paper, we conduct an experiment to examine whether incentive payments can be effective at promoting mobile money use among recent registrants, what types of incentives are most effective, and for which types of users. Specifically, we test whether an unconditional payment or a payment tied to completing a minimum number of transactions would help promote use of a nascent mobile money service among recent registrants who had not yet used the system for any transactions. In the experiment, individuals were randomly assigned to one of three groups. In the first, the unconditional transfer group, individuals were given a transfer of 25 Ethiopian birr (about 50 cents), accompanied by a text message encouraging them to use it for whatever they wanted. A second group, the conditional transfer group, was sent a text message saying that they had been enrolled in a promotion—if they made three transactions before a specific date (three weeks later), they would receive a 25 birr bonus from the phone company. A third group of individuals was randomly assigned to the control group; they were not sent any transfers or text messages from the partner bank during this period. In this set up, the unconditional transfer tests whether a fully unconditional, unlabeled transfer delivered through the mobile money platform induces additional usage that may translate to more or longer engagement with mobile money. This effect could arise because of the endowment effect of the transfer, because the user becomes more comfortable using the platform, or because the payment engenders goodwill towards the

platform. The conditional transfer provides a direct incentive to increase usage, beyond the endowment effect or warm glow of receiving an unexpected transfer.

To test whether these promotions can catalyze use among groups often underserved by financial inclusion efforts, we stratify the sample to include a larger proportion of women and refugees in the two treatment groups. Though we had to work with the sample that was available based on administrative records (which limited the sample size), this stratification makes it more plausible to find treatment effects among those target groups.

We conduct the trial in refugee hosting areas of Somali region, Ethiopia—specifically in areas near refugee camps in both the Jijiga and Dollo Ado areas of Somali region. The trial is part of a larger evaluation of the SHARPE project (e.g. de Brauw, Roy, and Tefera, 2022), which has been working with partners in Somali region to develop the financial services market system and increase financial inclusion. The parameters of the trial were co-developed with both the SHARPE project and their partner, Shabelle Bank, who offer mobile money through HelloCash, one of several new mobile money products in Ethiopia.¹

We test whether the promotions affect platform usage and whether these effects vary by user characteristics. First, we test whether individuals made any transfers at all between the beginning of the trial and December 5th, 2022, when text messages clearly told customers the promotional period would end for the conditional group. Second, we examine the number of transactions and the value of transactions made by each account, again during the period between the beginning of the trial and December 5th. Finally, we test for heterogeneity by gender, refugee status, and broad location (Jijiga or Dollo Ado). The analysis is conducted by administrative data collected from Shabelle Bank.

The remainder of the paper proceeds as follows. First, we provide some further description of the context in which the trial took place. Second, we briefly describe a conceptual framework. We follow this with a description of the data, methods, and then present results. The paper concludes with a brief discussion of policy or program implications for increasing financial inclusion.

¹ While there were several mobile money products being introduced at that time in Ethiopia, HelloCash was clearly dominant in the Somali region. In another survey conducted for this project among both refugees and neighbors in the areas from which this administrative data was collected, only 2 percent of mobile money users were using one of the other available products.

The Context

SHARPE is a humanitarian program using a market systems development approach to improve livelihoods among refugees and host populations in three locations in Ethiopia: Jijiga zone, Dollo Ado zone, and Gambella region, each of which contains several refugee camps (and one refugee camp of the same name). Market systems development projects work indirectly with specific actors or companies to help them develop changes in their business practices that can be mutually beneficial to the firms and their customers. Market systems development programs hope to prompt more sustainable improvements in the local economy by supporting local companies with capacity training, information on local markets and actors, and funding to support new, directed investments.

Moreover, rather than focusing on one or two nodes in a value chain, market systems interventions attempt to consider the way that markets could better function for all actors within the system, including those who are often excluded from market participation (e.g. women, minorities, or the poor). In the financial services sector, SHARPE noted at its onset that financial services providers in Ethiopia (banks, microfinance institutions or MFIs, and financial technology firms) did not yet reach a large share of the population. Although the financial services sector was growing, coverage of financial services was particularly low in remote and marginalized areas, including those surrounding refugee camps within Somali region (in its target zones of Jijiga and Dollo Ado). To expand digital financial services (DFS) in Somali region, SHARPE began working with Shabelle Bank in late 2020.² Shabelle Bank works with the digital cash and payments product HelloCash, which is itself a product of Belcash Technology Solutions. HelloCash was also offered at the time by three other financial institutions in Ethiopia (Lion International Bank, Cooperative Bank Oromia, and Wegagen Bank).³

Digital platforms offer a way to extend financial services such as transfers, saving, or credit into areas lacking the brick-and-mortar presence of conventional service providers. A more robust digital financial system (DFS) could lead to higher levels of financial inclusion among both host community nationals and refugees. Operationally, SHARPE helped promote the DFS expansion by providing funding to increase the number of local DFS agents, enrolment officers, and

² This institution was previously known as Somali Microfinance Institute (SMFI). In February 2022 SMFI received “bank” status by financial authorities in Ethiopia and was rebranded as Shabelle Bank.

³ SHARPE also worked with Wegagen Bank in the Gambella region; this engagement began in early 2022.

registered merchants.⁴ With these pieces in place, the expectation is that more user enrollment and greater usage and sustainability will follow, which may contribute to local economic development and offer a useful platform for humanitarian transactions.

Administrative data suggest a larger share of both men and host community nationals enrolled in SHARPE target areas than women and refugees. Examining administrative data on all enrollment between April and September 2022 in SHARPE target areas, we observe that the majority of enrollees are men in the host community; only 13 percent are refugees, and 24 percent are women in the host community (Table 1, Panel A). Even when enrolled, refugees of either gender are much less likely to ever conduct a transaction (Panel B); women in the host community are also less likely to be active users of HelloCash than men. These groups likely face greater constraints to adoption but may also have high returns. Financial services in these marginalized populations and surrounding host areas have the potential to unlock financial security and growth opportunities for both refugees and host populations. However, refugees face challenges in gaining access to services including illiteracy, perceptions of legal barriers, and higher costs of reaching DFS agents. Therefore, the experiment tests whether a small incentive can help overcome those challenges.

Brief Conceptual Framework

We conceptualize that technologies are often created that have high value to consumers and producers alike, so their markets grow rapidly (Figure 1). As these markets grow, individuals or entities who own the rights to residual profits from those technologies will try to expand them to new markets, and a set of outcomes occurs following that growth. The resulting outcomes may or may not align well with social goals for outcomes from those technologies. One example includes electrification in the United States prior to the Great Depression; it took the advent of social programs such as the Tennessee Valley Authority and the Rural Electrification Administration to provide electricity to excluded areas (e.g. Kitchens and Fishback, 2015). In other words, if the social goal was for everyone to have access to electricity, the market was not going to attain that goal without public intervention.

In situations in which socially desirable outcomes do not align with those that would come about in a private equilibrium, public intervention is needed to meet those social goals. In the

⁴ In this context, enrollment officers are known as Know Your Customer (KYC) officers.

context of SHARPE, the rapid expansion of mobile money in the Jijiga zone was hardly reaching areas surrounding refugee camps. As a result, intervention (through SHARPE) was needed to align the goals of Shabelle Bank (the partial owner of the residual) with social goals. A further goal in this context is to expand access to excluded groups, namely women and refugees. So whereas the program took care of attempting to reach those areas, within those areas we run the experiment described above to attempt to nudge those who have registered into using the technology.⁵

Data and Sampling

We conducted sampling for this study as follows. We used administrative data on HelloCash enrollees during the month of September 2022, and first dropped any customers ($n=752$) who made at least one transaction during the month of September to identify a sample of low-use registrants. There were 1675 such individuals. We then stratified that sample into eight groups, based on whether located in Dollo Ado or Jijiga; male or female; and refugee or host, as recorded in the database. We finally randomized assignment into one of the three groups within each strata—the unconditional 25 birr transfer, the group that could earn a 25 birr transfer through three transactions, and a control group.

To improve power to measure effects on women and refugees, we set proportions of women and refugees receiving transfers to be higher than for men in the host community. The proportions were the same for women and all refugees in the experiment; they were each sampled at rates of one-fourth in the unconditional group, five-twelfths in the conditional group, and one-third in the control group. We used these proportions under the impression that fewer individuals in the conditional group would be eligible for bonuses, so we wanted to increase the sample size relative to the unconditional group. We split host men by proportions of $3/25$ in the unconditional group, $19/50$ in the conditional group, and half in the control. These proportions, once randomized, left us with a sample of 314 for the unconditional transfers, 661 for the conditional transfers, and 700 for the control group. The goal was to have a much smaller sample for the unconditional sample, since we expected they would be more likely to cash in than the conditional group. We then did a simple power calculation; using the indicator for “any transaction” as the primary outcome of interest, we find that we can identify a difference of 0.076 percentage points between each group with this design at 80 percent power.

⁵ A second experiment attempted to increase enrollment among women and refugees in general; see de Brauw et al. (2023) for more details.

To follow up on the sample, we asked Shabelle Bank to download data on transactions by those 1675 phone numbers for the three week period starting when the text messages and unconditional 25 birr transfers were made (November 14 - December 5). We use those data in analysis.

Balance

Table 2 summarizes the sample construction by strata across treatment arms and presents evidence of balance of the randomization. All variables are from the administrative data. The sample strata variables include whether the registrant is female, refugee status, and location (broadly, Jijiga or Dollo Ado), and by construction we observe that there are more refugees and fewer females in the unconditional and conditional promotion treatment arm than in the control group. Roughly 27% of the sample is in Jijiga area. Next, we assess balance on the number of days since they enrolled (up to October 31st when the administrative data were drawn). Controlling for stratification, we test balance by running a regression of the variable on days since enrollment on the two treatment indicators plus indicators for stratification, and test the joint null hypothesis that the coefficient estimates on the two treatment indicators are both zero. We cannot reject this hypothesis at the 5 percent level, suggesting the sample is reasonably balanced.

Results

To estimate the impacts of the unconditional or conditional transfers using the administrative data, we specify the following equation:

$$Y_i = \beta_1 U_i + \beta_2 C_i + \mu \mathbf{Z}_i + \epsilon_i \quad (1)$$

where Y represents outcomes that can be measured in the administrative data (whether subscribers conducted any transactions, the number of transactions, and the total value of transactions); U represents the unconditional transfer group, C represents the conditional transfer group, and \mathbf{Z} represents the variables that were used in stratifying the sample (gender, refugee status, and location). To test whether results differ for women or refugees, we then estimate an alternative model:

$$Y_i = \beta_1 U_i + \beta_2 C_i + \beta_3 X_i U_i + \beta_4 X_i C_i + \mu \mathbf{Z}_i + \epsilon_i \quad (2)$$

where X represents either an indicator for men or for refugees.⁶ All models are estimated using administrative data pulled for this purpose, including transactions made between the time when texts and unconditional transfers were sent out in November, and December 5th, which was given in texts to the conditional group as the last day of the promotion.

We present estimates of equation (1) in Table 3, using three outcome variables: whether an individual has made any mobile money transaction, the number of total transactions, and the total value of transactions. We find positive coefficients on both the unconditional and conditional transfer groups, but only the coefficient on unconditional transfers is significantly different from zero.

The group receiving unconditional transfers is 9.3 percentage points more likely to have made a transaction at all. We do not find that the conditional transfer led to higher probabilities of making any transactions, nor do we find changes in the number or value of transactions from either promotion. Given the large control mean, it is clear that some of the customers in all three groups had begun to make regular transactions between September 30 and the trial period, as the average transaction size is quite large (and the distribution of this variable includes a lot of zeroes).

We then present results for equation (2) in Table 4, with columns (1), (3), and (5) using an indicator for male respondents as the interaction variable, and columns (2), (4), and (6) using an indicator for refugee status as the interaction variable. We find that for the unconditional transfer, effects of the transfer appear to be concentrated in the host population. When disaggregating by gender, the coefficient on women alone is positive and significant at the 10 percent level; among men, the additive coefficient is positive and the overall coefficient is significant at better than the 1 percent level. Meanwhile, the indicators for interactions with refugee status yield negative point estimates. That all said, men actually have a lower total value of transactions than women (column 5); this coefficient is also significant at the ten percent level, though the sum is not statistically different from zero.

For conditional transfers, we again observe some differences by gender relative to the control group. The coefficient for the number of transactions is statistically different from zero among women, and suggests the conditional transfer nudged them to make 1.15 additional transactions, on average. The additive coefficient among men is negative and also statistically different from zero, suggesting women conduct more transactions in response to the promotion, but men do not.

⁶ We do not present results with the full interaction of gender and refugee status due to low power for those tests; note that the X variable is included in equation (2) as it is subsumed into the Z vector.

We next turn to the three columns including interactions with refugee status (columns 2, 4, and 6). Here, we find that both promotions were more likely to lead to any transactions among the host community (column 2), but not among refugees, according to the additive interaction terms, which are both negative in magnitude. Coefficient estimates in models explaining the number and value of transactions are not statistically different from zero, suggesting that the promotions affected transactions on the extensive margin, but not the intensive margin.

Having explored gender and refugee status, we then examine heterogeneity by location (Table 5). There appear to be no effects on the indicator for any transactions taking place, but more transactions occurred among the unconditional group in Jijiga. The market system around refugee camps (agents, merchants) is relatively more developed in the Jijiga area, and that could explain why there might have been a catalyzation of transactions in Jijiga. That said, this coefficient is only significant at the 10 percent level. As with the other tables, there are no significant coefficients on the treatments when explaining the total value of transactions.

In sum, the unconditional transfer led to a higher likelihood of making a transaction, but not more transactions or transactions of higher value, at least in the short term. These effects appear concentrated among women, and among the host population, rather than refugees. The conditional transfer led to a slightly higher likelihood of transactions among the host community, and more transactions among women. We discuss the results within the project context below.

Discussion

In this paper, we study an experiment conducted in collaboration with Shabelle Bank in Jijiga, Ethiopia, to attempt to catalyze use of a mobile money service among those who have registered but not used the system. We randomized initial non-users into three groups: a group that received 25 birr and a message telling them to use it however they wanted; a group that received a text message telling them that if they made three transactions within the next three weeks, they would receive a 25 birr reward; and a control group. We then use administrative data to learn about effects on whether they used the system or not, the number of transactions during the study period, and the total value of transactions. We stratified the randomization to select more women and refugees into the two treatment groups.

We find that the unconditional transfer did lead to a higher likelihood of transactions during the study period, though only by 9.3 percentage points. One hindrance, perhaps ironically, is that qualitative work around the overall project suggested that people feel like their money is very

secure in HelloCash, so they may not have felt the need to remove it (de Brauw et al., 2023). We found no effect on average on the number of transactions or their value. In heterogeneity analysis, we find that the experiment did not affect refugee HelloCash use, but the promotions did have a positive effect on use by women, thus potentially helping to close this dimension of the gender gap in financial inclusion. In particular, women who received the conditional transfer promotion had a significantly higher number of transactions and value of transactions than women in the control group.

A goal of the research was to understand whether a simple nudge could help increase financial inclusion among women or refugees; the effects are small enough in magnitude that it would not seem like this particular intervention would be profitable in the long term. Nonetheless, there are a couple of versions of this trial that might make sense as a follow-up. First, one would be to attempt to confirm the effects with a larger sample. The sample in our case was limited to geographic areas targeted by SHARPE; expanding those areas even just among individuals who signed up in September 2022 would have substantially increased the sample size. A second potential test would be to test a conditional version with a lower transaction threshold (e.g., 1 transaction in 2 weeks). From the business perspective, it is not entirely clear that an unconditional transfer would be profitable long term, but a promotional period with a small incentive for particular behaviors very well could be. Finally, it is important to again state that there was no effect among refugees. Although these promotions were not successful at improving financial inclusion for refugees, it is important to continue to research ways to improve wellbeing for refugees and increase linkages between refugees and host economies, particularly in contexts with protracted refugee situations.

References

- Aker, Jenny, Rachid Boumnijel, Amanda McClelland and Niall Tierney. 2016. “Payment Mechanisms and Anti-Poverty Programs: Evidence from a Mobile Money Cash Transfer Experiment in Niger.” *Economic Development and Cultural Change* 65(1): 1-37.
- Ashraf, Nava, Dean Karlan, and Wesley Yin. 2010. “Female Empowerment: Further Evidence from a Commitment Savings Product in the Philippines,” *World Development* 28(3): 333-344.
- Bachas, P., P. Gertler, S. Higgins, and E. Seira. 2021. How debit cards enable the poor to save more. *Journal of Finance*. 76(4): 1913-1957.
- de Brauw, A., D.O. Gilligan, L. Leavens, F. Moges, S. Roy, and M. Tefera. 2023. Impact Evaluation of the SHARPE Programme in Ethiopia. CEDIL Academic Report.
- de Brauw, A., S. Roy and M. Tefera. 2022. “Financial Services in Refugee Hosting Areas: Can They Promote Inclusion? Lessons from the SHARPE Project in Ethiopia.” Project Note, International Food Policy Research Institute.
- Demirgüç-Kunt, A., Klapper, L., Singer, D., & Ansar, S. (2018). *The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution*. World Bank Publications.
- Global Findex. 2021. Global Findex Database, published by the World Bank, Washington, DC.
- Karlan, Dean; Morduch, Jonathan. 2010. Chapter 71 - Access to Finance, Editor(s): Dani Rodrik, Mark Rosenzweig, Handbook of Development Economics, Elsevier, Volume 5, Pages 4703-4784, ISSN 1573-4471, ISBN 9780444529442, <https://doi.org/10.1016/B978-0-444-52944-2.00009-4>.
- Kitchens, C, and P. Fishback. 2015. “Flip the Switch: The Impact of the Rural Electrification Administration 1935-1940,” *Journal of Economic History* 75(4): 1161-1195.
- Klapper, Leora, Mayada El-Zogbhi, and Jake Hess. 2016. “Achieving the Sustainable Development Goals: The Role of Financial Inclusion.” CGAP working paper, Washington DC.
- Suri, T., and W. Jack. 2016. The long-run poverty and gender impacts of mobile money. *Science*, 354(6317), 1288–1292. <https://doi.org/10.1126/science.aah5309>

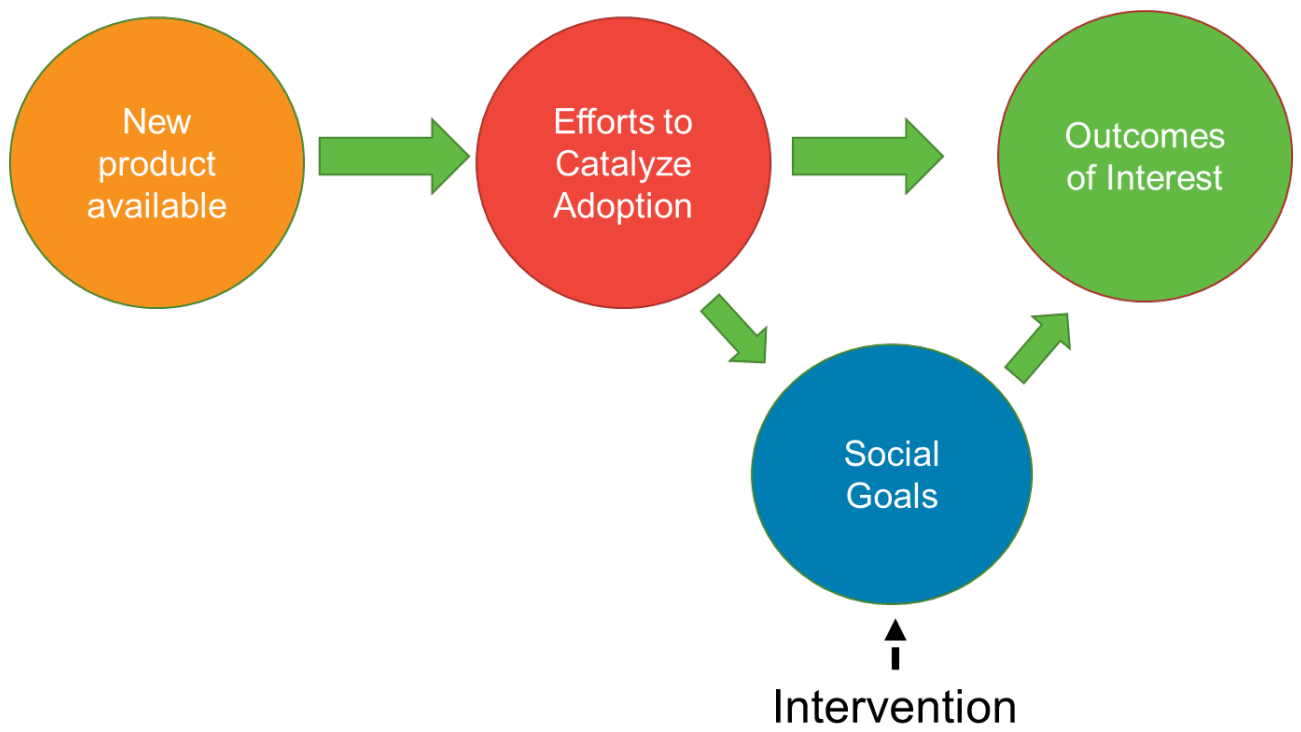


Figure 1. Visualization for Introduction of a New Beneficial Technology with Rapid Adoption

Table 1. Enrollment and Usage in SHARPE Target Areas, HelloCash, April-September 2022, by Gender and Refugee Status

Panel A: Enrollment	Host Community	Refugee
Men	62.8%	8.0%
Women	24.1%	5.1%
Panel B: No Transactions		
Men	52.9%	69.8%
Women	56.3%	75.3%

Source: Shabelle Bank Administrative Data.

Table 2. Sample Structure and Balance - Means by Group, New HelloCash Customers

Variable	Control	Unconditional Transfer	Conditional Transfer	F-Test, means are equal
Refugee status	0.156 (0.013)	0.268 (0.025)	0.201 (0.015)	0.92
Gender (Male=1)	0.721 (0.013)	0.634 (0.015)	0.529 (0.025)	0.84
Located in Jijiga zone	0.271 (0.013)	0.296 (0.023)	0.283 (0.014)	0.84
Days since Registered on October 31	45.9 (0.33)	44.8 (0.51)	46.0 (0.34)	0.11
Sample Size (N)	700	314	661	

Notes: F-test for equal means conducted through a regression controlling for stratification.

Table 3. Impact of Promotion Treatments on Mobile Money Transactions, Transfer Treatments, Somali Region, Ethiopia, November 2022

Dependent Variable	Any Transaction?	Number of Transactions	Total Value of Transactions
	(1)	(2)	(3)
Unconditional Transfer	0.093** (0.029)	0.058 (0.060)	-245.8 (292.2)
Conditional Transfer	0.032 (0.021)	0.045 (0.471)	8.69 (327.8)
Control Mean	0.189	1.873	1175.5
Number of Observations	1675	1675	1675
p-value, Unconditional=Conditional	0.035	0.292	0.411

Notes: Robust standard errors in parentheses.

Source: Shabelle Bank Administrative Data.

Table 4. Impact of Promotion Treatments on Mobile Money Transactions, by Gender and Refugee status, Somali Region, Ethiopia, November 2022

Dependent Variable	Any transaction?		Number of Transactions		Total Value of Transactions	
	(1)	(2)	(3)	(4)	(5)	(6)
Unconditional Transfer	0.081* (0.044)	0.110** (0.034)	0.673 (0.529)	0.761 (0.523)	388.5 (301.1)	-415.9 (332.5)
Conditional Transfer	0.056 (0.037)	0.041* (0.024)	1.150** (0.539)	0.273 (0.363)	1278.8** (572.4)	-69.4 (379.4)
Unconditional*Male	0.028 (0.059)		0.932 (1.051)		-860.0* (515.2)	
Conditional*Male	-0.037 (0.045)		-1.41** (0.69)		-1874.6 (696.6)	
Unconditional*Refugee		-0.076 (0.068)		-0.967 (2.495)		777.6 (668.3)
Conditional*Refugee		-0.058 (0.055)		-1.29 (2.25)		464.3 (737.2)
p-value, Unc. Transfer+ Interaction=0	0.006	0.574	0.435	0.931	0.257	0.528
p-value, Cond. Transfer+Interaction=0	0.481	0.793	0.431	0.644	0.103	0.525
Control Mean	0.189	0.189	1.873	1.873	1175.5	1175.5
Number of Observations	1675	1675	1675	1675	1675	1675

Notes: Robust standard errors accounting for survey design in parentheses. **-indicates significance at the 5 percent level or better; *- indicates significance at the 10 percent level or better.

Source: Shabelle Bank Administrative Data.

Table 5. Impact of Promotion Treatments on Mobile Money Transactions, by Location, Somali Region, Ethiopia, November 2022

Dependent Variable	Any Transaction?	Number of Transactions	Total Value of Transactions
	(1)	(2)	(3)
Unconditional Transfer	0.087** (0.033)	-0.113 (0.679)	-119.8 (294.1)
Conditional Transfer	0.008 (0.033)	-0.173 (0.615)	-383.4 (268.6)
Unconditional*Jijiga	0.022 (0.068)	2.41* (1.43)	485.9 (900.6)
Conditional*Jijiga	0.082 (0.053)	0.804 (0.879)	465.1 (1023.8)
p-value, Unc. Transfer+ Interaction=0	0.063	0.068	0.902
p-value, Cond. Transfer+Interaction=0	0.057	0.301	0.719
Number of Observations	1675	1675	1675

Notes: Robust standard errors accounting for survey design in parentheses. **-indicates significance at the 5 percent level or better; *- indicates significance at the 10 percent level or better.

Source: Shabelle Bank Administrative Data.

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