

Banking with Agents: Experimental Evidence from Senegal*

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Abstract

This paper uses a randomized controlled trial to study the effects of access to agent banking. Individuals were encouraged to open an account and transact at either an agent or at a branch. We find that individuals directed to an agent increase the overall number of deposits and withdrawals compared to individuals directed to the branch. Since the number of transactions at the branch are the same for both groups, this increase in the number of transactions come from more visits to the agent. Our results suggest that agents reduce transaction costs and can thus play a role in deepening financial inclusion.

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1. Introduction

Does agent banking hold the promise of bringing large numbers of poor, unbanked individuals and households into the formal financial system? Agents are trusted local retailers that double as lower-cost alternatives to bank branches and enable customers to more conveniently make deposits, withdrawals, money transfers, and payments on loans (Lyman et al., 2006; Siedek, 2008; Mas and Kumar, 2008; Flaming et al., 2011). In Senegal and the world over, agents are small shops, supermarkets, petrol stations or agents of other existing money transfer service providers. Because of the convenience associated with their closer proximity (both physical and social) to typically underserved market segments, agents likely find it easier to reach poorer customers living further from formal bank branches, and thus could expand financial inclusion more cost-effectively than traditional banking and microfinance approaches.

Our goal is to estimate the effects of access to agent banking on account opening and usage of the account. Since the decision to bank with an agent is typically endogenous, we use a randomized control trial (RCT) to identify the causal effects of agent banking in urban and peri-urban areas in Senegal. A randomly selected group of individuals were given information about a transactional account offered by our partner microfinance institution. Using a 2x2 encouragement design, half of the individuals that received the information were in addition given a monetary incentive to open the account. Another half of the study participants were told they could open the account at the nearest agent, while the other half were told to open the account at the closest branch. Thus individuals fall into one of five groups: (i) offered information about the account (Info), monetary incentives to open it (Incentives), and told to open it at the branch (Branch); ii) Info, Incentives and told to open it with an agent (Agent), (iii) Info, No Incentives and Branch (iv) Info, No Incentives and Agent and (v) No Info.

While much of the literature has focused on how physical proximity to agents can promote usage of bank accounts (see, e.g., Brune et al. 2014), the selected study areas are close to and equidistant from agents and the branch alike. This way we provide a more direct test of whether the business approach used by agents and their social proximity to unbanked populations better promotes take-up and usage of accounts than offering the same services through the branch.

The account offered, known as ‘Sukaliku’ account, had a number of features designed to appeal to the poor: no opening or account maintenance fees, no minimum balance, and no limit to the number of deposits and withdrawals to and from the account (though there is a 500 CFA minimum amount for deposits and withdrawals). Importantly, there were no fees on deposits or withdrawals.¹ In other contexts, transaction fees, especially those associated with withdrawals, have impeded usage of savings accounts (Dupas et al., 2016; Banerjee and Duflo, 2011). Account balances also earn interest at a rate of 4% per year.

We find that providing account information and financial incentives to open it increased the probability of opening the account by 14.3 percent and 20.4 percent, respectively. This is similar to findings from other experimental settings (see, e.g., Cole et al. 2011). While take-up of the account was not influenced by whether individuals were directed to either an agent or a branch to open the account, individuals that were directed to an agent made more deposits and withdrawals during the 12 months after the opening of the account. In particular, they visited the branch as often as those directed to the branch, making transactions of roughly 64,000 CFA (USD 106.24 at the time of the study), but visited the agent 1.7 times more per year, making smaller transactions (USD 23.50 on average).

Our work is related to two emerging strands of research. The first focuses on how poor households use agents to send and receive money within social networks to improve their

¹ Account opening and minimum balance fees were also waived in Dupas and Robinson (2013), Dupas et al. (2016), Schaner (2015), and Prina (2015). Only Prina (2015) also waived withdrawal fees.

financial management. Jack and Suri (2014) have shown that mobile telephony has reduced the costs of such within-network transfers in Kenya and find that proximity to ‘mobile money’ agents has helped households to smooth consumption in the face of economic shocks.^{2,3}

Having an agent of a banking institution in close proximity could also reduce the transaction costs associated with sending and receiving money, and it may make additional types of financial transactions feasible. Our work is therefore related to a second strand of experimental literature on take-up and usage of bank accounts. One part of that literature shows how commitment devices enable poor households to accumulate savings to varying extents in different contexts (Ashraf, Karlan, and Yin, 2006; Karlan et al. 2014; and Karlan and Zinman, 2014).⁴ However, our work is more closely related to the literature that introduces ordinary savings accounts to poor households (Cole, Sampson, and Zia, 2011; Dupas and Robinson, 2013, 2016; Schaner, 2015; and Prina, 2015).

A priori, it is difficult to know whether commitment or ordinary savings accounts would be better vehicles for accumulating savings. Greater flexibility to withdraw savings from ordinary accounts in times of need is likely to be more attractive to poor households than the more rigid terms of commitment accounts, but that very flexibility might make it harder for them to accumulate savings. And indeed, the variation in account take-up and usage is wide across experiments that introduce ordinary accounts, from 84% take-up and 80% usage in

² Similarly, Yang and Choi (2007) find that shocks to the incomes of Philippine households are associated with significant increases in the international remittances that they receive, an indication that those remittances could be used to smooth consumption.

³ Jack and Suri (2013) also find that the purposes of remittances differ between users and non-users of M-PESA. Users are more likely to receive remittances for credit or in response to an emergency, while the fraction of total M-PESA transactions for regular support declines. The patterns suggest that M-PESA enables households to more easily draw on their social networks for support in trying circumstances. Relatedly, Blumenstock, Eagle, and Fafchamps (2015) show that Rwandan households affected by earthquake received increased amounts of cellular “airtime” (a simple precursor to mobile money) from members of their social network, especially those with whom they had already established reciprocal relationships.

⁴ In their experiments, Brune et al. (2014) and Kast and Pomeranz (2014) compare outcomes for commitment and ordinary savings accounts.

Nepal (Prina, 2015) to about 10% take-up and 8% usage in Indonesia (Cole, Sampson, and Zia, 2011).⁵

One salient factor that could spur high take-up and usage of ordinary accounts is the lack of reliable savings alternatives. Prina (2015) speculates that this could be contributing to the high rates she finds among female household heads living in Nepalese slums. In addition, Karlan, Ratan, and Zinman (2014) point to lowered transactions costs and greater trust in banking institutions as crucial for increasing the usage of formal savings products among the poor. And again, the features of the savings product itself (withdrawal fees, minimum balances, account opening fees) will no doubt affect take-up and usage.

To put our experiment in the context of the literature, we note that the areas around Dakar and Thies that we study contain many poor households, but they are likely not as poor as the households in other experimental settings such as Nepal. Moreover, a substantial share of our subjects had an account with another financial institution prior to our experiment. These factors could lead to lower expected take-up rates for our study. At the same time, trust in financial institutions and lowered transaction costs are factors that should work to increase take-up and usage in our setting. Our partner institution (MicroCred) is well-established in Senegal, and the lack of fees for opening and using the account should be attractive to poor households.

Because it examines the effects of proximity to banking outlets (branches and agents), our work is also related to the non-experimental literature showing how expansion of bank branch networks is associated with increased account usage among the poor, resulting in increases in their incomes and reduced poverty levels (Bruhn and Love, 2014; Allen et al. 2013; Burgess and Pande, 2005). What distinguishes our work from both the experimental and non-experimental literature is that we provide a direct test of how agents affect the take-up and

⁵ Usage rates are based making a minimum number of transactions within a specified time period after opening an account. For example, active account users in Prina (2015) are those that made two or more deposits within a year of opening an account.

usage of ordinary savings accounts relative to bank branch staff. To our knowledge, this is the first such test in the literature.

The rest of the paper is organized as follows. Section 2 describes the experimental design and data sources, Section 2.1 the sample characteristics, Section 2.2 the randomization validation, Section 3 the empirical framework, Section 4 results and Section 5 concludes.

2. Experimental Design and Data

The experiment was a collaborative effort among MicroCred, MasterCard Foundation, the World Bank and the International Finance Corporation (IFC). MicroCred (MC) is a microfinance institution that offers microcredit as well as savings products. After entering the Senegalese market in 2007, MC quickly became one of the largest four microfinance institutions in Senegal. Having focused on lending to micro, small and medium entrepreneurs in the past, MC recently shifted focus to cater to low income individuals, illiterate, women, young and rural people. The institution's agent network was launched in 2014 and is growing rapidly to support this vision. More than 500 agents currently complement a network of 37 branches serving clients all over Senegal in all large and a number of smaller cities as well as increasingly also in rural areas.

Despite the arrival of MC, Senegal remains below the average for Sub Sahara Africa in terms of financial inclusion. According to the Global Findex Database (Demirguc-Kunt et al 2014) only 11.9% of the adult Senegalese population have a bank account and only 6.6% of adults report saving at a financial institution.⁶ Saving informally using savings clubs or non-relatives is more common and done by 29%.

According to a census we conducted in the study areas, 46 percent of households report having a savings account and 87 report saving informally. These numbers are higher than the

⁶ The regional averages for Sub Sahara Africa are higher at 28.9% and 15.9%, respectively.

Senegal-wide averages from Findex because they mostly come from urban areas with higher proximity to financial institutions.

The timeline of the experiment is presented in Figure 1. Our study sample consists of 2200 individuals from nine different survey areas located in the suburbs of the capital Dakar (6 areas), in the suburbs of Thies, the third most populous city (2 areas), and in a village outside of Thies (1 rural area).

These areas were chosen because MC was planning the roll out its agent network there. Once the agent was identified by MC, we identified suitable areas that were equidistant to MC branches and agents. Figure 2 shows as an example the two survey areas in Thies. Each survey area is located between a MC branch and a MC agent and are typically 1-1.5 square kilometers.

After study areas were chosen, a census with basic socio-demographic and financial characteristics was implemented to draw the sample of study participants. Every household in the study areas was visited, and a member from each household was selected at random using a Kish grid. Existing MC clients were excluded from the survey but they could be clients of other financial institutions. In total, 8,002 individuals were interviewed.

Data from the census was used to identify respondents with a high propensity to open a savings account. The 2,500 individuals with the highest probability were selected and randomly allocated using a 2x2 design into a control and four different equally sized treatment groups that varied depending on whether individuals received monetary incentives to open a savings account and where they were sent to open the account.⁷ Each of the 5 experimental groups had 500 individuals.

During a household visit, the baseline data was collected and then treatment groups were offered of a savings account. All four treatment groups received information about savings

⁷ The statistical model turned out not to be very accurate. Among individuals in the treatment group, those with higher propensity to open an account were no more likely than those with lower propensity to actually open the account when offered.

account features. The monetary incentive was only received if the savings account was opened before a certain deadline and was transferred as balance to the newly opened account. Individuals were encouraged to visit an agent or the branch to open a Sukaliku account at an agreed day and time. Since at the time of the study agents did not have the authority to open accounts on behalf of MC, a MC representative was present with the agent during the account opening days. His or her role was to collect the paperwork needed to open the account, while any information about the account and questions that the client might have asked were answered by the agent. The different treatment conditions are summarized in Table 1.

During the visit, baseline data were collected using tablets about respondents' demographics, household characteristics, financial assets, respondents' credit and saving behavior, their use of money transfer services and bill payment methods, as well as their awareness and use of mobile money services. A total of 2201 respondents were interviewed, 374 control group respondents and 1827 respondents from different treatment groups.

After a baseline survey was completed, respondents received different incentives to open a savings account. Out of 541 participant that opened an account during the 12 months following the visit, 294 respondents were further interviewed for the account opening survey.

A subset of participants that actually opened an account were further soon after interviewed (up to two days after account opening). The purpose of this account opening survey was to compare their experience during account opening at branches and agents.

The endline survey was conducted in March 2016, one year after the baseline, with the same respondents. The overall attrition rate was 15 percent and it is almost identical and not statistically significant across experimental arms. This suggests that attrition bias is not a concern when examining the impact on outcomes measured in the follow-up survey.

During the 12 months after the household survey and the experiment during which respondents received incentives to open a savings account, MicroCred kept track of which

respondents opened an account and the location and size of their transactions. The administrative data of savings account transactions allow us to not only analyze and compare account opening across treatment groups but also to measure account activity, in particular the type of transaction (deposit or withdrawal) and the channel (branch or agent). Almost no client in our sample used the account to transfer money.

2.1 Sample Characteristics

Census and baseline data

Table 2 reports summary statistics about respondents including demographic data, information about respondents' education, professional status, income as well as access to credit and savings. Panel A presents summary statistics for the census, conducted in September and October 2014. The sample consists of one household member (chosen at random) per each of the 8002 households interviewed in the nine survey areas located between MC branches and agents. Panel B presents summary statistics from the baseline survey collected between January and March 2015 for the sample of individuals selected for the study.

Since the sampling strategy using in the census is the same as that using to collect the Findex data, they are comparable. Recall that study participants were selected because they had a high propensity to open a savings account. As it turns out, our model had little predictive power in explaining actual take-up of the account. No matter, the baseline sample and the census are different. In Panel B, 53% of respondents are female, less than in the census sample. Forty one percent of baseline respondents are heads of households since they usually manage the household finances. The proportion of household heads in the baseline is similar to that in the census. The average as well as median proportion of self-employed respondents, respondents with a credit as well as respondents in whose families at least one person has a

savings account are higher in the baseline sample than in the census sample. The same holds for respondents' average and median age and individual monthly income.

Baseline respondents are on average about 37.9 years old, obtained 6.7 years of schooling and have an average monthly income of about 100,000 FCFA (equivalent to 173 USD). The average monthly income of all census respondents is comparatively lower with 67,000 FCFA (equivalent to 116 USD). Literacy among baseline respondents is 64%, almost ten percentage points higher than in the census. Further, 80% of baseline respondents report being self-employed, while this proportion is only 32% in the census. The use of financial services is again higher among baseline respondents with 58% having a credit and 98% reporting to save informally. Only 34% of census respondents have a credit and 87% report to save informally.

Thus, the baseline sample is on average richer, more educated, and slightly older as well as composed of more active users of financial services than the census.

Transaction data

Table 4 reports summary statistics for account opening and usage from MicroCred administrative data. These data include every transaction that respondents made since account opening in 2015 until February 2016 and specifies the type (deposit, withdrawal or transfer), amount and location (at an agent or a branch) of each transaction.

About 24.2% of study participants opened a savings account with MicroCred and 34.2% of those used it actively, that is, they made at least one transaction with their account since account opening. The experimental treatment conditions were successful in inducing account opening as the take-up rate varies across treatment and control groups. Only 11.8% of control group respondents opened an account with MicroCred while take-up rate among respondents in the different treatment groups vary from between 21.5% for respondents that received information about the account and were sent to open an account at a branch and 29% for respondents that

received information, as well as monetary incentives to open an account and that were sent to open an account at an agent.

In terms of actual usage of accounts, Table 4 reports statistics for the full sample of accounts opened, including inactive accounts and for the subsample of accounts that were active. Since the total number of withdrawals and deposits are similar, these accounts appear to be used to as a transactional account to manage their cash needs, rather than an investment account where savings are kept for a rainy day. The number of transactions made on accounts is with 1.7 deposits (5.0 for the active sample) and 1.5 withdrawals (4.4 for the active sample) relatively low. However, the low average numbers of total deposits and total withdrawals hide the fact that the number of transactions per account varies widely from respondent to respondent. Some respondents made up to 48 deposits and up to 37 withdrawals since account opening.

The average accumulated amount of deposits is 307,000 FCFA (equivalent to 532 USD) per client. The average accumulated amount of withdrawals is 259,000 FCFA (equivalent to 449 USD). These results suggest again the transactional nature of the account. The average balance of active savings accounts one year after the experiment is 52,000 CFA (equivalent to 90 USD). The average balance of savings accounts across individuals that opened an account is 18,000 FCFA (equivalent to 31 USD), comparatively lower given the high proportion of inactive accounts.

In terms of location, more than one third of transactions at done with agents and these transaction tend to involve lower amounts.

2.2 Randomization Check

Table 3 presents the randomization check with the sample of 2200 respondents that took part in the baseline survey. Columns 2 – 6 report the mean for each of the experimental group while Column 7 reports the p-value of a T-test that all treatment dummies are jointly zero in a

regression where each variable is the dependent variable. We do not observe systematic differences between treatment and control groups with respect to demographic characteristics, education level, monthly income or the proportion of respondents that have an outstanding credit. Similarly, there are no significant differences in the distance to the closest MicroCred agent and branch. We find significant differences between the different treatment and control groups at the ten percent level for the proportion of self-employed and for the proportion of respondents with at least one existing savings account in the family. The proportion of respondents that report to save informally is also significantly different across treatment and control groups at the one percent level.

An F-test of the null hypothesis that the average of all these variables is the same for any treatment and control groups cannot be rejected (with p-values higher than 0.111).⁸

3. Empirical Framework

In order to estimate the effect of different incentives on savings account opening and usage, we estimate the following equation:

$$Y_i = \alpha + \beta_1 Agent_i + \beta_2 Info_i + \beta_3 Incentive_i + \beta_4 Distance\ to\ branch_i + \beta_5 Distance\ to\ agent_i + \varepsilon_{imt}$$

Y stands for account opening, account activity and different measures of account usage. These variables are drawn from the transaction data of respondents that opened a savings account. The data includes every transaction that respondents made since account opening and specifies the type (deposit, withdrawal or transfer), amount and location (at agent or branch) of each transaction.

⁸ If we consider instead the sample of 2500 individuals assigned to be interviewed, the lowest p-value that would be reported in Column 7 would be 0.185. Similarly, the p-value of an F-test of the null hypothesis that the average of all the variables is the same for any treatment and control groups cannot be rejected (p-value is 0.23).

We analyze the following twelve different outcome variables: (1) *account opening*, (2) *activity*⁹, (3) the *total number of deposits* since account opening, (4) the *number of deposits done at a branch*, (5) the *number of deposits done at an agent*, (6) the *total number of withdrawals* since account opening, (7) the *number of withdrawals done at a branch*, (8) the *number of withdrawals done at an agent*, (9) the *share of transactions done with agents*, (10) the *sum of deposits*, (11) the *sum of withdrawals* as well as (12) the *final account balance* (as of February 2016) one year after the encouragement to open a savings account.

Agent, *Info* and *Incentive* are treatment dummy variables. Each outcome variable is regressed on these three different treatment dummies: (a) *Agent* - a dummy for whether a baseline respondent was sent to an agent to open a savings account, (b) *Info* - a dummy for whether a respondent received information about the savings account and (c) *Incentive* - a dummy indicating if a respondent received a monetary incentive to open a savings account in addition to information about the account.

Distance to branch and *distance to agent* indicate an individual respondent's distance to the next MC branch or agent in kilometers. Since the randomization did not stratify by any variable, there are no additional regressors, apart from the treatment dummies and distance measures.

4. Results

Panel A of Table 5 presents the intent-to-treat effects. In Column 1 the dependent variable is whether an account was opened and includes all respondents, while in Columns 2-12 the sample is restricted to individuals that opened an account. Panel B presents results for the sample of clients who at least transacted once and includes regressions for a subset of outcome variables.

⁹ A client is defined active if he/she made at least one transaction since account opening.

We find that individuals directed to an agent increase the overall number of deposits and withdrawals compared to individuals directed to the branch. Since the number of transactions at the branch are the same for both groups, this increase in the number of transactions come from more visits to the agent.

5. Conclusion

This paper studies the effects of access to agent banking. We find that individuals directed to an agent increase the overall number of deposits and withdrawals compared to individuals directed to the branch. Since the number of transactions at the branch are the same for both groups, this increase in the number of transactions come from more visits to the agent. Our results suggest that agents reduce transaction costs and can thus play a role in deepening financial inclusion.

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Figure 1: Survey timeline

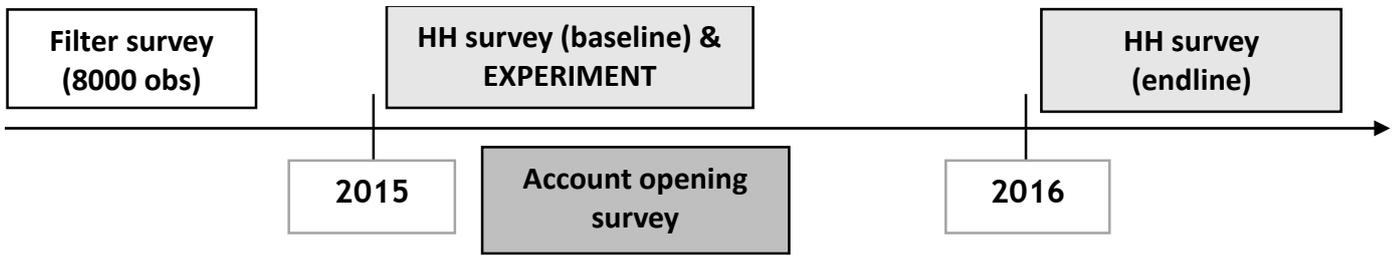


Figure 2: Example of survey areas (Thies)

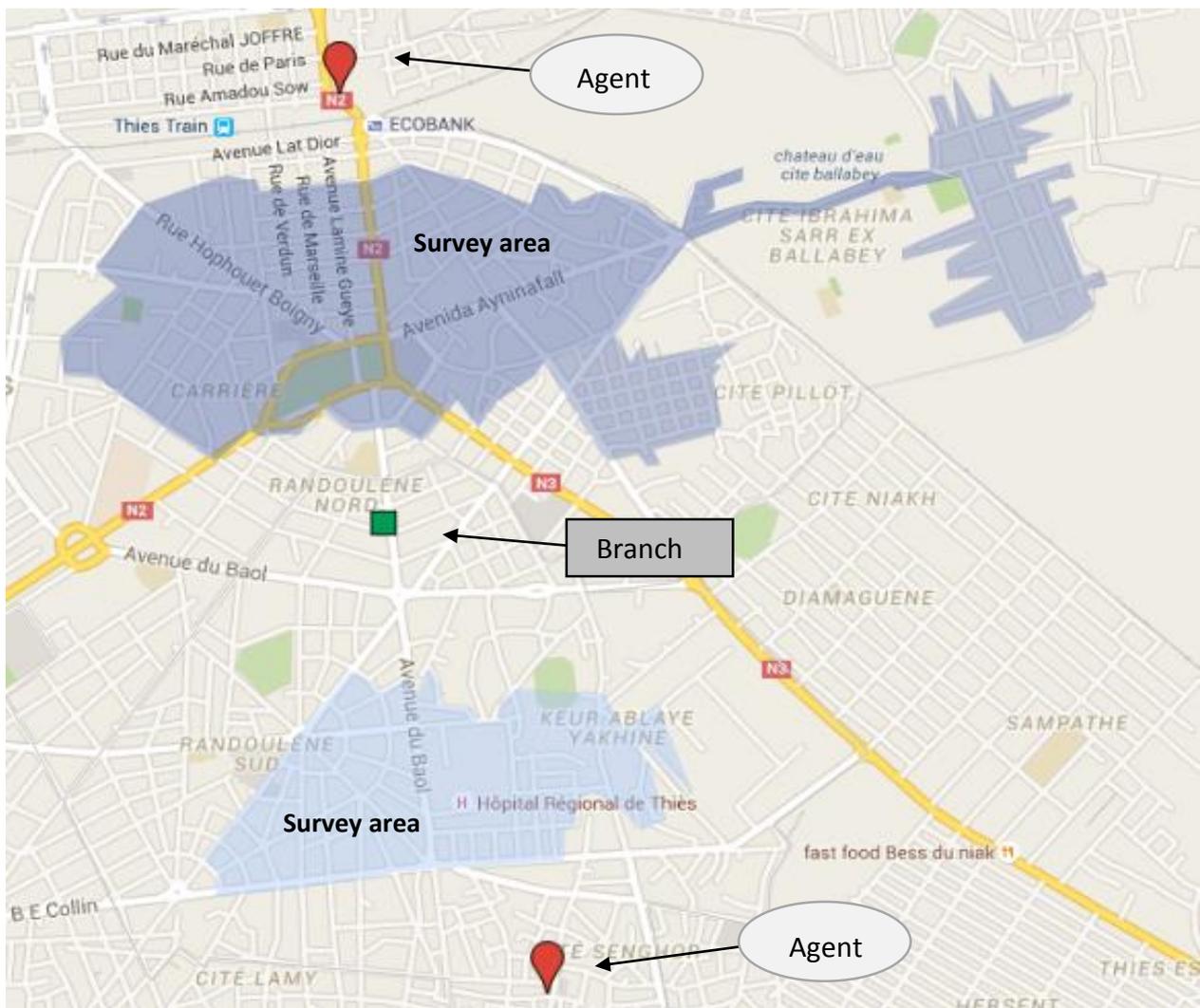


Table 1: Experimental Design

Control Group	Individuals do neither receive any information about the savings account nor a monetary incentive to open an account.
<hr/>	
Treatment Group	
Info & Branch	Individuals receive information about the savings account and receive the address of the closest by branch to open an account.
Info & Agent	Individuals receive information about the savings account and receive the address of the closest by agent to open an account.
Info, Incentive & Branch	Individuals receive information about the savings account, are sent to a branch and also receive a <i>monetary incentive</i> to open the account (1500 CFA \approx 2.6 \$ conditional on account opening).
Info, Incentive & Agent	Individuals receive information about the savings account, are sent to an agent and also receive a <i>monetary incentive</i> to open the account (1500 CFA \approx 2.6 \$ conditional on account opening).

Table 2: Summary Statistics

	N	Mean	Std. Dev.	Min	Median	Max
<i>Panel A: Census Sample</i>						
Gender (1=Female)	8002	0.587	0.492	0.000	1.000	1.000
Household head (1=Yes)	8002	0.398	0.489	0.000	0.000	1.000
Years of schooling	8002	6.682	5.764	0.000	6.000	17.000
More than 6 years of schooling	8002	0.554	0.497	0.000	1.000	1.000
Literacy (1=Yes)	8002	0.531	0.499	0.000	1.000	1.000
Survey language (1=French)	8002	0.140	0.347	0.000	0.000	1.000
Age	8002	36.328	12.779	16.000	34.000	88.000
Professional status (1=Self-employed)	8002	0.321	0.467	0.000	0.000	1.000
Individual monthly income (in thousands of FCFA)	6894	66.984	83.021	0.000	30.000	600.000
Credit taken out (1=Yes)	8002	0.343	0.475	0.000	0.000	1.000
Savings account in family (1=Yes)	8002	0.460	0.498	0.000	0.000	1.000
Saving informally (1=Yes)	8002	0.866	0.340	0.000	1.000	1.000
<i>Panel B: Baseline Sample</i>						
Gender (1=Female)	2200	0.528	0.499	0.000	1.000	1.000
Household head (1=Yes)	2200	0.409	0.492	0.000	0.000	1.000
Years of schooling	2200	6.867	5.296	0.000	6.000	17.000
More than 6 years of schooling	2200	0.601	0.490	0.000	1.000	1.000
Literacy (1=Yes)	2200	0.644	0.479	0.000	1.000	1.000
Survey language (1=French)	2200	0.054	0.225	0.000	0.000	1.000
Age	2200	37.830	12.015	16.000	36.000	84.000
Professional status	2200	0.801	0.399	0.000	1.000	1.000
Individual monthly income (in thousands of FCFA)	2200	99.982	98.733	10.000	60.000	600.000
Credit taken out (1=Yes)	2200	0.579	0.494	0.000	1.000	1.000
Savings account in family (1=Yes)	2200	0.517	0.500	0.000	1.000	1.000
Saving informally (1=Yes)	2200	0.980	0.142	0.000	1.000	1.000

Table 3: Randomization check

	N	Means					P-val of F-test
		Control	Info & Branch	Info & Agent	Info, Incentive & Branch	Info, Incentive & Agent	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gender (1=Female)	2200	0.511	0.544	0.546	0.498	0.538	0.420
Household head (1=Yes)	2200	0.417	0.432	0.394	0.376	0.428	0.190
Years of schooling	2200	7.027	6.685	7.067	7.041	6.551	0.679
More than 6 years of schooling	2200	0.620	0.600	0.619	0.602	0.568	0.679
Literacy (1=Yes)	2200	0.663	0.640	0.666	0.630	0.623	0.623
Survey language	2200	0.059	0.058	0.053	0.059	0.040	0.350
Age	2200	37.925	37.805	36.927	37.307	39.153	0.133
Professional status (1=Self-employed)	2200	0.356	0.407	0.359	0.350	0.413	0.090
Individual monthly income (in thousands of FCFA)	2200	96.524	107.562	95.969	100.130	99.213	0.111
Credit taken out (1=Yes)	2200	0.599	0.568	0.559	0.570	0.602	0.249
Savings account in family (1=Yes)	2200	0.527	0.521	0.481	0.517	0.538	0.094
Saving informally (1=Yes)	2200	0.995	0.980	0.980	0.970	0.977	0.006
Distance to branch (in km)	2088	1.778	1.424	1.761	1.542	1.629	0.349
Distance to agent (in km)	2088	2.017	1.590	1.945	1.761	1.782	0.512

Notes: Column 1 reports the number of observations. Columns 2-6 report means. Column 7 reports the p-value of F-test that in a regression of the variable against treatment indicators, all coefficients associated to treatment indicators are jointly zero.

Table 4: Account usage

	N	Mean	Std. Dev.	Min	Median	Max
Account Opening (1=Yes)						
Overall	2201	0.242	0.428	0.000	0.000	1.000
Control Group	374	0.118	0.323	0.000	0.000	1.000
Treatment Group	1827	0.267	0.443	0.000	0.000	1.000
– Info & Branch	447	0.215	0.411	0.000	0.000	1.000
– Info & Agent	450	0.264	0.442	0.000	0.000	1.000
– Info, Incentive & Branch	461	0.297	0.458	0.000	0.000	1.000
– Info, Incentive & Agent	469	0.290	0.454	0.000	0.000	1.000
Activity						
Active (1=Yes)	532	0.342	0.475	0.000	0.000	1.000
<i>Panel A: Full Sample</i>						
Total number of deposits made	532	1.699	4.386	0.000	0.000	48.000
Average deposit amount (in thousands of FCFA)	532	18.987	66.697	0.000	0.000	900.000
Sum of deposits (in thousands of FCFA)	532	105.166	428.567	0.000	0.000	5752.600
Total number of withdrawals made	532	1.509	4.283	0.000	0.000	37.000
Average withdrawal amount (in FCFA)	532	13.382	44.949	0.000	0.000	450.000
Sum of withdrawals (in thousands of FCFA)	532	88.743	416.236	0.000	0.000	5725.000
Average balance 15 Feb 2016 (in FCFA)	532	18.276	86.060	0.000	1.500	1141.650
<i>Panel B: Sample with active accounts</i>						
Total number of deposits made	182	4.967	6.334	1.000	3.000	48.000
Total number of deposits made at agents	182	2.522	5.807	0.300	0.000	45.000
Total number of deposits made at branches	182	2.445	2.774	0.000	2.000	16.000
Average deposit amount (in thousands of FCFA)	182	55.502	104.943	0.800	23.095	900.000
Average deposit amount at agents (in FCFA)	85	43.765	58.281	1.000	20.000	350.000
Average deposit amount at branches (in FCFA)	146	65.548	123.811	0.500	24.094	900.000
Sum of deposits (in thousands of FCFA)	182	307.408	690.157	1.00	85.00	5752.60
Total number of withdrawals made	182	4.412	6.399	0.000	2.000	37.000
Total number of withdrawals made at agents	182	2.132	4.647	0.000	0.000	33.000
Total number of withdrawals made at branches	182	2.280	4.062	0.000	1.000	33.000
Average withdrawal amount (in thousands of FCFA)	182	39.118	70.108	0.000	15.543	450.000
Av. withdrawal amount at agents (in thousands of FCFA)	73	36.016	43.745	1.000	21.500	201.000
Av. withdrawal amount at branches (in thousands of FCFA)	110	61.861	87.602	1.000	28.500	450.000
Sum of withdrawals (in thousands of FCFA)	182	259.403	680.997	0.000	50.000	5725.000
Average balance 11 Feb 2016 (in thousands of FCFA)	182	51.946	141.400	0.000	5.664	1141.65
Proportion of transactions made at agents	182	0.357	0.404	0.000	0.138	1.000

Table 5: Results

	Account Opening	Active	Number of deposits			Number of withdrawals			Share of transactions with agent	Sum of deposits in thousands FCFA	Sum of withdrawals in thousands FCFA	Account balance in thousands FCFA
			Total	At branch	At agent	Total	At branch	At agent				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Panel A: Full Sample</i>												
Agent (1=Yes)	0.008 (0.021)	-0.000 (0.045)	1.077*** (0.399)	0.008 (0.191)	1.069*** (0.319)	1.077*** (0.365)	0.228 (0.194)	0.849*** (0.256)	0.352*** (0.057)	90.370** (43.330)	98.890** (42.230)	0.128 (8.549)
Info (1=Yes)	0.111*** (0.025)	-0.022 (0.087)	-1.370 (1.231)	-0.156 (0.395)	-1.214 (1.104)	-1.971 (1.285)	-1.144 (0.908)	-0.827 (0.828)	-0.154* (0.093)	-77.720 (80.900)	-80.580 (77.080)	8.614 (8.060)
Incentive (1=Yes)	0.168*** (0.025)	-0.013 (0.085)	-1.448 (1.226)	-0.286 (0.378)	-1.161 (1.108)	-2.267* (1.269)	-1.404 (0.907)	-0.863 (0.810)	-0.047 (0.093)	-71.350 (78.370)	-89.860 (72.790)	16.690* (9.501)
Distance to branch (Km)	-0.003 (0.010)	-0.015 (0.035)	0.105 (0.543)	-0.509*** (0.168)	0.614 (0.500)	-0.279 (0.338)	-0.572*** (0.185)	0.294 (0.231)	0.176*** (0.035)	-101.800** (50.210)	-98.020* (49.940)	-14.310** (6.403)
Distance to agent (Km)	-0.010 (0.008)	0.014 (0.030)	0.369 (0.432)	0.511** (0.224)	-0.142 (0.265)	0.448 (0.409)	0.542*** (0.196)	-0.094 (0.253)	-0.122*** (0.026)	130.500* (76.830)	125.000 (76.720)	15.300*** (5.881)
Mean of dependent variable	0.242	0.342	1.699	0.836	0.863	1.509	0.780	0.729	0.122	105.166	88.743	18.276
Observations	2,088	501	501	501	501	501	501	501	175	501	501	501
R-squared	0.031	0.001	0.050	0.039	0.055	0.036	0.042	0.029	0.267	0.082	0.082	0.023
<i>Panel B: Sample of Active accounts</i>												
Agent (1=Yes)			2.487*** (0.800)	0.045 (0.417)	2.442*** (0.699)	2.913*** (0.853)	0.731 (0.505)	2.182*** (0.633)		230.000** (99.510)	256.800*** (97.460)	
Info (1=Yes)			-3.088 (3.077)	-0.237 (0.791)	-2.850 (2.977)	-4.982 (3.082)	-2.976 (2.215)	-2.006 (2.218)		-169.700 (196.500)	-180.600 (187.500)	
Incentive (1=Yes)			-3.845 (3.085)	-0.889 (0.772)	-2.955 (2.993)	-6.240** (3.054)	-4.001* (2.222)	-2.239 (2.182)		-229.000 (198.700)	-281.400 (185.400)	
Distance to branch (Km)			0.922 (0.753)	-1.211*** (0.335)	2.133*** (0.814)	-0.614 (0.730)	-1.527*** (0.461)	0.913* (0.471)		-222.600** (101.700)	-221.900** (107.500)	
Distance to agent (Km)			0.436 (0.679)	1.170*** (0.346)	-0.734 (0.532)	0.982 (0.671)	1.348*** (0.356)	-0.366 (0.444)		287.400** (127.400)	280.900** (129.200)	
Mean of dependent variable			4.967	2.445	2.522	4.412	2.28	2.132		307.408	259.403	
Observations			175	175	175	175	175	175		175	175	
R-squared			0.175	0.129	0.170	0.118	0.130	0.087		0.205	0.205	
Robust standard errors in parentheses												
*** p<0.01, ** p<0.05, * p<0.1												