The Partnership For Financial Inclusion

Who Are the Microfinance Clients?

A case study on customer segmentation and product development

FIELD NOTES #3

Two thirds of adults in Sub-Saharan Africa don't have access to formal financial services, which means the large majority do not have access to secure and productive means of saving, safe and efficient ways of transacting money, or regulated credit. The rate of financial exclusion is highest among the most marginalized communities; those with low levels of education, and low-income and rural populations. In Tanzania, less than five percent of smallholder farmers have an account at a formal financial institution despite the fact that subsistence farming is the mainstay of the country's economy[1]. One of the challenges facing microfinance institutions that attempt to break new ground by offering banking services to such communities is to understand new client groups in order to provide relevant and well-designed products and services that make the business viable from both customer and provider perspectives. Analyzing existing data more effectively and being innovative in collecting new information is of increasing importance for financial institutions, as this study shows.

For every successive loan that a customer takes out the loan size grows, the interest rate decreases, and the maturity increases. This suggests that microfinance does help small-scale entrepreneurs grow their businesses.

1 Based on the latest FinScope Tanzania data from 2013.

The MasterCard Foundation
International Finance Corporation
WORLD BANK GROUP

AccessBank Tanzania (ABT), an IFC client, is a socially responsible microfinance institution established in 2007. The bank operates under a full commercial bank license, providing loans and other financial services primarily to lower income customers and small- and medium-scale enterprises (SMEs). Headquartered in Dar es Salaam and initially focused on urban and peri-urban borrowers, ABT has recently branched out to other areas of the country in order to better serve low-income rural populations. As part of the Partnership for Financial Inclusion, a joint initiative of IFC and The MasterCard Foundation, IFC implemented a data analytics project with ABT to examine its customer records. Moreover, a small follow-up survey with 150 active and inactive urban clients was conducted to explore the effect of micro loans on clients' households and businesses. IFC also implemented a Financial Diaries study on a rural agri-loan pilot to help ABT better understand the rural market.

The three interlinked research pieces offer insights to the industry, for example regarding the fungibility of money among target client groups. A common challenge for microfinance institutions is how to judge accurately if customers will use microloans for the productive purpose as planned. Considering the tight economic context of a low-income clientele, there is a risk that credit is being used for general household expenditure that does not yield the expected returns or ability to repay. The studies conducted by IFC suggest that both urban and rural populations do indeed treat loans as fungible income, but that a common practice of mental accounting means that customers keep track of any diversion of funds and eventually invest the same amounts in their businesses from other income sources. Though fungible use of money is common, it need not be a problem.

The analysis of ABT's client records shows that for every successive loan that a customer takes out, the loan size grows, the interest rate decreases, and the maturity increases. Larger loans are associated with higher total assets, while a higher number of successive loans taken out by an individual is associated with larger average loan amounts and net income. This suggests that microfinance does help small-scale entrepreneurs grow their businesses, although the study does not prove causality as such. The study also finds that clients who are in the lowest 20 percent income category when they take their first loan show a 50 percent higher increase in loan size between their first and most recent loan, suggesting that they are growing their businesses faster than clients that are better off at the outset. This could show that microfinance is most beneficial at the bottom of the pyramid for those clients that have no alternative access to other formal sources of finance.

Results of the follow up survey suggests that monthly health and, above all, education expenditures of clients increase with every loan taken out on average. The same holds for monthly business expenses, which supports the case that clients' businesses grow with every loan taken out. Tracing ABT clients over time, the IFC research also found an increase of clients' income with every loan taken out. Although the follow up study does not test for a causal relationship between loans and observed changes, qualitative evidence from interviews nevertheless suggest that more than 80% of sample clients attribute positive effects on their households and businesses to borrowing with ABT.

The research done on the new agri-loan product in the Lake Victoria region showed that there is a substantial demand for access to financial services among rural communities and that it is indeed possible to design a commercially viable rural lending product that meets this demand. A reason for the success of ABT's agri-loan is that it is designed as a loan product for rural populations with diversified incomes rather than an agri-loan for the production of a certain crop, which has traditionally been the most prevalent agricultural loan. The loan is individual rather than collective, and takes into account the varied income cycle of smallholder farmers by allowing for variable repayments over the loan cycle in accordance with fluctuations in expected income. ABT also accepts cattle as collateral instead of land, as Tanzanian's small-scale farmers tend not to own land or other immovable property.

The Characteristics of ABT Microfinance Clients

The customer profiling study[2] analyzed data focusing on the characteristics of ABT's micro clients in general, credit profiles of distinct client segments, and the changes over time associated with taking out loans as well as factors determining these changes. It sought to answer questions such as: Which types of clients ABT is reaching in terms of key socio-demographic characteristics, such

Customer Profiling

Based on a dataset composed of electronically available data from the bank's Management Information System as well as paper-based client information from loan files for a selected sample of 541 micro clients in total, the study looked at what types of clients ABT is reaching in terms of socio-demographic, economic and business variables, and how distinct client segments are characterized.

Impact Study

A follow-up survey with 150 active and inactive urban clients was conducted to explore the borrowing experience and the effect of micro loans on households and businesses.

Agrifinance Study

Researchers conducted a series of in-depth financial diaries-type interviews with a sample of 15 rural loan customers and a control group of 15 non-customers with similar profiles to determine the impact of the rural loan on household finances.

NOTE: Results from these studies are neither strictly statistically representative for clients of AccessBank Tanzania nor for microfinance clients on a broader level.

2 The data analytics was based on electronic and paper based data from ABT's. Out of more than 40,000 ABT 1micro clients, a sample of 541 micro clients with a total of 652 loan files was selected. Only clients with a loan size of more than 2,000,000 Tanzanian Shillings ($1,223) were included.

as economic and business variables concerning for example gender and family size? Do men and women have different credit conditions? Do they bring different collateral? Do clients with different numbers of credits have different profiles? Do characteristics change with an increasing number of credits? What are the common characteristics of clients who do not renew their loans? Are there business or collateral variables that help to predict the chances of default? How are missing clients at the middle of the loan size distribution characterized? How do they compare to the rest?

As loan clients mature, their loan conditions improve

The majority of sample clients are 30-40 years old, 73 percent are married, and the majority has more than two children. About 32% are first time borrowers, 35 percent have taken 2-4 loans, and the remaining third of sample clients has taken out more than four loans. With every loan taken out, the loan size for a client increases on average, the interest rate decreases and maturity increases, up to a number of seven loans. Higher loan sizes are associated with higher total assets, and a higher number of loans taken out by an individual is associated with higher average loan amount and net income.

Men have better loan conditions than women

Given that male borrowers have higher values of total and fixed assets than female borrowers, male sample borrowers tend to have better credit conditions than female borrowers. Men's average loan size is higher, their interest rates are lower, and the maturity for their loans is longer. The proportion of drop-outs (see below) is smaller among men than women. Among first time borrowers, men spend more on education, entertainment, food and health than women. Among borrowers with 2-4 loans, women spend more than men on education and entertainment. The differences between male and female borrowers decreases with a higher number of loans.

Women are better than men at paying back loans

For borrowers with up to four loans, women clients tend to have lower PAR (Portfolio at Risk, the proportion of loans that are overdue) than men in the overall micro client sample. The PAR for women decreases with the number of loans, while male customers with 2-4 loans have a slightly higher PAR than male first-time borrowers. However, the PAR is more than two percentage points lower for male borrowers with more than four loans than for male borrowers with 2-4 loans. PAR among all ABT micro clients was 5.81% and 2.59% for sample clients.

One in three clients leave the bank

Dropouts are defined as clients whose last loan disbursement has passed for at least 450 days, as 95 percent of all credits are normally renewed within this period. The figure of dropouts for all ABT micro clients is 37.05 percent. Among women sample clients, the proportion of dropouts is higher than for male clients, while with each additional loan taken, the loyalty to ABT seems to increase and people become less likely to drop out. Total assets are positively and significantly associated with inactivity, which means that when clients get to a certain, individually defined level of assets, they no longer feel the need to take out a loan from ABT[3].

The 'missing middle' is indeed missing

Small and medium-sized enterprises account for a high share of economic activity in developed countries, but are often missing in developing countries. 85 percent of ABT's micro clients have an initial loan size of less than $3,000. Only 11 percent are "middle clients" or very small enterprises who take out a first loan of $3,000-$8,000, while a mere 4 percent take out loans bigger than $8,000, getting close to the SME space. The analysis shows that the "middle clients" are the biggest spenders on food and health, but spend only half the amount on education compared to clients with bigger loan size.

Microloans contribute to higher spending on education, food and health

The study shows a clear trend of increasing spending on education as clients take out more loans, with a 300 percentage point increase for clients that are classified in the highest loan graduation class[4]. Health expenditure also increases with the number of loans, and the change is about 50 percent higher for borrowers who have a relatively low income level when taking out their first loan compared to the change recorded by relatively wealthier clients. Food expenses also increase more among clients with the lowest initial incomes compared to wealthier clients. It thus seems that ABT's loans contribute to higher spending on education, health and food, especially among the poorest borrowers.

Loan conditions vary depending on gender, assets, industry

In addition to the gender bias reported above, the study confirmed, not surprisingly, that borrowers with the lowest asset and income levels also tend to have smaller loan sizes and higher interest rates. One result stands out, however, namely that borrowers in the clothing sector tend to get better credit conditions (e.g. lower interest rates) than borrowers in other industries.

The Effect of Taking out Microloans

All urban clients living in and around Dar es Salaam that were part of the initial client record analysis were contacted for a follow up survey one year later in order to explore the potential effect borrowing with ABT had on them. Respondents were given the opportunity to express their experience with taking out one or more loans with ABT as well as the effect they observe and attribute to those loans.

3 Within the scope of the follow up survey one year later, we found that 15.4% of inactive clients indeed seem to have graduated beyond the micro-loan level as they are taking out loans with commercial banks.
4 Based on their repayment history and number of loan cycles borrowers are classified into three graduation classes. I is the lowest graduation class and III is the class for the customers most worthy of credit.

Loans are within the capacity of borrowers to repay
For 85% of sample clients the loans they took out with ABT were within their capacity to repay. Only 12% of borrowers mentioned having difficulties in repaying their loans. When taking out a loan, speed of loan approval is ranked most important by the highest proportion of clients (31%). This result is confirmed by the fact that the highest proportions of clients mention the short and simple loan processing as two of the aspects they value when borrowing with ABT. Other factors that clients (17%) consider when taking out a loan are bank location, customer service and collateral requirements. For a slightly smaller proportion of clients, reputation of a bank is the most influential factor when considering a loan. Only 4% found the interest rate the main point for consideration.

Borrowers attribute positive effect to loans
87% of clients state that the ABT loan was helpful or even very helpful for them and their families. As an example, clients state that loans helped them to provide their families with food and to pay school fees for their children. Others used the loan to build a house. Being asked the same questions about the effect of taking out a credit on a client's business, a similar picture emerges. Once again, 87% of respondents stated that it was effective or even very effective for their business. Examples of effects on businesses are capital increase, improved and expanded businesses, as well increase of products needed for a business. The clients that did not find the loan helpful mention that the interest rate is too high and the loan amount too small for their needs and in order to trigger a change.

Loans are used for investing in own business
Almost all sample clients are entrepreneurs with at least one (42%) or even two to four businesses (58%). Their businesses account on average for 88% of a client's monthly income. Monthly business expenses of sample clients increased with every loan. The median change of business expenses per loan is 74 USD. The increase is higher among female borrowers than among male borrowers. The use of loans to invest and expand business is confirmed by answers of respondents that were asked to describe the effect ABT loans had on them and their households. 76% of sample clients mentioned that they would buy more inputs and increase the stocks of their businesses. About 40% of respondents further use the loan to improve and expand their business site. 27% buy equipment or tools for their business. These answers indicate that micro loans are indeed used for investing in own businesses and thus for productive purposes as intended. As we will see below, the picture is different for rural clients and hence the need for a specific rural lending approach.

Implications

1. Microloans help individuals of financially marginalized communities advance economically and improve livelihoods. As borrowers take out progressive numbers of loans, their businesses grow and their economic situation improves. A vast majority of borrowers attribute their economic advancement to access to finance.
2. Microloans contribute to broader development as microloan clients increase spending on education, health and food.
3. Most microloan clients do not have a problem paying back their loans, and only a very small number of clients find the interest rate is too high.
4. Microfinance institutions are well advised to continue ensuring fast and simple loan processing as this is highly valued by clients and one of their main considerations when deciding to take out a loan.
5. Simple and cheap data analytics work can add great value to MFIs who are often sitting on large amounts of data without making full use of it.

From Agricultural Loans to Rural Lending
Different microfinance customers require different products and services. The insights gained in analyzing customer profiles can be used to sharpen a provider's offerings to a specific client group, for example smallholder farmers. Due to the seasonality of incomes and the unpredictability of external factors such as weather, farmers face a unique set of challenges accessing financial services. Smallholder farmers tend to lack formal collateral, rarely have registered credit histories, and face poor infrastructure and commodity price volatility that can significantly impact their ability to repay loans on a fixed schedule. As a consequence, they are often denied the credit they need for working capital, to buy tools or machinery, or to take out insurance, in order to improve productivity, income and livelihoods.

The challenge that financial institutions face in meeting this demand is to design products that are tailored to the specific needs of farmers on sustainable terms. In 2014, ABT developed and piloted an agri-loan product specifically designed for the rural farming community and targeting small-holder farmers. Compared to ABT's standard microloans, the term of the rural loans was extended to up to a full year; the repayment schedule was based on the client's ability to repay given his or her estimated income stream; and livestock was accepted as collateral.

The intention of offering these terms was to allow farmers with tangible agricultural assets access to credit and the ability to invest loan money on a timeline that would allow them to take advantage of longer-term agricultural and economic cycles. In the Kahama district, Shinyanga Region, where the product was piloted, farmers grow diverse cash crops and depend on livestock for traction, fertilization of their fields, and as assets for savings and risk management. ABT created a typology of farmers and a risk assessment methodology that took these conditions into account and also relied on community verification of farmers' resources in lieu of official documentation.

As part of the pilot evaluation process, the independent research firm, Microfinance Opportunity (MFO), was engaged to assess the new rural loan product on a sample of 15 ABT clients versus a comparison group of 15 similar, non-client farmers. The research was conducted using mixed methods of data collection including modified financial diaries, farm tours, and interviews with bank staff. The analysis of this data helps shed some light on a variety of topics related to rural micro-lending schemes in Sub-Saharan Africa and elsewhere.

Smallholder farmers make good bank customers

The success of ABT's pilot can be judged first and foremost on its reported 0% PAR (after 13 months, when all loans had matured), and the decision by ABT to extend the scheme to its other branches in Tanzania. But it can also be called successful based on information provided by participants in the study. Borrowers said they were satisfied with the terms and the impact of the loans on the ability to generate income. It is also noteworthy that after an initial round of marketing of the pilot, ABT found further marketing efforts unnecessary and thereafter relied entirely on word-of-mouth to attract new agri-loan applicants in Kahama. This seems to suggest that there is indeed a latent demand for finance in rural areas.

"Mental accounting" is used to manage finances

The financial diaries made apparent once more that money is fungible, in that people use inflows for a variety of outflows. This is often cited as a potential problem with microloans, with the fear being that customers take out loans for particular productive purposes but then use the money for more general expenditure. It is a reasonable assumption to make, considering the often small financial margins many micro-loan clients have. The study showed, however, that participants mentally account for a large outgoing sum against a corresponding incoming sum. This indicates that people can and do connect specific inflows with specific expenditures. In asking borrowers to explain how they will use loans, ABT and other lenders may be helping them to mentally commit to that use rather than treat it as a fungible sum.

Diversification plays an important role in rural cash flow management

One of the characteristics of ABT's rural loan clients is that they had diverse sources of income, in addition to farming. Diversification can help people manage cash flow and reduce the impact of shocks. Several participants mentioned that they were encouraged by ABT to diversify the investments they made with their loan money, suggesting that interaction with loan officers led to further diversification and thus greater resilience to cope with the insecurities of a livelihood dependent on farming. Farmers used income from one economic activity to finance expenditures for other economic activities. One particularly common practice was to use business income to finance agricultural inputs, suggesting that diversification can play a role in helping people manage cash flow in an agricultural setting where inflows and outflows are seasonal and lumpy. By vetting farmers for diversified income sources in the application process and allowing borrowers the freedom to invest in non-agricultural projects that smooth cash flow, the agri-lending scheme enabled farmers to make timely repayments.

Implications

1. Agri-lending schemes incorporating flexible terms can appeal to rural households, and selection criteria recognizing that diverse economic activities occur in rural areas can help banks select qualified borrowers and protect against default.
2. MFI's are advised to shift from individual assessments and single crop loans to a 'rural lending approach' which covers all household activities and accepts financing of a diverse portfolio of activities.
3. Allowing clients to participate in the drafting of the terms of their loans helps to achieve client ownership over loan terms as well as more realistic terms, which should result in better repayment behavior
4. Proper selection and training of loan officers is key to breaking into the rural market, considering the resistance that often exists towards rural individuals and communities. Once empowered with an understanding of what is needed to identify qualified loan candidates based on criteria that are applicable to the rural context, loan officers have the potential to become strong advocates for banks in an important underserved market.

5 More than 450 days passed since the last loan disbursement

Conclusion

Innovative research activities such as the ones described here can help financial institutions deepen their knowledge about existing and potential clients in order to design relevant products and services to successfully reach and serve previously unbanked populations. The customer profiling exercise established different client segments and then identified, for example, existing disparities in repayment rates. The tracer follow up survey gave active as well as inactive microloan clients the possibility to express how they perceive the usefulness of borrowing and the loan experience in general. The financial diaries study, on the other hand, highlighted that rural clients require a slightly different approach that is closely aligned to the seasonal calendar while accepting that fungibility of money does not need to be a cause for concern for lenders. Overall, the results suggest that microloans have positive benefits for business and households of clients and that most of the clients use loans for productive purposes, such as investments in their businesses.

One potential field of future study could be to further explore reasons for inactivity among loan clients. Microfinance institutions often have up to 30 percent of microloan portfolios composed of inactive clients[5]. Exploring the positive or negative reasons for not taking out another loan holds much promise in terms of improving products and services as well as measuring impact of loans. To be able to this, it is important for microfinance institutions to keep the contact data of former clients up to date. With more detailed and historic data financial institutions could for example use data analytics to improve credit risk profiling or to trace longer term development of individual clients, and make this an integrated part of standard client portfolio analysis to the ultimate benefit both of the institution and clients.

Contact the Publisher:

Anna Koblanck
AKoblanck@ifc.org
+27(0) 11-731-3000

IFC, Sub-Saharan Africa
14 Fricker Road, Illovo,
Johannesburg

Authors

SVEN HARTEN is the IFC Results Measurements Specialist leading the knowledge and learning agenda of the Partnership for Financial Inclusion.

His current research focuses on developing successful business models for microfinance and mobile financial services in Sub-Saharan Africa.

SINJA BURI is Monitoring & Evaluation Consultant working for the knowledge and learning agenda of the Partnership for Financial Inclusion.

Her research focuses on characteristics of microfinance clients as well as the factors that influence the take-up and usage of financial services in Sub-Saharan Africa.

The Partnership for Financial Inclusion aims to scale up commercial microfinance institutions and advance mobile financial services to bring financial services to 5.3 million previously unbanked people in Sub-Saharan Africa by 2017. It is a $37.4 million initiative of The MasterCard Foundation and IFC that brings together the intellectual and financial capital of the Foundation with IFC's market knowledge, expertise and client base. The partnership is also joined by The Development Bank of Austria, OeEB, and collaborates with knowledge partners such as the World Bank and CGAP. An important objective of the partnership is to contribute to the global community of practice on financial inclusion, and to share research and lessons learned. This publication is part of a series of reports published by the program.

To find out more, please visit www.ifc.org/financialinclusionafrica