Working paper

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The Role of Business Skills and Capital Constraints in Micro Enterprise Development

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Executive Summary

Recent research suggests that small enterprises in developing countries face a number of challenges to growth, including lack of skills, capital constraints and poor self-control. This report details the initial results of a rigorous evaluation designed to understand some of the issues that constrain young entrepreneurs. The project employs a gold standard methodology to understand what constrains businesses from growing, and what can be done to overcome these constraints.

The evaluation uses a number of novel approaches to understand what constrains entrepreneurs. The first is the baseline measurement of an individual's ability to succeed in business. Entrepreneurial ability is often identified in the literature as an important component in business success, but it is rarely measured or used effectively.

Individuals have also been trained so as to affect this ability. Individuals often lack knowledge of the best practices of running of business, especially in developing countries, where education in general is often limited. A random selection of people were given business skills training. The goal is to increase the knowledge individual business owners have about doing business, i.e. their ability.

In order to test to what extent capital constrains entrepreneurs, a set of interventions have also been introduced that provide people with money to grow their business. Recent research though has shown that there are constraints to what people can do with money given to them. Evidence suggests that many people face behavioral constraints, such as impatience, or community constraints, such as family pressure, that make it difficult for business owners to invest money the way they would like. Individuals have thus been randomly divided into six groups: (1) those that receive a cash grant of $200, (2) those that receive a loan of $200, (3) those that are given business skills training with a cash grant equal to $200, (4) those that are given business skills training and a loan of $200 and (5) those that are given the behavioral intervention. There is also a control group that will be used as a comparison.

The evaluation also covers two distinct geographic locations in order to understand the role that market structure and development has in the impact of the program. The main intervention was conducted in the central region of Uganda where markets are well developed. An additional intervention were delivered in northern Uganda where a recently ended 20 year civil war has left the markets undeveloped. By testing the effect of the same interventions in these two different areas, the role that market development plays in business growth success can be ascertained.

The results of the baseline analysis suggest that randomization was successful in producing a balanced sample of individual characteristics. The results of analysis on take-up also suggest some individual characteristics that predict who will be interested in loans and trainings. While only correlations, the results suggest that neither sex nor marriage status predicts interest in loans, while previous experience with loan processes are important. Individuals in the north are also far more interested in loans than people from the south. For interest in training, women and literate individuals are more interested while previous training experience and being from the north are both negatively associated.

Introduction

Young entrepreneurs and the small businesses they run are of vital importance for modern economies. Nowhere is this more important than in poor countries with limited formal employment options. It is not clear though what is necessary to help grow and develop such businesses. Policy makers and researchers posit that entrepreneurial skills and competencies are an integral part of whether a business is successful. Yet there is little evidence if entrepreneurship skills can be taught. Most businesses also face cash constraints, meaning they cannot invest in their business to develop it to the optimal size. It is unclear which, if either of these, is what is holding business development back.

A number of recent research projects have explored the impact of enterprise training and have found mixed results. Oosterbeek, van Praag and Ijsselstein (2010) find that business skills training has no effect on business outcomes. Bjorvatn and Tungodden (2010) find that business training in Tanzania has some effect on business knowledge, but no effect on business outcomes. Karlan and Valdivia (2006) include business training in a microfinance institute in Peru. The program lead to increased business knowledge, revenue and repayment rates, but had no effect on profits. Attanasio et al (2011) subsidized vocational training in Colombia and found income and employment increases for women, but none for men.

Cash grants suggest a more cohesive picture. In two different papers, De Mel, Mckenzie and Woodruff (2008a and 2008b) find high returns to cash grants in businesses in Sri Lanka, but very little return for female owned businesses in Ghana. Blattman, Fiala and Martinez (2011) find high returns to a grant program in Uganda for business training and capital for men and women, though women performed slightly worse. They find though that alleviating capital constraints were the major reason behind business success, with a small role for business training. There is currently no strong evidence of the effect of loans on business development.

This report details the initial results of an experimental evaluation of the issues that constrain young entrepreneurs. The evaluation tests different mechanisms, as implemented through three interventions, and determines which, if any, can assist entrepreneurs in developing their businesses.

The first intervention is the Improve Your Business (IYB) skills training. IYB is a standard training program that the ILO provides to existing businesses throughout Uganda. It is a materials-based training program for established entrepreneurs who want to improve the management processes of their business. The

training is modular in order to meet the specific needs of the target group. IYB is based on advanced participatory adult training methodologies.

The second intervention is cash grants. A selection of business owners were chosen to receive cash grants valued at $200. These grants are unconditional, though the agent who delivered the money instructed the recipient that the money should be used for the business. The business owners selected were equally divided between those that have taken the IYB training and those that have not.

A selection of business owners were also be chosen to receive loans valued at $200 to be implemented by PRIDE, a microfinance institute in Uganda.

One of the key analyses of this project is a cost/benefit analysis that takes into account the costs of implementing such interventions. Cash grants are very easy for governments to implement, but are given very little oversight. Loans are expensive to scale up, but may be more impactful for individuals. Behavioral intervention is basically free to implement in this context, but may have a small but economically significant effect. Finally, training is offered by many governments and organizations around the world but have not been well evaluated for their costs versus benefits given. This study will be able to answer all of these questions.

The remained of this report includes an outline of the interventions that have been given to individuals. I then discuss the evaluation design and core questions to be answered. I end with analysis conducted on the baseline and initial tracking data collections. Due to delays in the implementation of the program, endline data collection has been delayed until the middle of 2013 to allow for effects to materialize. Three endlines at three month intervals will be conducted to track the trajectory of business growth and will present the final analysis. This is done to improve the statistical power of the analysis (McKenzie 2012). This report therefore focuses on descriptions of the samples involved in the evaluation, balance tests to determine whether randomization was successful in producing similar observable characteristics for the populations in the different treatment arms, as well as an initial analysis into who was interested in taking up the program. Randomization was conducted only on individuals who expressed an interest in both training and a loan. I explore what individual characteristics are correlated with interest in loans and training to better understand selection into the program, as well as better understand what populations are best targeted for such programs in the future.

In appendices A and B I also present some of the lessons learned from the baseline and initial tracking data collections. Data collection in Uganda is often difficult in general, but these difficulties are

compounded when working with small business owners who are generally untrusting of outsiders asking about the details of their business. This information is based on the experiences of the researcher and the survey manager during these data collections and could be useful for others interested in running similar data collections.

Interventions

The different interventions provided to random selection of the population of youth businesses are as follows.

Start Your Business (SYB)

SYB is a materials-based training program for emerging entrepreneurs with a business idea who want to proceed and start their own business and those with young businesses. The objective of SYB training is to enable entrepreneurs develop a concrete, feasible and bankable business plan. By the end of the training course, these entrepreneurs will have completed a basic business plan. The business plan will serve as a blue print for the entrepreneurs in the business and in accessing finance.

SYB training is customized for entrepreneurs who want to start micro or small-scale businesses and those who have just started their businesses and do not have a business plan. To benefit fully from SYB training, the entrepreneurs should be able to read and write. Furthermore, they should have developed a concrete and feasible business idea prior to SYB training. SYB training is equally suitable for men and women in rural and urban areas, and for young entrepreneurs.

SYB training is designed to assist entrepreneurs to, among others:

- Draft a marketing strategy
- Plan their staff needs
- Cost their goods and services
- Decide about the legal form of their business
- Get a clear idea about the licenses and the permits needed
- Assess the environmental impact of their planned business
- Forecast their finances

The SYB training materials comprise the SYB manual and business plan booklet and the SYB Business Game. The SYB manual is used during the training and serves the entrepreneurs as a source of reference

after the course. The manual explains step by step the process to follow to prepare and implement the business plan. Explanations are given in easy-to-understand language and plenty of illustrations are used to explain concepts and solutions as clearly as possible.

Relevant examples and exercises relating to business women and men are important features in the manual, enabling the reader to immediately apply the theory of learning and to step by step complete the corresponding section in the business plan booklets.

The SYB Business Game is part of the training. The SYB Business Game enables the entrepreneurs to simulate business operations. The advanced modules of the Game allow the entrepreneurs to experiment the challenges of managing small businesses with product portfolios in different markets.

Cash grants

A selection of business owners were chosen to receive cash grants valued at $200. These grants are unconditional, though the agent delivering the money instructed the recipient that the money should be used for the business. The business owners selected for the grants were equally divided between those that have taken the SYB training and those that have not.

Loans

A selection of business owners were chosen to receive loans valued at $200. These loans were semi-conditional in that the money has to be paid back to the implementing microfinance organization, though there are no consequences regarding the use of the money, similar to the cash grant. The business owners selected were also equally divided between those that have taken the SYB training and those that have not.

Evaluation and program design

The goal of this evaluation is to better understand the main constraints to business growth. In order to determine this, a number of indicators will be collected on the businesses during the endline data collections, including the following:

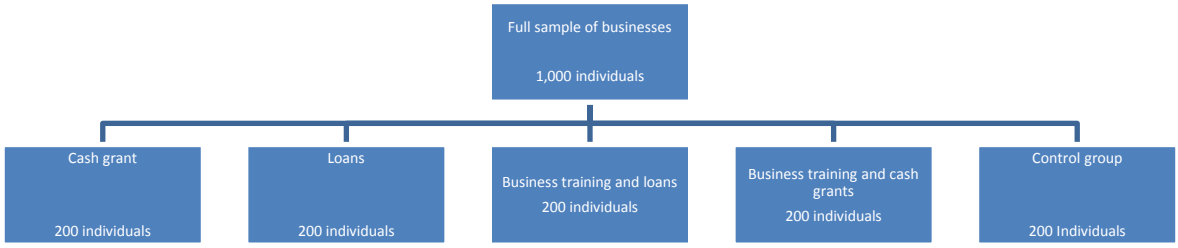
- Business growth (sales turnover, profitability)
- Employment creation
- Changes in business status (registered or not)
- Productivity

- Application of new business management skills
- Quality of the jobs created (decent jobs)

The methods to be employed are a state of the art randomized cross-cutting evaluation design. Rather than simply implementing one program and comparing outcomes to a control group, a variety of interventions were randomly implemented. In this way, the causal impact of each intervention can be obtained and a detailed cost-benefit analysis can be calculated across each.

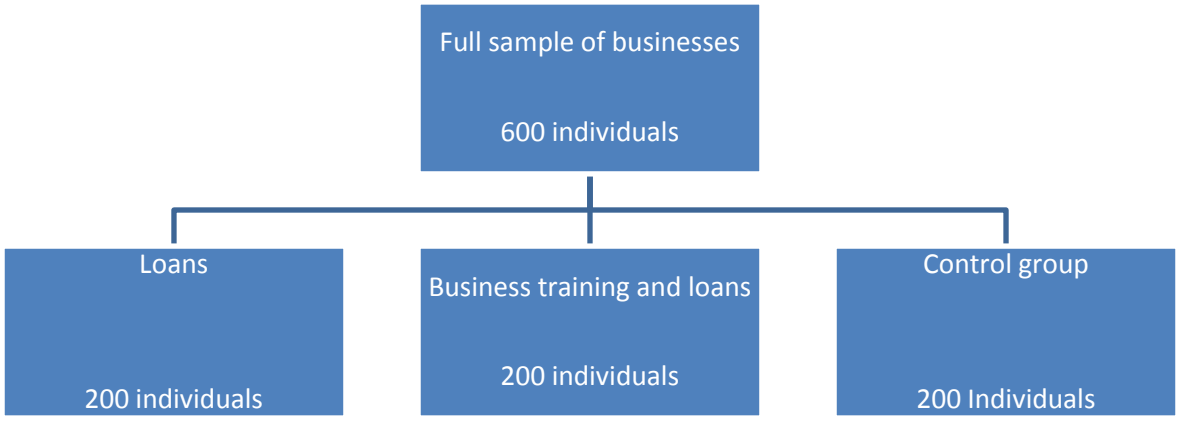
For the main evaluation in the central region, individuals were randomly divided into six groups: (1) those that receive a cash grant of $200, (2) those that receive a loan of $200, (3) those that are given business skills training with a cash grant equal to $200, (4) those that are given business skills training and a loan of $200 and (5) those that are given the behavioral intervention. There is also a control group that was randomly selected to be used as a comparison. Analysis will be done on the differential outcomes between the different groups and the control group.

Visually, this design is as follows.



Thus, a total of 400 individuals were selected to receive cash grants, 400 to receive loans and 400 to receive training. This population is spread across the central region, with approximately half of each group in Mukono and half in Jinja districts.

For the evaluation in the northern region, individuals were randomly divided into three groups: (1) those that receive a loan of $200, (2) those that are given business skills training with a loan of $200 and (3) the control group. This can be visualized as follows.



In Gulu, a total of 200 individuals were selected to receive training and 400 to receive loans.

The interventions are given to individuals with a baseline and three endline data collections. Power calculations on the sample and a review of the literature suggest that a sample size of 200 business owners per intervention and control group is appropriate. For the central region this means a total sample size of 1,200 individuals, and 600 for the north.

Businesses in both regions were selected through a listing exercise. Approximately 3,000 youth businesses in the central and 900 businesses in the northern region were surveyed quickly to gather information on entrepreneur ability, size of business and demographics of the owners. The selection of the final businesses to be in the samples was based on the criteria of desire to grow and interest in the ILO training and loan program. Individuals were then randomly split into the seven categories.

Analysis

The analysis discussed in this section covers the results of the baseline and initial tracking data collection. The data was collected during a baseline census survey that where all small businesses in Mukono were targeted for a quick 10 minute survey. Due to delays in the implementation of the programs, a short tracking survey was conducted before randomization on business owners who expressed interest during the baseline in receiving loans or training. This was done to ensure their continued interest in the program before selecting the final sample. Appendices A and B present some of the issues encountered during these data collections. The issues do not affect the quality of the final

sample or the external validity of the sample, but they do show some of the difficulties in working with small business owners.

In the remainder of this section, I first present the summary statistics for the population. I then discuss the balance tests and confirm that the randomization process produced a well-balanced sample on observables. I then look in detail at the differences between the central and northern samples and discuss how the programs could affect these populations differently. I end by discussing the determinants of interest in the programs. Who was interested in receiving training and loans is strongly correlated with some demographic characteristics. This last analysis could have implications for how training and loan programs are implemented in the future. All tables are presented in the Appendices.

Summary statistics

The questionnaires included information on business owner personal demographics. Appendix B presents the summary statistics for the baseline data collection on the full sample of individuals interviewed during the baseline in both the northern and central regions. There is very little information on small business owners in Uganda. While this sample does not reflect a representative sample of all businesses in Uganda, it does offer a snap-shot of the business owners in these areas.

Small business owners interviewed are more likely to be female (60%) than male, counter to the stereotype of business being dominated by men. The majority of business owners are also married (68%).

Average revenue in the last 4 weeks was 1.6m USH (approximately $640), though this includes a significant amount of variation. Profits are significantly lower at 445,000 USH ($178). For both profit and revenue, business owners report that the average rates in a normal month are about 25% higher.

Individuals were also asked a number of basic intelligence and ability questions. In one question, enumerators read off a list of 8 numbers and asked owners to repeat the numbers back to them from memory. On average the business owners were able to repeat 4 numbers back. Four math questions were also asked, though most business owners were able to respond correctly to them.

Before informing them of the intent of the survey, business owners were asked if they had ever taken loans (38% said yes), the amount of the loan (2.2m USH), and whether they had yet to repay the loan (40% said yes).

A range of assets questions were also asked with the intent of developing an asset index using principal component analysis. As hoped for, there is significant variation in the number of items people own.

Finally, during the quick tracking survey, revenue and profits for the last 4 weeks were asked again. This will allow for an increase in statistical power as there will be 2 baseline and 3 endline measures of profit. These values are significantly lower than the baseline results as the sample included here is those that were selected for the tracking and are reflective of the final program sample. Revenues were 1.2m USH in the last month, with profits at 350,000 USH.

Balance tests

The main benefit of a randomized design is the balance of characteristics between treatment and control samples. While it is impossible to comment on the balance of unobservable characteristics, it is important to test for the balance of observable characteristics as these can be used as controls during the final analysis. The results of a balance test for each of the four arms of this study is presented in Appendix D. The regression conducted for variable i and treatment j is as follows:

$$Variable_i = Treatment_j + District\ Dummies + Error\ Term$$

Each regression is done only between the appropriate treatment variable and the control group, meaning the coefficient can be interpreted as the difference between the respective treatment group and the control group. Statistical significance is demarcated by * for 90%, ** for 95% and *** for 99%.

The results of these tests are very positive. In expectation, about 10% of the variables should be significant at the 90% level or better. Of the 60 variables collected during the baseline, 8 are significant for the grants only arm, 6 for grants and training and 2 for loans only and loans and training. The variables that are significant are not critical variables for the analysis, except for profits from the last 4 weeks in the tracing survey for the grants only arm. For the remaining arms, there are no critical variables that are significant.

Take-up

Who is it that wants training? Who wants loans? Appendix E presents the correlations between the interest of individuals in receiving the two interventions and some basic demographics. The analysis is on the population in the tracking survey and the results are suggestive of the answer to these two questions. The regression conducted on individual i uses OLS on the following model:

$$Interest_i = Characteristics_i + District\ Dummies + Error\ Term$$

An individual's interest in receiving a loan is not well correlated with sex, marriage status, literacy or revenue. It is positively correlated with broad age categories, suggesting that older business owners are more likely to want a loan, whether the person received training in the last, and the number of individuals the business employs. Also, individuals in the north, Gulu, are much more likely to be interested in loans, perhaps due to the newness of the markets, opportunities for expansion, and/or the lack of business loan options in the north.

While a causal argument cannot be made here, it appears that there are some broad conclusions that can be made about interest in loans. It is interesting that neither sex nor marriage status predicts interest. Age and previous training is associated, which suggests that experience with the loan process may be important.

An individual's interest in training presents a contrasting story. Age, marital status, number of employees and revenue are not significantly related to interest. Being female and literacy are both positively significant, but previous training and being from the north are both negatively associated. These correlations do not paint an especially clear picture of those interested in training, but it is clear that women and more educated people are interested in acquiring more skills.

Conclusions and Next Steps

This report details the programs that were implemented, the evaluation design, and the outcomes of the baseline and tracking surveys. The data suggests that randomization was successful in creating a balanced sample. Basic analysis also suggests some interesting characteristics of the businesses, as well as correlations between interest in loans and training.

Due to delays from the implementing agencies, the first endline data collection has been delayed to next year, and so the most interesting analysis, that of the impact of the programs, cannot be discussed yet. The data collections will be conducted every three months and will take one month to collect each. Data will be collected in March, June and September 2013. Preliminary analysis will begin in April, with final results available November 2013.

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Appendix A: Baseline survey description and lessons learned

The baseline was conducted on all small businesses in Mukono, Jinja, Buikwe and Gulu towns. There was no discrimination in the initial contact for the age of the business owner. This was done to ensure the team did not miss any of the appropriate businesses. The questionnaire included sections on individual and household demographics, including age, profits, revenues and assets for the business, and some simple intelligence questions. It ended by asking the individual if they are interested in receiving business skills training and/or a loan.

During the data collection, a number of challenges emerged. These are described below, along with the solution employed.

Lack of trust by the community due to high crime rates, especially in Mukono

- High level of Conmen

- Business Community insecurity about the goal of the project, given the nature of the questions, Example what was your revenue in the last month?. What where the profits of your business in the last month etc.

SOLUTIONS

- We developed T-shirts with the DIW Berlin logo to clearly identify us and remove suspicions

- We developed name tags / identity cards which were used to identify enumerators. This improved the level of trust by the community / response rate.

- Recruited and trained more female enumerators instead to develop trust by the community since most conmen are men.

Local authorities, example the Chairman Local Council One (L.C 1) took advantage of the above challenge of lack of trust by the community and started asking for bribes to give the project a go ahead. At least eight in ten L.C's in a given zone or Sub County asked for bribe.

SOLUTIONS:

- A letter introducing Stephen to the District Security Officers of Mukono, Jinja, Buikwe and Gulu Districts was developed by Nathan Fiala. The District Security officers comprises of District Police Commander (D.P.C), Chairman Local Council Five (L.C 5) and the Chairperson of the Business Communities. So Stephen instead presented this letter to the Chairman L.C 1 instead of giving bribes. This reduced the level of bribery by about eighty percent (80%). Please find copy of the letter attached.

Time spent with business owners were more than the expected estimated time since business owners would pay more attention to customers instead of Enumerators.

SOLUTIONS:

- Enumerators we retrained with an additional skill of waiting with a smile on their faces, giving simple assistance to business owners, example, carrying a crying baby, giving change (loose money solution) and later resuming the survey when business owners are free.

Lack of the business community awareness of our visit.

SOLUTIONS:

- Fliers was developed by Nathan Fiala and later delivered to businesses owners door to door. This was done three days in advance before our visit.

Other research groups carrying out almost a similar nature of surveys were mistaken by the communities to be part of us.

SOLUTIONS:

- Our identity cards were used to explain the difference

There were cases of thieves / thugs breaking into business premises a week or a day prior to our visit. In most cases those particular victims or the whole of that area refused to answer questions about their businesses.

SOLUTIONS:

- We avoided that spot for sometimes and later Stephen coordinated with the Chairman Business community of that area to build community trust towards our activity.

Finding and carrying out the surveys with missing business owners at the time of our visit.

SOLUTION:

- Another separate team was developed from the existing team just to retract those missed business owners and carry out the surveys later.

The creation of a new district (Buikwe) from Mukono just a couple of months before our visit. About eighty percent of the community at that time still categorized Lugazi town / sub county to be under Mukono district.

SOLUTIONS:

- Stephen made inquiries from Chairman L.C 1, new district authorities about the new names for different zones and sub counties in the new district.

Some proud business owners embarrassed us by chasing us away and refused to answer sensitive questions about their businesses and demanded to talk to manager instead, or call the police when we insisted.

- Lack of confidence by weak Enumerators due to previous refusals / intimidations by business owners.

SOLUTIONS:

- Team approach rather than individual approach was introduced by Stephen. This made teams led by team leaders to move together. A strategy of team leaders standing directly opposite businesses and assigning Enumerators to approach a business while monitoring was implemented. Team leaders would wait until those surveys are complete and assign Enumerators again to a set of businesses in that similar manner.

- Team leaders would finally approach a difficult business owner and if he or she still refuses, that business was not done. These team approach rather than individual increased the level of confidence by the business owners in us.

Business owners lying about their ages.

SOLUTIONS:

- Common sense was used to determine age group. Example, business owners with grey hair was not considered a youth.

Business owners giving a name that they are popularly known with e.g., nickname instead of real names. Examples, business owner whose real names is Stella Lamara but popularly known as "Mama Brenda" would register Mama Brenda instead of Stella Lamara.

SOLUTIONS:

- Real names was included during tracking, however it was hard to demand them to prove real names with their identity cards within the short tracking period of time allocated.

Business owners politely giving fake telephone numbers and names instead of refusing to complete the surveys.

SOLUTIONS:

- During tracking, such participants were excluded, not interviewed and their questionnaires not done.

Cases of businesses not yet opened at the time of our visit.

SOLUTION:

- Work would begin at 8.30 AM when most businesses are open and team leaders would go back to check and interview businesses that were previously closed.

GENERAL SOLUTIONS TO IMPROVE DATA COLLECTION

- Generally, the quality of the survey was controlled by increasing the number of audited questionnaires from three questionnaires per Enumerator to four.

- Team meetings headed by Stephen was carried out twice a day at 8 AM before approaching businesses and 7 PM after approaching businesses. Each Enumerator would share their everyday challenges and immediate solutions was developed within a team. Complicated questions were forwarded to Nathan Fiala who later developed solutions and sent back to the team.

Appendix B: Initial follow-up description and lessons learned

Due to the delays in implementing the interventions, a quick follow-up to businesses was conducted 3 months after the baseline. During this follow-up, businesses were once again asked about their profits and interest in receiving training and loans. This section describes the issues encountered with finding businesses and ensuring they are still interested in the program.

Low expectations and lack of assurance or confidence by the community of our return (our coming back after baseline) because of the following reasons,

- Delay.

- We didn't communicate to the business community the exact time period we would come back. They waited for our coming back for a long time hence were not expecting us anymore and so others lost interest in our loan offers and found other alternatives.

- Some business owners also claim that previous researchers who promised to come back never came back and this made them to doubt us too.

SOLUTIONS:

- We explained to them that we are a different research group handling a different project with completely different values, protocols and goals.

Businesses relocating to a different location.

SOLUTIONS:

- Stephen developed a separate tracking team to track businesses that have moved within that area or district. But for businesses that have moved to another district, the available tracking time period was not enough to track such far businesses.

Change of Business ownership or Management. E.g., business is bought by another company or sold to another person. Such businesses was not interviewed and left out during trucking.

Dual ownership of businesses. Eg, Husband and Wife, Brothers, Brothers and Sisters owning the same business.

SOLUTIONS:

- Determination of true ownership of the business was based on higher share holder in the business taking ownership. Also the person who makes decisions about business developments, loans and business debt was legible to take true ownership.

Kampala City Council Authority (KCCA) developing and implementing strategies of removing semi-permanent business premises and constructing a giant market structure in such areas.

SOLUTIONS:

- Stephen again developed a tracking team to locate such businesses in their new premises. However, the tracking time period given was not enough to locate all of such businesses

The subsequent hike of business trading license fees just a couple of months after our baseline by KCCA prompted some business owners to think that this hike came as a result of our previous questions about their businesses. This made some few business owners to refuse to answer sensitive questions about their businesses such as: What were your revenues last month, What was the profit last month and from the profits how much money did you re-invest in your business?

SOLUTIONS:

- Again Stephen coordinated with the Chairman of the business community and humbly requested his help in creating awareness and restoring our name in that particular community.

Few cases of business owners dying.

SOLUTIONS:

- New business owner's name and contacts were determined and included instead.

Long missing business owner from the business premises may be for two or more weeks. Example, - gone to purchase more stock, - butcher man going to the village for three weeks to purchase cattle, - gone on maternity leave, - gone for burial, - sick, - gone to the village for digging especially in Gulu, - School visitations, - gone for an Auction (A big market day usually in the villages are referred to as "Auction" where business owners would go for almost a week) etc.

SOLUTIONS:

- Phone calls were made to these business owners and appointments to meet were scheduled. Later on, some of these businesses were revisited.

- However, not all of these appointments were successful within the short tracking time period.

- Another tracking timeline was set by Nathan which improved this tracking success

Impersonation, example in Mukono, two brothers named Lacan Geoffrey and Okello Denis co-owns a business. The former was the true owner of the business. However the latter called another Enumerator and registered the same business separately but in a different name.

SOLUTIONS:

- Business IDs was introduced by Nathan Fiala.

Rain disrupting tracking activities, example tracking movement by the Enumerators.

Business owners also going to dig in the villages for a longer time during rainy season and returning later after the rainy seasons.

Delay in starting tracking in Gulu because our professional Enumerators were all hired by another research firm (IPA).

SOLUTIONS:

- We had to wait for one whole week for them to first finish and become available again for us to start the tracking.

Business owners giving a friend's number as their alternative phone numbers especially for businesses with only one contact phone number.

Power cuts especially in Gulu made phones not to be charged for a long time hence most phones remained off.

SOLUTIONS:

- Enumerators followed the given directions, found businesses and interview them.

- Also Enumerators included new contacts for businesses whose contact numbers have changed.

Fear due to insecurity by business owners of our phone calls and our visits made the business owners to suspect that we could be conmen, intelligent agents, KCCA spies. Example, when we followed the written direction and found a business owner named Mukasa John in his business premises and we asked him whether he is or he knows Mr. Mukasa John, his immediate response were:-

-why are you looking for him?

-what has he done?

-I don't know him.

However, when the number of Mr. Mukasa John given on the tracking sheet was dialed, his phone rang real loud and then he admitted that he could be the one depending on why we needed him.

This was a major challenge especially in the central region.

SOLUTIONS:

- Phone calls were made prior to our visit and reasons for our visitations were made known to them before our visitations.

Appendix C: Summary Statistics for Baseline

variable	N	Mean	sd	min	max
female	4612	0.5984389	0.4902672	0	1
age	4603	3.812296	1.384541	1	7
married	4606	0.6762918	0.467941	0	1
previoustr~g	4580	0.221179	0.4150861	0	1
bustype1	4540	13.4	15.14186	1	47
bustype2	1256	9.030255	10.76252	1	47
busfinance1	2956	1.496279	1.442521	1	7
busfinance2	235	3.370213	1.998708	1	8
employees	4574	0.6609095	1.371117	0	23
emplopyeeh~s	2975	42.8121	80.95321	0	999
accounting1	4602	3.193611	0.747159	1	5
lastrevenue	4393	1635229	9132026	0	5.20E+08
avgrevenue	4329	2015644	1.01E+07	0	5.00E+08
lastprofit	4288	445242.3	1539520	-300000	5.00E+07
avgprofit	4251	648282.9	5169843	-50000	3.00E+08
lastreinve~t	3693	271601.9	1444171	-50000	5.00E+07
stockvalue	4279	3433481	1.76E+07	0	9.00E+08
liabilities	3204	307490.3	2596937	-1000000	1.00E+08
numbers	4597	3.953665	2.163424	0	8
math1	4608	0.5603299	0.4964008	0	1
math2	4627	0.9909228	0.094851	0	1
math3	4627	0.9855198	0.1194723	0	1
math4	4625	0.9699459	0.1707545	0	1
plans1	4600	2.133043	0.6346824	1	5
previousloan	4587	0.3791149	0.4852197	0	1
ploansource1	1720	1.639535	1.37045	1	5
loanpurpose1	1707	2.115407	1.017509	1	6
loanpurpose2	204	3.053922	1.492851	1	6
loanamount	1705	2192671	6295046	1	1.00E+08
payback	2631	0.3990878	0.489804	0	1
default	2781	1.70694	0.692757	0	2
easyloan	4544	1.360695	0.5048347	0	2
loansource1	2758	1.852792	1.439662	1	5
loansource2	203	3.280788	1.51722	1	7
animal	4566	3.632939	12.53903	0	200
land	4548	5.175022	95.23578	0	6000

tree	4568	25.09194	259.9524	0	9000
bike	4570	0.4389497	0.8278723	0	15
motorbike	4570	0.1643326	0.4491148	0	6
car	4570	0.0973742	0.3747527	0	6
building	4572	0.8048994	2.071991	0	91
tv	4563	0.736796	0.8072572	0	20
heater	4580	0.1078603	0.4032834	0	10
battery	4580	0.0759825	0.3551506	0	9
generator	4580	0.118559	0.3663692	0	10
engine	4582	0.0113488	0.3450495	0	20
laptop	4581	0.17136	0.5970236	0	11
fridges	4582	0.5150589	0.7150823	0	20
rooms	4594	2.739225	3.757034	0	202
loanuse1	3211	2.036437	0.7807531	1	7
loanuse2	159	4.050314	2.178139	1	7
condition	4339	1.790966	0.559796	1	3
lastrevenueT	2090	1195089	2729557	0	7.50E+07
lastprofitT	2081	354838.2	721388.1	0	1.30E+07
lastreinve~T	1949	208430.8	684529.8	-110000	1.50E+07
loanintere~T	2128	1.231673	0.4220003	1	2
previoustr~e	4633	0.2332127	1.132295	0	25
busage1	4633	3.94703	5.203702	0	99
busage2	4633	1.782056	3.951416	0	40
paybacktime	4633	0.0580451	1.64073	-109.1474	7.25

Appendix D: Balance Tests

VARIABLES	grantsonly		grantsandtraining		loansonly		loansandtraining	
	coef	p-value	coef	p-value	coef	p-value	coef	p-value
female	0.0695	(0.191)	0.0205	(0.663)	-0.0417	(0.221)	-0.0512	(0.134)
age	0.0991	(0.303)	-0.000822	(0.994)	-0.0378	(0.653)	-0.0109	(0.899)
married	0.0239	(0.642)	-0.00446	(0.923)	0.00742	(0.817)	-0.00629	(0.845)
previoustraining	0.00923	(0.841)	-0.00228	(0.957)	-0.0203	(0.512)	-0.00593	(0.850)
bustype1	1.781	(0.227)	-0.195	(0.882)	0.871	(0.425)	0.474	(0.664)
bustype2	0.734	(0.565)	0.0228	(0.982)	0.721	(0.594)	0.0180	(0.990)
busfinance1	-0.108	(0.595)	-0.0830	(0.661)	-0.0601	(0.670)	-0.0125	(0.932)
busfinance2	-1.517	(0.215)	-1.500	(0.177)	0.478	(0.412)	0.107	(0.854)
employees	0.241**	(0.0326)	0.178*	(0.0971)	0.111	(0.248)	0.0433	(0.589)
emplopyeehours	19.31*	(0.0655)	8.412	(0.401)	6.714	(0.232)	6.782	(0.217)
accounting1	-0.0692	(0.253)	-0.112*	(0.0535)	-0.0185	(0.729)	-0.00620	(0.905)
lastrevenue	-63,170	(0.402)	44,766	(0.517)	-37,878	(0.453)	-43,417	(0.379)
avgrevenue	57,557	(0.690)	194,892	(0.296)	568,537	(0.310)	19,609	(0.842)
lastprofit	-117,596	(0.115)	55,998	(0.622)	-16,502	(0.724)	-15,998	(0.721)
avgprofit	-292,102	(0.325)	-54,279	(0.832)	-128,522	(0.331)	-117,900	(0.370)
lastreinvestment	33,878	(0.463)	102,036	(0.222)	29,209	(0.340)	20,679	(0.364)
stockvalue	-983,205	(0.411)	-1.320e+06	(0.165)	-187,220	(0.774)	-423,222	(0.490)
liabilities	-6,923	(0.940)	-42,048	(0.525)	9,824	(0.859)	69,033	(0.286)
numbers	-0.0334	(0.862)	0.106	(0.544)	0.0400	(0.789)	-0.0545	(0.719)
math1	0.0526	(0.308)	0.0310	(0.506)	0.0246	(0.476)	0.0493	(0.156)
math2	0.00580	(0.318)	0.00508	(0.515)	-0.00726	(0.263)	-0.00746	(0.257)
math3	-9.36e-05	(0.991)	0.00430	(0.751)	0.0197**	(0.0304)	0.0121	(0.230)
math4	0.0114	(0.420)	-0.00110	(0.944)	0.00491	(0.667)	-0.0151	(0.254)
plans1	-0.00727	(0.897)	0.0448	(0.397)	0.0179	(0.663)	0.0218	(0.600)
previousloan	0.0745	(0.165)	0.0362	(0.450)	-0.00855	(0.807)	0.0235	(0.503)
ploansource1	0.00650	(0.978)	-0.104	(0.605)	0.0148	(0.919)	0.228	(0.126)
loanpurpose1	0.326**	(0.0140)	-0.00860	(0.948)	-0.0105	(0.918)	0.188	(0.108)
loanpurpose2	1.167	(0.162)	-0.217	(0.758)	-1.052**	(0.0266)	-0.267	(0.473)
loanamount	798,032**	(0.0465)	1.412e+06	(0.141)	121,441	(0.507)	195,982	(0.231)
payback	-0.00759	(0.919)	0.0666	(0.292)	-0.0150	(0.707)	-0.0342	(0.391)
default	0.137**	(0.0152)	-0.00275	(0.963)	-0.0342	(0.496)	0.000699	(0.989)
easyloan	-0.00104	(0.984)	-0.106**	(0.0178)	-0.00401	(0.907)	-0.0643*	(0.0600)
loansource1	0.125	(0.496)	0.231	(0.167)	0.0328	(0.777)	0.0788	(0.492)
loansource2	-1.167	(0.170)	-0.526	(0.439)	-0.410	(0.398)	-0.758	(0.129)
animal	1.611	(0.379)	-0.353	(0.776)	-0.372	(0.604)	0.0531	(0.942)
land	0.292	(0.575)	-0.294	(0.144)	15.03	(0.315)	-0.413	(0.701)
tree	-1.707	(0.274)	2.251	(0.532)	4.619	(0.851)	12.52	(0.552)
bike	0.0221	(0.710)	-0.0971**	(0.0478)	-0.00290	(0.959)	-0.0421	(0.443)
motorbike	-0.0578	(0.157)	0.00508	(0.896)	-0.0208	(0.543)	-0.000869	(0.979)
car	-0.0585	(0.209)	-0.0373	(0.324)	-0.0142	(0.580)	-0.0218	(0.363)
building	-0.0922	(0.146)	-0.00805	(0.901)	0.400	(0.145)	0.132	(0.215)
tv	0.00529	(0.927)	0.00829	(0.864)	0.0310	(0.656)	-0.00658	(0.893)
heater	-0.0291	(0.328)	0.0640*	(0.0521)	0.0402	(0.252)	0.0208	(0.380)
battery	0.00630	(0.719)	-0.0179	(0.106)	0.0271	(0.282)	0.0228	(0.382)
generator	0.00107	(0.975)	0.00531	(0.848)	0.00800	(0.748)	0.0288	(0.254)
engine	0		0.00424	(0.317)	0		0.00996**	(0.0447)
laptop	-0.0692	(0.288)	-0.00589	(0.937)	-0.00649	(0.871)	0.0390	(0.421)
fridges	0.0521	(0.445)	0.117*	(0.0510)	0.106	(0.101)	0.0478	(0.265)
rooms	-0.0348	(0.819)	0.0121	(0.935)	0.305	(0.555)	-0.0576	(0.699)
loanuse1	0.0570	(0.473)	-0.00131	(0.985)	0.00277	(0.960)	-0.0323	(0.524)
loanuse2	1.583	(0.157)	-1.432	(0.157)	0.251	(0.689)	-0.274	(0.644)
condition	-0.0312	(0.549)	-0.0256	(0.639)	0.0236	(0.537)	-0.0162	(0.659)
lastrevenueT	744,975	(0.166)	122,244	(0.579)	210,569	(0.169)	93,268	(0.537)
lastprofitT	224,257*	(0.0953)	58,741	(0.390)	21,092	(0.624)	37,668	(0.271)
lastreinvestmentT	231,468*	(0.0939)	106,695	(0.124)	38,347	(0.283)	29,823	(0.229)
loaninterestT	9.36e-05	(0.991)	-0.000148	(0.981)	-0.00248	(0.318)	0.00267	(0.540)
previoustrainingtime	0.0178	(0.784)	0.138	(0.131)	0.0106	(0.889)	0.0307	(0.687)
busage1	0.0728	(0.899)	-0.309	(0.525)	0.132	(0.691)	-0.389	(0.216)
busage2	-0.289	(0.306)	0.0165	(0.957)	-0.343	(0.206)	0.00592	(0.983)
paybacktime	0.0753**	(0.0336)	0.00812	(0.684)	0.0123	(0.615)	0.00240	(0.904)

Appendix E: Take-up Analysis

	(1)	(2)
VARIABLES	loaninterestT	traininginterestT
female	-0.009	0.024
	[0.019]	[0.011]**
age	0.022	-0.006
	[0.008]***	[0.005]
married	0.022	-0.003
	[0.020]	[0.011]
literacy	-0.011	0.026
	[0.022]	[0.013]**
previoustr~g	0.038	-0.026
	[0.021]*	[0.012]**
employees	0.015	-0.002
	[0.007]**	[0.004]
lastrevenue	0.000	-0.000
	[0.000]	[0.000]
districtT==GULU	0.205	-0.056
	[0.026]***	[0.015]***
districtT==JINJA	-0.057	0.017
	[0.035]	[0.020]
districtT==MUKONO	-0.036	-0.004
	[0.024]	[0.014]
Constant	0.627	1.073
	[0.043]***	[0.025]***
Observations	2,051	2,051
R-squared	0.083	0.021
Standard errors in brackets		
*** p<0.01, ** p<0.05, * p<0.1		

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