Abstract

The idea and implementation of Microfinance has become a hot topic and is currently at the central stage in debates on poverty alleviation. Microfinance can be defined as the sustainable delivery of financial services to the poor that aims at creating a world in which as many poor households as possible, have access to a suitable range of financial services (Christen, Rosenberg and Jayadeva, 2004). However, the large majority of impact studies of microfinance lack empirical support and several limitations and obstacles continue to haunt the potential outcomes of microfinance, such as selection bias (Tedeschi, 2007) and lack of integration with the commercial banking sector (Copestake, 2007). In my thesis, I will focus on yet another limitation, that of lack of entrepreneurial knowledge amongst lenders in microcredit. I will develop on the marginal impact of entrepreneurial training on microcredit and suggest an empirical framework. The paper will start by presenting the topics of entrepreneurship and microfinance and the current situation in Tanzania. In Part II a review of an important study by Karlan and Valdivia will be discussed and in the following section a suggestion for a framework for an empirical study will be made. Conclusions and limitations will be presented in the final sections.
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1. Introduction and Scope of the Paper

In 2006 the Nobel Peace Prize was awarded to the Grameen bank and its founder Muhammad Yunus for their struggle in attempting to reduce poverty in Bangladesh. Through the provision of small loans to the very poor, these parties offered the poor a chance to earn sufficient funds to free themselves from the cycle of poverty. As the field of microfinance extends and grows throughout the developing and developed world, so has the interest of social activists and financial investors. Various mechanisms are thought to be responsible for the success of microfinance in reducing poverty but various obstacles remain. These obstacles have to be addressed in order for microfinance to continue growing in the future. Yunus speaks of entrepreneurial opportunities with funds, when in fact many of the entrepreneurial traits desired for financial sustainability are not available to the poor. It is therefore crucial to speak of entrepreneurship and microfinance together, rather than treat them separately. Most of the literature available has not, as far as I can see, treated these two areas simultaneously.

It is important at this stage to point out the distinction between microfinance and microcredit. Microcredit refers to the act of providing the loan, whereas microfinance is the act of providing financial services in a broader sense. In other words, microfinance encompasses domain of microcredit (Sengupta & Aubuchon, 2008). In this study the two terms will be used interchangeably since an impact on microfinance would mean a similar impact on microcredit.

Unfortunately the incorporation of entrepreneurial training in microcredit programs is far from common. However, the advantages of such trainings are expected to outweigh the costs of implementation. Also, little empirical research exists both on the impact of microfinance on poverty and on the potential impact of entrepreneurship training on microfinance. It is my aim to explore this latter topic using an empirical framework to test the impact of entrepreneurship training on microfinance. It will be taken for granted that microfinance has a positive impact for poverty alleviation and working on this assumption I hope to convince that entrepreneurship can help microfinance overcome some of the hurdles it has come across in its fight to alleviate poverty.

However many advantages one can name of introducing entrepreneurship training, the question of measuring this impact remains an issue. For this reason I would like to study the marginal impact of entrepreneurship on microfinance. For this purpose, I will recur to empirical methods of studying the impact of training and will present a framework to do so. The research goal of my study is to develop a
sound empirical framework to test the impact of such training on microfinance programs in Tanzania, and what those effects are expected to be.

The research question is:

“What are the expected effects of entrepreneurial training on microfinance, and how can they be successfully measured empirically?”

The research question is then divided into sub-questions:

- What is Entrepreneurship?
- What would an Entrepreneurship program entail?
- Who would train?
- What is Microfinance?
- What are the current Microfinance activities in Tanzania?
- How many participants are involved in Microfinance activities?
- What is the profile of these participants?
- What are the problems?
- What are the expected results of integrating entrepreneurial training with microfinance?
- How will those results be measured?
PART I
2. The Notion of Entrepreneurship and Education for Entrepreneurship

2.1. Entrepreneurship and Entrepreneurial Training

When small businesses emerge, a significant number of them subsequently fail either at their infancy stage or a few years after start-up (Ladzani & Van Vuuren, 2002). This failure can be attributed to lack of awareness and failure to correctly estimate the cost of start-up and running one’s business (Macleod, 1995).

I will not venture into the precise definition of entrepreneurship. Having studied this topic extensively, I have long come to the conclusion that just like leadership, entrepreneurship is too imprecise a subject to be defined tightly and hence, consensus about the construct of entrepreneurship remains elusive. Instead, my attention will shift to the categorization of entrepreneurship by Kaufman and Dant based on various contemporary definitions found in the literature. Kaufman and Dant (1998, p. 7) found three perspectives derived by the definition focuses, specifically:

- Traits and skills possessed by entrepreneurs such as risk taking, leadership and motivation. The questions here are whether these skills are innate or whether one can teach them.
- The process of entrepreneurship from creation of new enterprise to results. Other steps would include introduction of new combinations of production factors in an uncertain environment.
- Activities by entrepreneurs such as networking, overcoming market deficiencies, maintaining and developing profit making businesses, and so forth.

All in all, it can be said that entrepreneurship is the process through which individuals or teams of individuals possessing certain traits and skills, create value by combining a unique set of resource inputs to exploit opportunities found in their environment. This type of value creation can be found in any organizational context and the outcomes can range from new venture to product creation to technology. Its applicability is hence not limited to the discipline of business.

In the context at hand, the issue being discussed is that of entrepreneurship training in the setting of microfinance, and whether this would lead to improved results both for the microfinance institute and for the households making use of its services. Academic and development policy discussions about microentrepreneurs and microinstitutes serving these entrepreneurs originally solely focused on the infusion of financial capital, not human capital, assuming that their client’s human capital was fixed. However, lately a trend has been observed where more and more importance is given to maximizing the
output of Microlending efforts by offering additional services that will improve the livelihood of clients whilst further improving the mission of poverty alleviation. Unfortunately, the few programs that exist are remarkably heterogeneous and their impact on economic outcomes has not been conclusively evaluated.

Kroon and Moolman (1992) have highlighted that training helps owners and managers learn how to tackle certain problems, saving them in the process, time and money. Also, it allows them to understand certain rules and procedures present in running a business.

Useful categories of training include motivation; business; and entrepreneurial training. However, this three-legged pot does not stand without one of its legs, and most of the time the missing leg is entrepreneurial training (Ladzani & Van Vuuren, 2002). Postigo and Tamborini (2002) make a useful distinction between education about entrepreneurship and education for entrepreneurship. The authors argue that education about entrepreneurship is mostly based on the construct and transference of knowledge about the discipline whereas education for entrepreneurship focuses on the learning experience and the improvement of competencies, aptitudes, skills, and values.

“\textit{I firmly believe that all human beings have an innate skill. I call it the survival skill. (…) Giving the poor access to credit allows them to immediately put into practice the skills they already know}” (Yunus, 2003).

In developing countries, informal markets dictate the economic scene with over 500 million active micro-entrepreneurs, yet hardly ever do these self-employed receive formal training or education on how to run a business (Karlan and Valdivia, 2006). But can these skills be taught? Yunus claims they are innate. Indeed, poor do possess survival skills but are these skills the same as needed to create a sustainable business? I believe they are not and therefore attention should be placed on teaching these skills to maximize the results of microfinance in poverty alleviation efforts.

\subsection*{2.2. Current Situation and the Perceived Need for Training}

The entrepreneurial training content is of utmost importance and is typically custom made for the different entities making use of it. Particularly, models developed in the West will seldom meet the requirements faced by countries in the developing world.

Training materials can be requested from large western organizations such as the International Labour Organization based in Europe, Promuier in Latin America and Brac in Bangladesh. These trainings
typically include general business skills; strategy training; and problem-solving skills. The trainings introduce the client to what a business entails; how it runs and the marketplace it competes in. Typical attributes of such training are all too familiar to business students and include the identification of a client base; its competitors; and the position of a business in the marketplace. Also, basic business practices are worked on, such as treatment of clients; profit usage; selling; discounting; production; and so forth.

There are several options concerning the content and form of the training materials. An easy approach would be to approach the International Labour Organization in Europe. KAB (Know About Business) is the ILO’s entrepreneurship education training package that is used in many countries and often adapted to each. In Tanzania, the National Vocational Education and Training Authority (VETA) has, with the support of NUFFIC, the International Training Centre of the ILO (ITC-ILO), and TRIODOS FACET, developed a 2-year tailor-made curricula entitled Entrepreneurship Education and Training (EET), which includes a small part of KAB, the ILO Business Game and other training material from other sources. The Tanzania VETA-EET curriculum is a merged course organized through both online and face to face sessions. The general objective of the course is to stimulate and develop student’s entrepreneurial attitudes; to create awareness of entrepreneurship as a possible alternative career option; and to develop and improve business skills necessary to the creation of new businesses (Virtual Learning Environment, 2008).

Because this study is concerned with entrepreneurial training in Tanzania, I also took the freedom to explore alternative teaching modules that would perhaps fit even better the Tanzanian borrower. Specifically I came across two models developed in South Africa, and one model incorporating the previous two. I will analyze and propose to test these models for applicability in Tanzania. These models were developed to govern the thinking about entrepreneurial teaching. Whilst training programs are aimed at different target markets and levels of education they all share their main purpose of stimulating and developing entrepreneurial activity in some or other way. Additionally, when applied to microfinance clients, the training has a two-fold goal: to improve institutional outcomes for Microfinance Institutes and to improve business outcome and welfare for clients. Although the authors that developed these models used formulas to quantify the models, these formulas will not be included here as they suggest a quantifiable relation not obvious from their study. Instead, the models will be treated in their entirety qualitatively. Furthermore, due to the lack of precision and quantification, what the authors call variables are in fact mere constructs aimed at the orientation of the mind in the context of entrepreneurial education.
2.3. The Developed Models, an Analysis

Entrepreneurial performance education model (E/P model)

This model refers to the elements believed to drive entrepreneurial development and was designed to steer syllabi and curriculum development at the University of Pretoria (van Vuuren and Nieman, 1999).

The model implies that entrepreneurial performance is a function of motivation, entrepreneurial skills, and business skills. Educational models making use of this model should cover these three constructs. The three constructs are shortly described:

- Motivation: The authors suggest that this dimension contributes towards participants’ qualities such as inner control, persistence, leadership, determination, decisiveness and shear guts.
- Entrepreneurial skills: Creativity, risk-taking and opportunity recognition.
- Business skills: Skills such as marketing, operational, financial, human resource, and business plan compiling skills.

The multiplicative presentation of the constructs in the quasi formula suggests that in the absence of any of the three constructs the effect of the remaining constructs is cancelled, leading to zero or extremely low levels of entrepreneurial performance.

Entrepreneurial Education Model (E/E model)

This model goes beyond the content of entrepreneurial education programs to include the context wherein such programs are carried out by facilitators and the approaches used (Pretorius, 2000a, b). Here, five constructs are identified as being relevant for entrepreneurial education in promoting start-ups (Ras & Pretorius, 2007).

- Entrepreneurial success themes (Gartner et al., 1999; Timmons, 1999)
- Business knowledge and skills (Gartner et al., 1999; Harris, 1994)
- Business plan utilization (Brush et al., 1995; Timmons, 1999)
- Learning approaches (Mayfield & Weaver, 1997; Ulrich & Holman, 2000)
- The facilitator (McMinn, 2000; Nonis & Hudson, 1998)
- The program context
The model was developed purposely to increase “start-ups” as outcome requirement through entrepreneurial education (Pretorius, 2001). The facilitator is, according to the authors, the key construct and it is he who with the help of his skills, knowledge, and expertise should manage the constructs into a coherent mix. The facilitator is therefore not only part of the constructs but is also responsible for the variable mix which can vary according to demands during the program. The E/E model was further converted for purposes of comparison to the E/P model. Again due to the lack of quantitative elements, the formula was omitted here not to create a false expectation of quantitative relevance. Instead, the formula suggests that entrepreneurial education for start-ups is dependent on skills, knowledge and motivation of the facilitator; the approach employed by the facilitator; the business plan utilization; the entrepreneurial success themes and knowledge; and the business skills and knowledge (Pretorius, Nieman & Vuuren, 2005).
Pretorius et al. (2005) analyzed these two models to determine whether they were similar to one another. Consequently they developed a model incorporating both models which they claimed to be an improved version of the two. I will not develop extensively on the design of their research nor the propositions they drew. Instead, I will present directly their results and proceed in analyzing whether the current existing programs in Tanzania (VETA-EET) fit the profile of the model.

The integration of the two models resulted in a model where education for increased entrepreneurial performance depended on the facilitators ability, skills and experience as previously seen in the E/E model; motivation; entrepreneurial skills; business skills; learning approaches employed; and the business plan use as an approach. In other words, this reads that Education for improved entrepreneurial performance depends on the facilitators’ skills and ability to develop motivation, entrepreneurial and business skills by creatively using different approaches including the business plan.

The fusion of the two models as proposed by the authors basically implies that the models are used as a sort of guide to steer the development of training programs where the necessary constructs for a successful training program are laid out.

The question to be addressed now is whether the chosen training package of KAB (Knowledge About Business) take these constructs into account. Having read the Facilitator’s Handbook, I concluded that the training module is very much in line with the models previously described. Particularly, a strong emphasis is placed on the motivation of the participants and the trainers. Similarly, the role of the facilitator is highlighted: “The quality of the KAB programs introduced into national education programs depends highly from the quality training of the teachers selected for the KAB program in schools. The teachers are the change agents for the introduction of this new subject.” (Facilitator’s Handbook, Appendix, pg. 66)

The conclusion that the KAB training module fits the proposed model is very subjective since no empirical testing was conducted to indeed confirm this statement. The conclusion was based on a qualitative check of all constructs against the contents of the KAB model. Also, the models described are not, in my opinion, empirical and therefore it is advised to review this statement by means of measurable variables if indeed a more empirical proof is desired.
3. Microfinance Today and in Tanzania

3.1. A Little Bit On Microfinance

Muhammad Yunus argues that it is the poor’s lack of access to credit that holds them in poverty. Similarly, Yunus states that “to argue that banking cannot be done with the poor because they do not have collateral is the same as arguing that men cannot fly because they do not have wings” (Yunus, 2003).

Why are these ‘micro-services’ more readily available to the poor in the developed world as opposed to the poor in the developing world? The difference lies predominantly in the heavy competition within the financial sector in developed economies which ensures access to financial services to almost every citizen. Indeed, the foundations of microfinance are very easily understood and result from the unwillingness of banks to provide these services to the poor. This unwillingness can indeed result from the lack of collateral from the poor, as implied by Yunus. However and maybe more importantly, banks do not have the capacity to lend to the poor due to the substantial costs of managing client accounts. Banks lose money whenever a transaction is made below a break-even point in loan and deposit sizes, and poor clients typically fall under this break-even point. It becomes obvious that most emphasis is placed on the development of commercial banking that, in turn, places more value on high-value transactions. Ironically, poor households comprise the majority of most populations and therefore are a potential profit target for commercial banks.

Chowdhury, Ghosh and Wright (2005) examined the impact of microcredit on poverty and by fragmenting the notion of poverty into objective and subjective poverty, found that microcredit lowered both forms of poverty and that this effect was particularly resilient for the first six years of lending, after which they found a tendency to level off. This tendency to level off indicates the lack of sustainability often times found in microfinance.

Another issue of concern is that of bias. Bias issues are responsible for the often largely overestimated positive impacts of microcredit or microfinance on poverty and many are the factors that could provoke such bias. Tedeschi (2007) thoroughly explores this issue in his often cited article “Overcoming Selection Bias in Microcredit Impact Assessments: A Case Study in Peru”. Among other results, Tedeschi finds that those who will become borrowers in the future have higher incomes than those who say they will not. This discovery leads to the conclusion that self-selection into the microcredit program is an important problem (Tedeschi, 2007).
Ghatak and Guinnane (1999) highlight the two complementary reasons for the observed success of microfinance. Firstly, this success owes to group lending employed by many lending programs. Group lending ensures for joint liability for each of the lenders loans. Secondly, intense monitoring and promise of future repeat loans for well performing borrowers also ensures overall success of microfinance (Ghatak & Guinnane, 1999).

High rates of repayment are often quoted in the literature of microfinance and result apparently from various schemes unique to microfinance programs such as joint liability contracts; progressive lending; frequent repayments; and flexible collateral. Morduch (1999) highlights the issue of validation and reminds us that many of the repayment rates are self reported calling for the need to understand the methodology used in calculating these repayment rates.

Armendáriz de Aghion and Morduch (2000) contest group lending models as being superior to individual loan models. In particular, they point out that in relatively industrialized areas, individual loan models can perform better than group lending models.

Another issue that has increasingly become popular in discussing microfinance is that of social impact or female empowerment and education. Indeed it has been shown that loans to women have a positive impact on issues such as children’s education, contraception, and value of women’s non-land assets (Pitt & Khandker, 1998). Likewise, Khandker (2005) demonstrates that lending to women has greater impact on per capita household expenditure for both food and non-food items.

However, Goetz and Gupta (1996) challenge the view that microfinance empowers women. They go as far as claiming that microfinance has in fact done little to change the status of women within their household. Instead, it is the men who exercise control over borrowings and women hardly experience a change in occupation; mobility; or social status. Goetz and Gupta (2005) defend that microfinance does not empower women in any meaningful sense.

3.2. Landscape of Microfinance in Tanzania

Before we venture into analyzing the microfinance landscape in Tanzania it is important to discuss the variables that characterize microfinance performance. Due to pressure for transparency, financial and institutional indicators, used to measure risk and performance of microfinance institutions, have become increasingly important. Particularly, this transparency is hardly achievable if no agreement exists on how indicators should be named or calculated. A simple example is the common confusion between return on initial equity and return on average equity; which one is used for the ratio of return on equity (ROE)? Similarly, how is equity defined in the presence of long-term subsidized loans?
These and other questions are constantly put, highlighting the importance and need for universally understood indicators for microfinance. MicroRate, a microfinance specialized rating agency, IDB (Inter-American Development Bank), CGAP (Consultative Group to Assist the Poorest), USAID (United States Agency for International Development) and two other agencies set out to resolve this problem and to agree on names and definitions of a series of commonly used indicators.

The result is a well thought of and structured “Technical Guide” highlighting 14 of the most commonly used indicators published by a “Roundtable” group illustrating how each one of them is used (refer to Appendix pg. 70 for a full list of indicators). In this paper, and in the following analysis, these indicators have been used to study the landscape of microfinance in Tanzania.

It was frustrating to realize after months of research how little data could actually be collected. Even though attempts have been made in consolidating as much data as possible (the MIX Market) much data is considered sensitive to being shared such as detailed profiles of lenders or independent performance measures of MFIs such as repayment and retainment rates. Several official letters were sent to various institutes requesting this missing data but the response was unsatisfactory. Not being personally on site made arguing and convincing the MFIs for further information difficult and in the end only three MFIs of the ten contacted sent back some of the data requested. The resulting picture is therefore incomplete and impressionist relying mostly on data from the MIX Market online database, personal knowledge and interaction with some key players in the field. Nevertheless, an impression of the landscape of microfinance was developed in as much detail as possible and will hopefully serve as a starting point for those wishing to pursue a similar study in Tanzania.

In order to analyze the landscape of microfinance today in Tanzania we considered various performance indicators across institutes compared to an African benchmark on available information for the indicators concerned (made available by the MIX Market for 2007, see page 46). In order to establish what success factors could be behind good performance in the microfinance sector we should look at links between these performances and the profiles of the borrowers. This being said, the individual profiles of borrowers could, unfortunately, not be collected due to privacy reasons and lack of response from the MFIs in question. For this reason, an analysis was carried out between the literacy rate as a proxy for educational background in each country and the performance of MFIs across Africa with the expectation that the higher the literacy rate in a certain country, the better the aggregate performance of Institutes in that same country.
For this particular purpose, Return on Assets (ROA) was chosen as an indicator for performance since it measures profitability and reflects both the profit margin and the efficiency of the MFI. ROA is a reasonably clear-cut measure but its reliability depends on the analysis of the components determining Net Income (N.I), such as portfolio yield; cost of funds; and operational efficiency. Paradoxically, NGOs generally achieve a higher ROA than licensed MFIs (MicroRate & Inter-American Development Bank. Sustainable Development Department: Micro, Small and Medium Enterprise Division, 2003). This is explained by the fact that microfinance NGOs, with low debt-equity ratios and restricted possibilities of funding, need to rely primarily on retained earnings to fund growth (MicroRate & Inter-American Development Bank. Sustainable Development Department: Micro, Small and Medium Enterprise Division, 2003).

ROA is calculated by dividing Net Income after taxes and excluding any grants or donations (N.I) by period average assets. Return on assets and total assets were collected for several MFIs in a number of African countries where such data was available, together with literacy rates for the same countries. The following calculations were made:

\[
\text{ROA} = \frac{\sum N_I}{\sum A_i} \quad \text{Let} \quad A = \sum A_i, \quad \text{where ROA is the average Return on Assets of MFIs for a country;}
\]

\[
\sum_i N_I \quad \text{is total net income of MFIs}_i \text{ in the country; and} \quad \sum_i A_i \quad \text{is total assets of MFIs for the country. Then,}
\]

\[
\text{ROA} = \frac{\sum N_I \times A_i}{A} = \sum \text{ROA}_i \times \frac{A_i}{A} \quad \text{which is the sum of weighted Return on Assets of MFI}_i, \quad \text{with weights being the asset shares of MFI}_i \text{ in the total assets of the country considered.}
\]
As can be seen, no apparent link seems to exist between literacy rate and performance. What can be observed is that the standard deviation of ROA shows a tendency to increase with a higher literacy rate whilst ROA remains centred around 0 for the whole range of literacy rate. At first sight, this might come as a surprise since one would expect educated people to manage their loans better. This result may however, occur due to a possible selection bias with respect to the education of the people who are in the sample of lenders. These lenders could, for instance, already have a certain educational background allowing them to demand such services. In fact, this presumed bias has been observed in previous studies attempting to measure the impact of microfinance (Tedeschi, 2007). I cannot find a reasonable explanation to why the standard deviation increases with higher levels of literacy rate. Finally, the corresponding table in the appendix shows that the literacy rates are not all referring to the same year. This is not very serious in an exploratory analysis but is important for future considerations.
Portfolio Quality

Unfortunately our available data does not allow us to do further analysis of a selection of countries from the African continent. Instead, we will now turn to a brief descriptive analysis of the Microfinance institutes in Tanzania. We will consider the following aspects: Portfolio Quality, Efficiency and Productivity, Financial Management, and Profitability of the MFIs at hand.

The portfolio qualities will be analyzed for the 10 MFIs in Tanzania. The performance indicators used to analyze portfolio quality are: portfolio at risk; write-off ratio; and the risk-coverage ratio (performance indicators and corresponding variable names can be found in the Appendix, pg. 70).

Portfolio at risk is the most widely accepted measure of portfolio quality showing the portion of the portfolio which is “infected” by debts and therefore at a risk of not being repaid. This risk will increase the older the delinquency. In general, portfolio at risk exceeding 10% should be cause for alarm as most microcredit loans are not backed by “bankable” collateral. This ratio is free from subjective interpretations that plague other portfolio quality measures, such as repayment rate, and is a more conservative measure of institutional risk due to the inclusion of outstanding balance in both the numerator and denominator (MicroRate & Inter-American Development Bank. Sustainable Development Department: Micro, Small and Medium Enterprise Division, 2003). In other words, portfolio at risk measures a complete risk rather than the immediate threat. It is defined as:

\[
Prisk > 30 = \frac{OBA_{30} + TGORP}{TOGP}
\]

Where:

\(OBA_{30}\) = Outstanding Balance on Arrears over 30 days

\(TGORP\) = Total Gross Outstanding Refinanced (restructured) Portfolio

\(TOGP\) = Total Outstanding Gross Portfolio

The number of days must always be clearly stated since the ratio is often used to measure loans affected by arrears of more than 60, 90, 120 and 180 days (MicroRate & Inter-American Development Bank. Sustainable Development Department: Micro, Small and Medium Enterprise Division, 2003). This ratio was looked up for the ten microfinance institutes in Tanzania and was graphed so as to compare these ratios across institutes and over time and against an African average for 2007 (see Appendix pg. 76).
A general increasing trend in portfolio at risk until 2005 and a decrease for the following two years can be observed for the ten institutes in Tanzania. For the majority of Institutes, the portfolio at risk is lower than the average portfolio at risk for Africa when comparing data of 2006 and 2007 (See Appendix). The average portfolio at risk for Africa (7.3%) is below the suggested 10% above which cause for concern would arise. Nevertheless, no concrete conclusions can be taken at this point on the quality of these portfolios. Specifically, it is unknown whether all MFIs were able to separate their restructured loans from their non-restructured loans. If restructuring was significant this should have been specified as ignoring it would significantly underestimate risk. Furthermore, this ratio could have been easily manipulated by writing off delinquent loans. For this reason, portfolio at risk should always be analyzed in conjunction with the write-off ratio.

The write-off ratio is calculated by dividing total write-offs for a certain period by that period’s average gross portfolio. In other words, it indicates the loans that the MFI has removed from its books because of a substantial certainty that they will not be recovered. Some MFIs will take aggressive write-offs in an attempt to cleanse their portfolios resulting in low portfolios at risk. This apparent improvement can be misleading if not compared against the write-off ratio. The write-off ratio should therefore only be used as a control indicator to better understand the values of portfolio at risk.

![Portfolio Quality Akiba](image_url)

*Figure 3. Portfolio Quality Akiba Institute*
Due to missing data only three MFIs were graphed to illustrate the relation between write-off ratio, portfolio at risk, and risk-coverage which will be analyzed next. It can be observed that the write-off ratio and the portfolio at risk move together and closely but there is no strong evidence that a high portfolio at risk will be followed by a high write-off ratio, except ever so slightly for Akiba in 2002 and 2003. Both ratios remained low and close to zero and some points appear to be outliers such as in the
case of Finca for 2005 where suddenly portfolio at risk jumps to 19.96%. For SEDA a high risk of portfolio at risk is often matched in the same year with a high write-off ratio.

To measure the proportion of the portfolio at risk covered by actual loan loss reserves, the risk coverage ratio is used. This ratio is obtained from dividing loan loss reserves by the sum of outstanding balance on arrears over thirty days and refinanced loans. In other words, the risk coverage ratio measures how prepared an MFI is for a worst-case scenario.

The values obtained for the 10 MFIs in Tanzania were doubtful. When graphing the data, Microfinance Institute Pride had to be excluded as its values were too out of range with the 9 other MFIs. The remaining institutes show a steadier trend over the 9 years studied although data was not found for all institutes for every year observed (see Appendix, pg. 77). The resulting graph can be seen in the appendix together with all the other graphs on performance of the Institutes.

According to the Technical Guide, loan loss reserves typically range between 80% and 120% of the portfolio at risk for microfinance institutes. In Latin America the range was recorded at 24% to 405% (MicroRate & Inter-American Development Bank. Sustainable Development Department: Micro, Small and Medium Enterprise Division, 2003). In Africa the average for 2007 was 117.30% and in Tanzania it ranged from 11.62% to 540%. These ranges are much higher than those observed for commercial banks, reflecting an attitude of “when in doubt, be conservative” (MicroRate & Inter-American Development Bank. Sustainable Development Department: Micro, Small and Medium Enterprise Division, 2003).

Although the risk profile of MFIs is still very little understood due to the young character of this type of institute, it can generally be said that these high values are due to the lack of collateral found for most microloan portfolios. For collateral-backed portfolios, a risk-coverage ratio below 100% is common. Institutes that report extremely high ratios consistently above 200% may be prudently doing so anticipating poor performance for the portfolio or to hedge for future downturn in the economy (MicroRate & Inter-American Development Bank. Sustainable Development Department: Micro, Small and Medium Enterprise Division, 2003).

Again this ratio has to be compared with portfolio at risk and write-offs to establish a more solid measure of portfolio quality as they are all interrelated. As seen previously, a seemingly low portfolio at risk can in fact be very risky if it includes a large share of seriously overdue loans. Similarly, it can be very safe if loans are sure to be refunded. To fully understand portfolio at risk, it is of utmost importance to check whether good levels of portfolio at risk, and hence favourable risk coverage ratio, results of good
client selection or heavy write-offs. Comparison of the three ratios was graphed above for the chosen three MFIs.

**Efficiency and Productivity**

After having looked at the portfolio quality for the MFIs in Tanzania, the next question will deal with the efficiency and productivity of these institutes. This will be measured by the Operating Expense Ratio; and the Cost per Borrower for each institute. The Operating Expense is used as it is the best indicator of the overall efficiency of a lending institution, measuring the institutional cost of delivering loan services (MicroRate & Inter-American Development Bank. Sustainable Development Department: Micro, Small and Medium Enterprise Division, 2003). The Cost per Borrower is used as it offers a meaningful measure of efficiency, representing the average cost of maintaining an active borrower.

The Operating Expense ratio was observed for most years from 1998 to 2007 for the 10 MFIs. To calculate it, all expenses associated to the operation of the institute were divided by the average gross portfolio excluding interest, provision and extraordinary expenses (see Appendix, pg. 77). The ratio did not fluctuate for most MFIs but was higher than the African average for all MFIs except for Akiba, Selfina and Mbinga. This indicates that no improvement occurred at the average level of efficiency. At this stage it would be meaningless to compare ratios across institutes as it largely depends on loan size. Particularly, MFIs with high average loan sizes are expected to have a lower operating expense ratio. Indeed, Akiba displays the lowest levels of operating expense with an average loan size of $1,157 as opposed to an average over the nine remaining of just $186. Also, operating expenses are traditionally higher for rural micro-lenders as they are typically more dispersed than micro-lenders in urban settings.

Some MFIs show a decreasing pattern with one or two peaks, others stand out due to their extremely low levels of operating expense ratios (such as Selfina and Mbinga). Selfina’s low ratio could be explained by its relatively high average loan size which is the second highest after Akiba (§531). The pattern over institutions is so different that it is impossible to make any general inferences from the presented figures. Nevertheless, in 2002 MicroRate 32 scored an average operating expense ratio of only 19.9% as opposed to an African average of 23.1%. Although some MFIs still have to work hard to achieve these low levels, others have already reached below this, demonstrating that they can compete with their Latin American counterparts.

Cost per borrower is calculated by dividing all operating expenses by the average number of active borrowers. Unlike the Operating Expense Ratio, “size of the loan” does not appear in the denominator.
of Cost per Borrower meaning that an MFI with larger loans does not automatically appear to be more efficient. Cost per Borrower is, in this sense, a fairer indicator and complements the operating expense ratio in much the same way as the write-off ratio complements portfolio at risk (MicroRate & Inter-American Development Bank. Sustainable Development Department: Micro, Small and Medium Enterprise Division, 2003). Similarly, concluding that high operating expenses are a sigh of inefficiency would be the same as saying that a low portfolio at risk indicates high portfolio quality. Institutes with high operating expenses resulting from extremely small average loan sizes, tend to have a lower cost per borrower of that of more efficient MFIs.

Operating Expense Ratio and Cost per Borrower are expected to move in opposing directions, with one increasing as the other one decreases. This effect is predicted to become more pronounced with very low average loans. The following graph does not support this proposition, with only SEF-TZ displaying the expected outcome of higher levels of operating expense ratio matched with lower levels of cost per borrower. In fact, if a trend line were to be drawn, the opposite would emerge with a slightly positive slope suggesting that both variables move in the same direction. Nevertheless, one can observe that those MFIs with high operating expenses, such as Finca and SEDA, have a lower cost per borrower then, for instance Akiba, which is clearly more efficient than the rest.
Figure 6. Efficiency and Productivity Scatter Plot – Cost per Borrower versus Operating Expense Ratio

According to the Technical Guide, Microfinance Institutes that specialize in very small loans should maintain cost per borrower below $100, such as observed for all but Akiba, to avoid an extremely high operating expense. MFIs with higher average loans, such as Akiba, often relax about this measure reaching in some cases $400 per borrower (Akiba). The graph above displays this pattern. Note that even though Akiba appears to be an outlier, its graphical representation is important to understand the subtle differences between the levels in cost per borrower and operating expense ratio and the resulting effect on the efficiency of the institute. Furthermore, Akiba is the only institute displaying a similar picture to that of Africa with high levels of cost per borrower (Africa at $258.45 per borrower) even though it has no excuse for such high levels given its extremely high loan balance per borrower.

Financial Management

Having explored both Portfolio Quality and Efficiency and Productivity, our attention will now shift to the Financial Management of each of these institutes. In order to establish this, the Debt-Equity ratio
will be used, calculated by dividing total liabilities by total equity. This ratio is the simplest and best known measure of capital sufficiency measuring the total leverage of the institution. In other words, it indicates how much equity (which acts as a safety cushion) there is to cover for losses.

Debt/Equity Ratio = \( \frac{\text{Total Liabilities}}{\text{Total Equity}} \)

Not surprisingly, MFIs have typically reported low debt-to-equity ratios as their ability to borrow from commercial entities as NGOs was limited. However, the non-governmental nature of many MFIs has slowly been transforming resulting in more regulated microfinance institutes with rapidly raising debt-to-equity ratios.

The amount of debt that can be carried for a given level of equity will depend on the risk and volatility of the MFI. The variations of this ratio are frequently more important than the absolute level of the ratio. An MFI displaying rapid increases in its debt to equity ratio may be nearing its borrowing limits restricting future growth. Similarly, profit margins might be put under pressure as a result of rapid increases in debt funding.

*Figure 7. Debt-Equity Ratio of Different Institutes Over Time*
As can be observed, a general increasing trend is noticeable, confirming the above mentioned expectation that when Microfinance Institutes mature, leverage continues to grow. As for the industry in Latin America, MicroRate 32 reached a debt-equity ratio in 2002 of 4.3 far above the observed African average of merely 0.052 for 2007. Conversely, the values for Tanzania are extremely high compared to both the African average and MicroRate reaching in some instances debt to equity ratios of almost 9 completely contradicting the theory on microfinance institutes and their lack of ability to borrow from commercial banks.

At this stage it would be interesting to study the differences between regulated MFIs from NGOs. In particular, regulated institutes (such as Akiba bank and Mbinga Rural Bank) are more prepared to access commercial funds therefore achieving higher debt/equity ratios than non-governmental institutes (the remaining 8 institutes). This last point is probably the biggest motivation for NGOs to leave their sheltered tax-free haven and join the discipline of banking terms. However, the expected high debt-to-equity values for regulated institutes can only be observed for 2003 where Akiba and Mbinga display the highest levels of debt-to-equity. For the remaining years the debt-to-equity of Akiba, however high, drops below the level of non-regulated institutes. The reason for this could be due to many factors including the young nature of this industry and the lack of understanding of how the portfolios of microfinance institutes behave.

**Profitability**

The last section dealing with the performance of the MFIs will focus on the profitability as measured by the return on equity and return on assets. Return on Equity or ROE measures the profitability of the institution and is calculated by dividing net income by period average equity. ROE is of most interest to a private profit making entity that has real owners concerned with the health of the company and the return on their investments made in the company. In the case at hand, ROE is used as a proxy for commercial viability.

Just like debt to equity, return on equity should be measured over a period of time rather than at a single year as it can misrepresent the MFIs “true” profitability (MicroRate & Inter-American Development Bank. Sustainable Development Department: Micro, Small and Medium Enterprise Division, 2003). Similarly, one should consider whether taxes have to be paid or not. Whilst incorporated and supervised institutes normally pay taxes, non-supervised, not-for-profit MFIs do not. Furthermore, significant differences in portfolio yields across MFIs have to be expected as we are dealing with a very
young industry. In general it can be said that MFIs with low yields are required to be well efficient and maintain high standards of portfolio quality in order to remain profitable, whereas MFIs with higher yields often experience high return in spite of a multitude of weaknesses.

In a number of countries in Latin America, MFIs have largely outperformed conventional banks and NGOs have attained higher ROEs than formalized institutes even those the former operate with lower debt to equity ratios. These results are partly a consequence of the provision adjustment disadvantaging entities with larger and well-collateralized loans. Additionally, regulated entities have the tendency to operate in competitive markets pulling down portfolio yields.

For these and other reasons, one can only do a meaningful comparison among MFIs if major differences in accounting policies and reporting methods are adjusted. The most important element to consider is provision expenses. Return of Equity paired with high provisions can hardly be compared with one with much lower provisions. To correct for this, provision expenses should be re-calculated applying the same provisioning policy to all.

ROE for MFIs in Tanzania did not follow any predictable pattern, with some institutes clearly displaying a decreasing trend (SEDA) and others displaying very inconsistent patterns (Finca). Furthermore, some MFIs within Tanzania display questionable patterns particularly those that display ROEs up to almost 90% (Selfina) or as low as -123.43% (Finca); but apart from that they all remain close to the African average for 2007. The African average for 2007 (18.7%) is very close to that of MicroRate 5 years previously (close to 18%) again suggesting that the state of affairs in Africa, although with a 5 year delay, is following the same general trend as Latin America.
Another measure of profitability is Return on Assets or ROA. ROA is obtained by dividing Net Income by Average Assets and it measures how well a particular institute uses all its assets. ROA is a popular ratio as it reflects both the profit margin and the efficiency of a MFI.

Due to low debt-to-equity ratios and limited options of funding through financial and capital markets, non-governmental MFIs typically rely on retained earnings to fund growth. Consequently, these institutes generally achieve higher return on assets than licensed and supervised institutes. Again, a correct analysis of ROA should include a study of the components determining net income (portfolio yield, cost of funds, and operational efficiency).

In 2002, adjusted ROA reached by the industry stood at 4.9%, far greater than that achieved by commercial banks. Africa in 2007 displayed a figure at -6.9% far below the industry in 2002 (see Appendix, pg. 79). As for the ten individual MFIs they all displayed a random pattern with some displaying an increasing trend and others a decreasing trend. As was explained for ROE, adjusted ROA refers to the adjustments mentioned previously in the discussion of ROE. For this reason, the above comparison between figures obtained for Africa and MicroRate becomes near to meaningless due to
possible differences in accounting policies. Future research should take this into account and make sure to deal with adjusted ROA and ROE.

After having analyzed the different aspects of performance, a tentative conclusion can be drawn on the state of affairs in Tanzania. Unfortunately, with the data at hand, the resulting picture of the landscape of microfinance is incomplete and many questions remain such as whether the same reporting methods were used across institutes and whether the data available is clean. As observed, many relations observed in Tanzania did not match the theory suggested in the *Technical Guide*. Furthermore, important data such as repayment and retention rate were not to our disposal due to its sensitive character. What can be said with certainty is that the landscape of microfinance in Tanzania is far from the level observed in Latin America indicating that progress can and should be made. Also, it is important to highlight how little is understood about the ways these institutes perform and what are the factors one should consider in order to improve MFIs performance and the way they contribute to poverty alleviation.

3.3. The Need for Evaluation of the Impact of Microfinance

Before undertaking the issue of integration of entrepreneurial training and microfinance a little bit will be said on impact evaluation in general. Impact evaluations are used to estimate the impact of a program and to determine how different the lives of the participants are in relation to how they would have been had the program not been implemented. The measuring of the counterfactual is crucial for a reliable evaluation. However, many MFIs have focused on quantifying their activities so that as long as clients repaid their loans and took new ones, the activities were assumed to be successful and meeting the clients' needs. Nevertheless, impact evaluation is important for many reasons such as good market and client research.

Such an evaluation will require the measurement of the impact of receiving a program's services (such as training) versus the opposite of not receiving these services. The impact evaluation for microfinance is quite tricky due to the fact that the control group must be selected from non-clients who do not have a relationship with the MFI. This issue is less serious when dealing with training since much less people would require training as opposed to financial services. In the coming section and in the framework for empirical evaluation it will be assumed that microfinance has a positive impact on society.

Issues of ethics will inevitably arise when dealing with randomized evaluations especially where the positive benefits of a program seem obvious and the need for impact evaluation is questionable. In my
opinion it is favourable to first evaluate the impact and establish whether the program does indeed have a positive impact and for which type of individual the intervention works best.

The impact indicators used for microfinance impact evaluation are similar to the ones entrepreneurial training impact studies should use. Microfinance is expected to generate impacts on the client’s business, well being, on its family and on the community as a whole. A thorough impact evaluation of entrepreneurial training will treat the impacts across all domains. Furthermore, when evaluating the impact of new activities by the MFI, the data can very easily be collected directly from the MFI itself as has been done in the case at hand. Common data of interest include repayment rate, retention rate and average loan size all of which can be measured in a variety of ways. As seen previously, the same definition to measure the outcomes should be used before and after the intervention. Furthermore, the use of standard definitions and financial ratios are of utmost importance if the MFI wants to measure performance and growth against other players in its peer group. This has been facilitated by the way MFIs report on the MIX market. The data collected was all calculated in the same way and analysis and comparison between MFIs was made easier.

Furthermore, what has already been discussed previously is the importance of understanding that these indicators are only ‘intermediate’, meaning that whilst they may say a lot about the outputs for the MFI, they do not necessarily indicate a positive outcome for the MFI’s clients. Nevertheless, other indicators, such as “savings balance” are useful to the MFI and to the client as they indicate the financial stability of the clients and are a source of loan capital to the MFI.

3.4. Expectations of Integrating Entrepreneurial Training into Microfinance

As far as the author is concerned, no formal training exists in the form of entrepreneurial education in the field of microfinance in Tanzania. Such conclusion was drawn from correspondence with important players such as Triodos in Tanzania and the International Labour Organization in Turin.

Having analyzed in dept both the field of entrepreneurial training and microfinance in Tanzania we are now ready to discuss the integration of these fields for purposes of ameliorating the workings of microfinance. I believe that the reason why microfinance has not led to tangible results is two-fold. Firstly, very little research and empirical work has been done with the purpose of measuring the impact of microfinance. This stems from the fact that impact measurement is very difficult and data available is very recent. Furthermore, many MFIs in Africa are non-regulated and often do not report their figures; when reporting is observed, data is often inadequate or incomplete.
Secondly, the possibility that microfinance is not delivering the results it aimed for initially could be due to the way it is being implemented around the world. Particularly, microfinance is aimed at poor and often uneducated people and surprisingly has consistently overlooked the fact that its workings are often not understood by those making use of it (the poor). In other words, those making use of microfinance and potentially profiting from it, do not understand how it works; they do not know how to deal with money; they lack business insight; and they do not fully understand the advantages of investing and saving.

Integrating microfinance and entrepreneurship training is therefore an attempt to improve microfinance outcomes by teaching people how to make use of the available financial services in the most efficient way. I truly believe that education and training will have a positive effect on the lives of those who borrow and it is this that I want to accomplish by integrating training in microfinance programs in Tanzania.

I expect at first to approach a number of Institutes and convince them to take part in the program by persuading them that the training will not only be beneficial to them as it will be for their clients. Next, I am hoping that together with the support of the International Labour Organization, a concise training package can be developed for Tanzania (e.g. KAB). Subsequently, I hope to find people trained in KAB willing to train in the different MFIs.

Clients will be trained on various aspects of business, finance, and entrepreneurship. They will be able to better understand household finances, business start-up and investment. As a result, money they will borrow will be used in a more efficient and coherent way; it will be invested and saved; and ultimately help the client in coming out of poverty. In the mean time, microfinance institutes will observe and increase in their client base due to the popularity of the program; an increase in retention rates; an increase in repayment rates as their clients will be more wise with what they borrow; and ultimately MFIs will be better in place to ask for loans as investors will quickly realize the benefits of entrepreneurship training.

I am not claiming the entrepreneurship training will solve all the problems microfinance faces, but it will be a step towards solving them.

After 3 to 4 years an empirical study can be carried out, hopefully proving that such training is indeed beneficial.
PART II
4. Article Review

4.1. Introduction

In this section a critical review of the unpublished article “Teaching Entrepreneurship: Impact of Business Training on Microfinance Clients and Institutions” by Dean Karlan and Martin Valdivia will be carried out. Dean Karlan is a professor of economics at Yale University and his research agenda is mostly concerned with the workings of social policies and specifically the evaluation of microfinance programs for the poor. Martin Valdivia is a senior researcher for the “Grupo de Analisis para el Desarrollo” (GRADE) and his interest lies in topics such as poverty, social policies, microfinance, and rural development.

The purpose of the reviewed article is to report the authors’ findings on linking business training to microfinance clients and institutions. The study is concerned with the question of whether entrepreneurial skills are innate, as postulated by Muhammad Yunus, or can be taught within the context of informal markets and micro-entrepreneurs found in developing countries. The authors claim that the problem of impact evaluation does not seem to exist within formal education but becomes an issue with training programs targeting microentrepreneurs.

The research question is not explicitly formulated but it is clear from the paper’s introduction that the authors wish to find out whether or not business training has an impact on clients and microfinance institutions. They separate these outcomes into four distinct categories: institutional results; household results; business results; and business processes, knowledge and savings processes. Translated into a concrete question, the article’s research question would be: “What is the marginal impact of incorporating entrepreneurial training into a microcredit program?” This question is an important one to address and very interesting to my thesis as it deals with exactly the same issues.

I came across this article when I started researching for my thesis and was at first startled to see that it addressed exactly the same issue I was looking to write about. Nevertheless, I was convinced that sticking to my initial thesis theme was necessary due to huge lack of research done in the area. Particularly, the impact of microfinance is still academically very little understood and the differences in its working across the globe are not to be undermined. Also the media does not cease to remind the general public that even though microfinance is generally perceived as being highly beneficial to society it is striking how little we know about its effects, and the conditions for its success (“The Battle for the Soul of microfinance”, 2008). For this reason, studying processes which would improve microfinance,
would not only benefit the players involved (MFIs and clients) but also contribute to the general understanding of the impact of microfinance.

4.2. Article Summary

Karlan and Valdivia (2006) used a randomized controlled trial to measure the marginal impact of business training into a microcredit program. Three data sources were used and impact was analyzed for the institution, the household and the business of the microfinance client.

Financial-transaction data containing reports of all transactions was provided by FINCA, a Peruvian Microfinance Institute. This data included sensitive information on loan cycles; interest; socio-economic characteristics; etc.

Existing lending groups, both in Ayacucho and Lima, each consisting of on average twenty women, were randomly allocated to treatment and control groups, where treatment groups were to receive training as part of their mandatory weekly meetings, and where control groups remained solely credit and savings groups. In Ayacucho from a sample of 140 village banks (3,265 clients), 55 were allocated to a mandatory treatment group (where fines were applied for absence or tardiness and expulsion in extreme cases), 34 to a voluntary treatment group and 51 to a control group receiving no additional services besides the credit and savings program. In Lima, from an existing sample of 99 FINCA-sponsored banks (1,326 clients), 49 were assigned to mandatory treatment group and 50 were allocated to a control group. In Lima, no voluntary group was set up. Training started in October 22\textsuperscript{nd} 2002 in Lima, Peru and in March, 2003 in Ayacucho, Peru and was intended to last 22 weekly sessions.

The authors decided to carry out the empirical analysis irrespective of how well the village banks adhered to the training program or to the level of attendance.

The training materials were developed by Freedom from Hunger (FFH), a US-based non-profit organization, and Atinchik, a Peruvian firm (Karlan and Valdivia, 2006). The program consisted of general business skills and strategy training but did not deal with client-specific problem-solving or individualized advice. Although similar in content for both locations, the organization and presentation differed for both locations taking into account educational differences and learning processes. Module I dealt with several business aspects such as identification of customers, competitors and the notion of marketplace.
Module II tackled the issue of home finances and the importance of differentiating it from business finances by pointing to differences in income, costs, and profit, among other (Karlan and Valdivia, 2006).

Additionally, two surveys were used as data sources, one baseline survey conducted before the training intervention and one follow-up survey between one and two years later. These surveys put several questions on socio-demographic characteristics and general information relative to the client’s household and business. The baseline survey was distributed a few weeks before the beginning of the training. Of the clients in the baseline survey, 76% were reached and surveyed for the follow-up survey.

First-difference (FD) and double-difference (DD) estimators were used in the estimation process. The FD estimator resulted from the comparison of the levels of the outcomes between the treatment and control groups and the DD estimator took the changes over time into account. The authors present the FD estimator by estimating a linear regression in the following way:

\[ Y_{ij} = \alpha + \beta D_j^T + \epsilon_{ij} \]

where \( Y_{ij} \) stands for the outcome variable for client \( i \) in bank \( j \) after the treatment or non-treatment. \( D_j^T \) is a dummy variable taking the values of 1 or 0 depending on whether the client belongs to a treatment bank or not, respectively. Finally, \( \epsilon_{ij} \) is the error term, assumed to be independent across banks but not automatically within them. \( \beta \) measures the difference between the control and treatment banks in the resulting \( Y \) after the treatment, and is according to the authors an unbiased estimate of the average impact of being assigned to the treatment group on the outcome variable \( Y \) (Karlan and Valdivia, 2006).

Finally, the authors test whether the business training produces heterogeneous treatment effects along attributes such as prior education and interest in training.

The authors divided their result analysis into four categories of outcome variables: institutional results; business processes and knowledge; business outcomes; and household outcomes such as female empowerment and child labour.

Karlan and Valdivia find strong benefits for both the clients and the Microfinance institutions. Client benefits as reflected by improved business processes and knowledge and growth of sales whilst MFI benefits were observed through increased repayment and retention rates.
The authors report results in dropout rates where treatment group clients were less likely to drop out compared to mandatory group clients. Also, the authors found indicative evidence of adverse selection in that most of the positive impacts on institutional effects were strongest on the individuals who expressed little interest in business training as reported by the baseline survey and who had larger businesses.

As for business skills and practices, training clients demonstrated greater business knowledge consequently translating into better business practices (Karlan and Valdivia, 2006).

Business results, such as sales and employment, were reported to also be positive, particularly within the variation in sales. The authors report largest effect for sales in a bad month, which was 28% higher for treatment groups (Karlan and Valdivia, 2006).

As for household results, the authors distinguish two distinct categories: women empowerment and child labour. No impact was observed for empowerment but a positive treatment effect on the number of hours that female children spend on school and homework was observed, although overall effect is reported to not be significant.

4.3. Article Analysis and Evaluation

Before venturing into an analysis and evaluation of the article, I would like to point out that the article seems to not be published in a scientific journal in which case it would have been possible to obtain micro data for replicability tests.

The article touches on a very important theme and extends to effects of the training on the poor instead of only on the MFIs. What is interesting about this article is that it fills a gap in an area where so little is known about the marginal impact of training (non-financial services) on microfinance. It is therefore interesting to explore ways to improve microfinance such as the employment of business trainings or the infusion of other human capital activities. The aim of this article deals precisely with the former and explores whether entrepreneurial skills can be taught and the impact of these on the workings of microfinance. We note that entrepreneurial skills and business skills seem to be used interchangeably by the authors.
As for timeliness, the program was introduced in 2002 to last for two years, and the article dates from November 2006. Today, it still offers valuable information although it would be interesting to study the results of the program after 7 years. Seeing that the program was designed to only last two years, this is unfortunately not possible.

Nevertheless, the argument is convincing. Before coming across this article, I had a set of expectations similar to the ones expressed by the authors. Particularly, after studying different articles and newspapers, I concluded that microfinance could potentially offer much more than what it currently does. The issue of education is almost unavoidable when discussing the performance of microfinance, but to my surprise little to nothing has been done about educating lenders in the microfinance world. The authors address this issue and introduce business training into microfinance activities; however the evidence provided is, in my opinion, not always convincing.

I found that too many variables were presented even though presented in the appendix and deemed insufficiently significant by the authors. One of the problems here is that there are no generally accepted impact measures in microfinance, especially concerning household effects. How does one measure the impact of training? What should the dependent variable be? The authors decided to study the impact of business training on four dimensions, namely household, institutional, business and business skills and practice; but are institutional effects really indicative of the improvement of microfinance in general? In my opinion, looking at institutional effects is both misleading and not representative of the general impact training has on the individual lender. The study of institutional effects is, in my opinion, driven by the expectation that institutions will want to know the benefits of training before they agree to adopt it. Microfinance institutes were created to serve the poor and their goal is to reduce poverty. With this in mind, no one should feel that institutional effects are important to decide whether business training will be implemented or not. Furthermore, positive effects on institutional effects will only indirectly say something about the client’s well being and a lot of issues of heterogeneity will arise. For example, a client that fully repays its loan will say nothing about how training has impacted this client, as the client might have gone to great extents to repay this loan, leaving him with nothing. Yet, repayment rates increase for the institution as a result of training, tricking us into believing that training will have a positive impact on the client. Nevertheless, results linked to institutional effects should be treated as complementary and with a grain of salt.
Due to the great amount of information presented by Karlan and Valdivia the reader is easily puzzled as to whether the overall effect is positive or not, and whether the stated effect is representative of the client or of the institution.

The study design is sophisticated and takes into account common problems that arise with impact studies such as selection bias with respect to the profile of individuals that are more likely to choose to follow a program; heterogeneity issues; and to a certain extent, appropriate variables that capture the effect of the program. Karlan and Valdivia are experts in the area and their model accurately takes all these issues into account. Moreover, the data available from household variables was collected through surveys an important instrument for the collection of qualitative data. However, the accuracy and validity of the results might suffer from this qualitative aspect as answers might be influenced by factors such as shame of disclosing certain financial data or issues of privacy in the household.

The control for the experiment carried out by Karlan and Valdivia, consisted of a group of pre-existing lenders that continued making use of only lending and saving services as opposed to receiving the business training. This type of control is to be expected in any impact study and its validity is confirmed by the random treatment assignment used by the authors. The only remark I have concerning the control and treatment groups, is the creation of a voluntary treatment group for Ayacucho and not for Peru. It was not clear to me what the authors intended with this group and I failed to see its relevance to the design of the study or the resulting impact. The mandatory treatment group had fines imposed on to them for tardiness or absence to training sessions which is something I will replicate in my framework for study in Tanzania. Furthermore the authors argue that studying the control and treatment groups irrespectively of how well they adhered to the training program, or how well clients attended the training is important not only to avoid a selection bias with respect to the intensity of the program, but also because the delays due to holidays or birthdays were normal for “credit with education” programs (Karlan & Valdivia, 2006). This secured that no underestimation of the effect of training was done.

Overall, I agree with this statement although I think that when the program is being designed and scheduled, all these events should already be integrated and accounted for in the program’s calendar. If the authors are going to fine for absence or tardiness, and note that these are fines imposed on to the client, then I suggest that a similar treatment is given to the institutions in applying the program. In other words, unless stated explicitly in the calendar that a certain session will not take place as planned on a certain day, the institutions cannot skip a training session due to a birthday or other similar events.
The overwhelming amount of data presented is confusing due to the absence of a summary of the significant variables for each regression. If this had been done, the results would have been clearer and less confusing. Nevertheless, the results are presented by the authors and explained thoroughly into comprehensive statements. The choice of the authors to study so many variables obviously comes down to controlling for as many factors as possible. However at this stage, one is more interested in straightforward results that answer the question of whether training is positive or not. Furthermore, my interest lies primarily in household and business results. Institutions have historically appeared with the purpose of helping out the poor and whether they are positively affected by such training is not more important than the impact of training on the client. Institutional results also seem to say little about the true impact on the clients.

From a methodological point of view a number of observations can be made. If the dependent variable $Y_{ij}$ is a binary variable (assuming 0 or 1) the authors choose a Probit model (a transformation based on a standard normal distribution function) without giving a reason for this choice in favour of a Logit Model. The Probit model assumes that the dependent variable is generated by a standard normal distribution, while the Logit model assumes a logistic distribution. In my opinion, both models should be tested in future work. Furthermore, it is not clear how the authors deal with cases where both the dependent and the independent variables are binary and the sample space becomes dichotomous.

Lastly, the gestation or incubation period was kept very short for this type of experiment dealing with human capital. Just like formal education, business training or any other type of training should have enough time to translate into measurable results, and two years seems too short especially when it treats individuals with little to no previous education. In future work, attention should be given extending the period between the training moment and the moment at which the effect is measured.

4.4. Unanswered Questions

As for unanswered questions, one particular came to mind: why are these results what they are. In other words, an interpretation of the results is missing. There is of course the econometric challenge; the empirical workings; the lack of data concerning household and business variables; the very short gestation period used by the authors; the issue of performance variables; and finally heterogeneity; but what about the content of the training? The training is largely concerned with “business practices” training, not with what I am interested in, entrepreneurial training. The weak impact observed might be
attributed to the training content applied in microfinance programs. In the framework put forward in this paper our focus should be designing good training packages with explicitly stated objectives before we go on to measuring the impact in different settings. As far as I am concerned, nobody addressed this issue when interpreting the results of impact studies. Also, the authors named their article: “Teaching Entrepreneurship: Impact of Business Training on Microfinance Clients and Institutions” when in fact no entrepreneurship is taught to the clients in their study. Instead, business skills are taught. The difference between these two disciplines is something I develop in my thesis. I believe it is crucial to understand the difference in order to develop a successful training package and hence improve the results of the impact study. To use them interchangeably is incorrect as they both reflect very different ideas.

Another point which should be studied further is that the empirical analysis compared the treatment group to the control group independently of how well the clients in the treatment group attended the training; here we have a case where this information could have been adding much evidence to answering the research question; future studies should give due attention to this attendance issue.

At this stage I would also like to point out to something that surprised me. At no point in Karlan and Valdivia’s article do I find a section dealing with limitations. The field is obviously still largely misunderstood and the studies carried out have always their shortcomings, be it due to lack of data, wrong expectations or faults in the models used. I was amazed not to find a section dealing with limitations or even recommendations for future studies.

4.5. Usability and Validity of the Article

I do have to give the authors credit for addressing such an important issue and the findings should not be disregarded. It is the first article I came across that empirically studies the integration of entrepreneurship training with microfinance and although I hoped I would have that privilege, I am somewhat glad that this study has been initiated by two influential academics in the field (even though at a later stage, what the authors referred to as “entrepreneurship”, really just was “business skills”). I learned a lot from their study and will make use of their methodological approach in my framework for a similar study in Tanzania. Nevertheless, it is the first study made and care should be taken when interpreting their results particularly with regards to the content of the training and the variables used.
4.6. Conclusion

To conclude, the article addresses a very interesting topic and is, to my knowledge, the first one in the field. Karlan and Valdivia seek out to measure the marginal impact of adding business training to a Peruvian group lending program for microentrepreneurs. The impact the authors expect is positive and indeed positive results appear from the experiment. Nonetheless, several limitations have been observed which the authors themselves do not bring up in their final notes, such as choice of performance indicators, training content, and short gestation period. A lot of variables are presented with little to no degree of significance, and where strong significance is found the question remains as to how indicative these variables are that result in a general positive impact. Furthermore, values retrieved from surveys should be handled with care and their validity should be tested. Also some concern has been expressed with the creation of a voluntary treatment group and what its implications are to the results of the study.

Nevertheless, the methodology is clean and empirical and controls for issues of bias selection and heterogeneity. The authors had the funds to apply the program on a large scale but failed to do so for a longer period. Nonetheless, I believe that once published, this article will be an inspiration for further investigation into the topic and applicability to other countries.

With this said my final judgement of the value of the article is still positive but I was disappointed with the weak results and the omission of the possibility that the training could be the reason why little impact was measured. The article will be very useful to others with the intention of carrying similar studies in different regions, and it should be used more as a guideline rather than a manual on how to carry on such a study. Particularly, emphasis should be placed on developing training packages adequate to microfinance and more concerned with entrepreneurial rather than business training.

The study design and the model used to test the impact of the training will surely inspire other similar studies. Furthermore, we can learn from the article’s (unreported) limitations and try to improve our own study. As pointed out previously, future research should be careful with the training package applied, the variables chosen as performance indicators and the gestation period used. Taking these and other into account can significantly improve the validity of impact studies. Also, Karlan and Valdivia opened the doors to a very interesting area of study and one that should definitely invite more research.
from academics. Microfinance has not reached its full potential and the more we do to find out why, the more the chances of improving microfinance for the future.

Finally, an influential person in the field of microfinance once approached me during a microfinance conference and said: “do not get your hopes up, the impact is difficult to measure and is weak”. I do not believe in that without further evidence and the apparent lack of impact or weakness might just lie in the contents of the training package.
5. Framework for Impact Evaluation

5.1. Infusing Training into Microfinance Activities

After having discussed entrepreneurial training and microfinance separately, and having analyzed one of the only studies dealing with the integration of these two disciplines (by Karlan and Valdivia) a framework for impact evaluation can finally be presented.

Karlan is the first to warn against extrapolating from one single experiment. “This is the last thing in the world that I would use to develop policy,” he warns. “You have got to replicate” (“Battle for the Soul of Microfinance”, 2008). The problem is that replication simply is not happening and for all the optimism surrounding microfinance it is remarkable how little we know about when it works and why. This, in turn, matters due to MFIs dependence on donor subsidies. Despite the fact that microfinance has a good reputation amid development specialists, access to subsidies is far from guaranteed. Not everyone believes that a donor grant is more efficient than, for instance, paying directly for the construction of a primary school. Further credible evaluation is needed in order to safeguard those programs that deserve to be preserved (“Battle for the Soul of Microfinance”, 2008).

This section will discuss the integration of entrepreneurial training and microfinance taking into account lessons learned from Karlan and Valdivia’s study. Furthermore, new insights will be presented and a detailed plan of action will be suggested.

As seen in section 2.3 the existing KAB module (Know About Business) seems to satisfy the requirements of the South African models of entrepreneurial training. KAB materials have originally been field tested in Kenya, a neighboring country of Tanzania. KAB’s general objective is “to contribute towards the creation of an enterprise culture in a country or society, by promoting awareness among young people of the opportunities and challenges of entrepreneurship and self-employment, and of their role in shaping their future and that of their country’s economic and social development” (KAB Portal, 2009). This objective is very much in line with the objectives of microfinance and it only seems logical to link them together. Furthermore, the two South African models analyzed previously can be used to test the applicability of the KAB learning module.

At the time, however, no KAB programs have been introduced in Tanzania, but such can be requested for the future with the aim of combining it with microfinance activities. In Peru, a similar intervention was carried out in the study by Dean Karlan and Martin Valdivia and where the results were positive.
By introducing entrepreneurial training sessions during, for instance, the weekly meetings aimed at monitoring the progress of the loan, lenders will learn how to use their funds in the most efficient way. This is important not only to the lenders that will find themselves managing their money more professionally, but also to the various MFIs that will experience a higher repayment rate due to client’s improved businesses. Also it is expected that if clients learn how to manage their cash flows better, they will require less debt. Equally, one might observe higher demand for financial capital due to expanded successful businesses.

5.2. Implementation
Assuming that adequate training materials can be developed for Tanzania and in particular for Microfinance Institutes, the next important question is how these trainings and the subsequent impact study will be carried out. The pedagogy will include discussion, case studies, and various short exercises given to groups of 10-15 people hence, personalized advice will not be included. Also once a training package has been developed, care must be taken on how it is organized and presented to different Microfinance Institutes so as to accommodate differences in learning processes. See Appendix for an idea of what such a program would entail.

It is suggested to start with only a few microfinance institutes and measure what the impact of such trainings have on these institutes. It is important that the institutes are receptive to this kind of interference and that they understand the expected results for both them and their clients. This is crucial for the success of the intervention. However, as argued in the review of Karlan and Valdivia’s article, care should be taken in focusing on the results for the institutes as opposed to on the effects for the clients.

To get significant results the impact of the training should be measured after at least 4-5 years (a significant larger gestation period than the one applied by Karlan and Valdivia) and training should be given at least once a week. These trainings should be embedded in the MFI’s weekly meetings aimed at monitoring the progress of the loan. Consequently, lenders will learn how to use their funds in the most efficient way and the traits present in any big enterprise run by professionals will, in this way, also be taught to those deprived from business education.

At this stage questionnaires should be handed out inquiring over clients expectations of the training and several aspects of household and business. These answers can then be compared to those obtained in future surveys made after two-years and four-years since the beginning of the training.
Selection bias is expected with respect to the profile of individuals that will request such training and therefore randomized controlled trial should be applied in which pre-existing lenders in each MFI are randomly assigned to control and treatment groups. Treatment groups should be mandatory and clients will have to attend training at their weekly bank meetings (non-attendance or tardiness resulting in fines or even expulsion from the bank). Karlan and Valdivia empirically analyzed and compared control groups to treatment groups irrespective of trainees’ attendance and adherence to the training program. The authors argued that delays were expected and hence allowing them would avoid a situation where the resulting estimation of the impact of training would be stronger than what would normally be implemented. As argued previously, I do not agree with this statement and wish to improve the results by accounting for these delays in advance when designing the program and the time-frame of the sessions. In my opinion, one can plan in advance when these holidays will take place, and the implementation of the program should be adhered to strictly by not only the clients who will receive fines for tardiness but also by the institutes.

Several outcome variables should be measured and accounted for, many of which have been used by Karlan and Valdivia. Following their example, these outcome variables will be divided into four distinct categories: institutional outcomes; household/empowerment outcomes; business practices and business outcomes as these are the four main categories where effects of infusion can be observed.

Due to time constraint and other limitations already mentioned in the paper, the only variables collected for this study were institutional variables across several Microfinance Institutes. The reason I chose these variables are due to their relevance in relation to the performance of the institute (MicroRate & Inter-American Development Bank. Sustainable Development Department: Micro, Small and Medium Enterprise Division, 2003). Unfortunately, retainment rates and repayment rates were not made available. In future research, it is important to have information on these variables as they are more directly linked to the client than those presented here.
Table 1. Performance Indicators and Variables (taken from Appendix)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio at risk (Prisk&gt;30)</td>
<td>Prisk&gt;30</td>
</tr>
<tr>
<td>Provision Expense Ratio</td>
<td>-</td>
</tr>
<tr>
<td>Risk Coverage Ratio</td>
<td>RiskCoRAT</td>
</tr>
<tr>
<td>Write-Off Ratio</td>
<td>WORAT</td>
</tr>
<tr>
<td>Operating Expense Ratio</td>
<td>OpExp</td>
</tr>
<tr>
<td>Cost per Borrower</td>
<td>CoBor</td>
</tr>
<tr>
<td>Personnel Productivity</td>
<td>-</td>
</tr>
<tr>
<td>Loan Officer Productivity</td>
<td>-</td>
</tr>
<tr>
<td>Funding Expense Ratio</td>
<td>-</td>
</tr>
<tr>
<td>Cost of Funds Ratio</td>
<td>-</td>
</tr>
<tr>
<td>Debt/Equity Ratio</td>
<td>D/E</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>ROE</td>
</tr>
<tr>
<td>Return on Assets</td>
<td>ROA</td>
</tr>
<tr>
<td>Portfolio Yield</td>
<td>-</td>
</tr>
</tbody>
</table>

As observed, none of the variables used by Karlan and Valdivia were used in this study. The reason for this is that I found no direct link between the variables observed by Karlan and Valdivia and the performance of the Institutes. Karlan and Valdivia measured loan size; cumulative savings; repayment; fines; solidarity discount; and dropouts. In an event of entrepreneurial training, I wish to measure the effect on the performance of the Institute and on the performance of the client. According to the Technical Guide, the performance of an Institute can be determined by the variables I present here.

The performance of the client will be measured using several variables linked to both the business the client might be responsible for and to the client’s household. Karlan and Valdivia use the following business variables: last month’s sales; good sales; normal sales; bad sales; difference good-bad month sales; weekly surplus from most profitable product; number of total workers; and paid workers, not family (Karlan and Valdivia, 2006).

As far as this study is concerned, these variables are not all relevant. Moreover, the overall significance of this set of variables was relatively low. “Last month’s sales”; “Good sales”; “Normal sales”; “Bad sales”; Difference good-bad month sales” are in my opinion the most appropriate and representative variables of business results. These variables should be collected for the study in Tanzania.

Next, variables for Business practices will be discussed. Karlan and Valdivia suggest the following: tax formality; profits used for business growth; thinking of keeping business safe when taking money from it; fixed salary for herself; record sales; records withdrawals; records wages; business knowledge; starting a new business; number of sales locations; number of income sources; importance of main
product; allow credit sales; faced problems with business; planned change/innovation; and implemented change/innovation (Karlan and Valdivia, 2006).

In my opinion this list is too long and given that the results of Karlan and Valdivia were not so significant for this group of variables I will take the freedom to omit some for the proposed study. In particular, those variables I deem relevant for this study are: “profits used for business growth”; “business knowledge”; “starting a new business”; “planned change/innovation” and “implemented change/innovation”. These variables are also in line with the South African models for Entrepreneurial Education analyzed previously, which highlight important variables such as business start-up and motivation. Business Knowledge is expected to increase as a result of training and “profits used for business growth” as well, as clients will learn the concept of retaining earnings and business growth.

Next, household outcomes will be discussed. This set of variables is also very important as it aims at measuring the effects training will have on the client in his home. The household outcomes measured by Karlan and Valdivia are the following: financial decisions; family size decisions; keeping track of household bills; taking money/product from business; need to separate money; working children; hours dedicated to house work/child labour/schooling; and children with perfect attendance (Karlan and Valdivia, 2006).

The first five variables are empowerment outcomes. In my study, I am not concerned with the impact of business specifically for women. Additionally, I am not a firm believer that microfinance empowers women. I am mostly concerned with the general effects of microfinance and those of entrepreneurial training and therefore the first 5 variables will be excluded from this study. I am, however, concerned with child labour outcomes and wish to use the three last variables in my study.

All in all, the variables I am concerned with are:
Table 2. Outcome Variables

<table>
<thead>
<tr>
<th>Institutional Outcomes</th>
<th>Business Outcomes</th>
<th>Business Practices</th>
<th>Household Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio at risk (Prisk&gt;30)</td>
<td>Last month’s sales</td>
<td>Profits used for business growth</td>
<td>Working children</td>
</tr>
<tr>
<td>Risk Coverage Ratio</td>
<td>Good Sales</td>
<td>Business Knowledge</td>
<td></td>
</tr>
<tr>
<td>Write-Off Ratio</td>
<td>Normal Sales</td>
<td>Starting a new business</td>
<td>Children with perfect attendance</td>
</tr>
<tr>
<td>Operating Expense Ratio</td>
<td>Bad Sales</td>
<td>Planned change/innovation</td>
<td></td>
</tr>
<tr>
<td>Cost per Borrower</td>
<td>Difference G/B month sales</td>
<td>Implemented change/innovation</td>
<td></td>
</tr>
<tr>
<td>Debt/Equity Ratio</td>
<td>Return on Equity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on Assets</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Obviously, a lot of these variables, particularly household and business variables will have to be collected from the clients themselves through surveys and questionnaires. These will not only be developed for this purpose but also for the purpose of collecting qualitative information of how people experience the effect of the training. Unfortunately this has not been possible to do from abroad, but I am convinced that this data can easily be collected if on location.

Training centres working with ILO such as the Morogoro Centre in Tanzania will hopefully be willing to give these trainings after they have been introduced to the developed KAB learning module. Once trainings have been given and questionnaires have been filled the impact study can be carried out (after two and four years). Together with the qualitative data, quantitative data will continue to be collected from the participating institutes.

5.3. Methodology

The research question alone and the fact that I wish to measure the impact of a program suggests that the most logical type of research to be used is longitudinal; quantitative and causal. Also, the lack of empirical studies in the field has provoked an increased demand for such by outside investors who are still reluctant to invest in microfinancial institutes. The research should be mostly descriptive, empirical, and causal providing hard data there where it is necessary.

This does not however, exclude the use of qualitative data there where it might be necessary. Qualitative data will allow for a deeper insight of perceptions, attitudes and motivations and will provide
depth of information needed to determine what attributes should be treated quantitatively (Research Methods Knowledge Base, 2006). Up till now the design of the paper led to an exploratory analysis of the effects of training on entrepreneurial performance. Although I did expect a positive impact of training I will did not test any hypothesis formally.

Furthermore, the randomized nature of the sample should ensure that the experiment is a true experiment (Research Methods Knowledge Base, 2006). The effectiveness of the training will be evaluated using a randomized controlled trial in which lending groups are assigned randomly to control and treatment groups.

Finally, the reason I chose Tanzania was because I would be going there myself at the end of my Master education to put into practice the ideas of my thesis. The country is politically stable and basic data on local Microfinance Institutes was available although additional information had to be collected.

This study relied on two secondary data sources. Secondary data was collected from the MIX Market, a worldwide microfinance marketplace offering information on over 600 Microfinance Institutions and the World Bank for Tanzania’s country profile. Primary data was retrieved from direct contact with key players both in the field of Microfinance and Entrepreneurship Training. The MIX Market provided reports of all MFIs players in Tanzania; information on the loan cycles; the amount of borrowers; the dollar value of the loans; the repayment rates; and other information regarding the activities of microfinance. More specific data on the profile of the borrowers would have been taken from the MFIs themselves who’s contacts were provided by the MIX. Unfortunately for me, the response rate was close to zero and I was left with incomplete data.

Primary data was retrieved from important players such as the representative of Triodos-Facet in Tanzania; and the Global KAB Coordinator who is currently working on the impact evaluation of entrepreneurship education. Again, most of the information provided by these individuals was very general due to the sensitivity of the information I requested.

It is useful to retrieve primary data through, for instance interviews, when informants cannot be directly observed. Also informants can provide past information and it allows the researcher to control the line of questioning (Creswell, 1994). Nevertheless, as I was dealing with clients in Tanzania, MFIs in Tanzania, and professionals outside my country, such interviews, although planned for, were unfortunately unsuccessful with only a handful willing to answer my emails. Nevertheless, as this is a framework for an
empirical study I would advise future research to seek individuals for interviews and, if on field, interview both clients and participating institutes.

These interviews or surveys should be developed by using “the interview guide approach” where all topics; issues; wording and sequence would be specified in advance.

In order to demonstrate that the random assignment would produce similar control and treatment groups, key demographic features and financial transaction from before the training was provided in section 3.2.

The evaluation method chosen largely depends on the nature of the question; the quality and type of data on hand; and the procedures by which individuals were allocated to the program i.e. the assignment rule. This last point is crucial for the analysis. As described previously I am dealing with a social experiment where assignment is random. Social experiment methods are the closest to the ‘theory’ free method of a scientific trial, and rely on the availability of a randomized assignment rule. They are the most convincing evaluation method, directly constructing a control group which is a randomized subset of the population (Blundell, 2002). To estimate the impact of the training program, simple econometric models should be used. In particular, the instrumental variable method, which is a standard econometric approach to endogeneity relying on finding a variable not present in the outcome equation but which is also a determinant of the assignment rule. In the simple linear constant parameter model, the Instrumental Variable (IV) estimator finds the treatment effect removed of all bias which originates from a non randomized control (Blundell, 2002). Nevertheless, in heterogeneous treatment effect models, the impact parameter can vary in unobservable fashion across individuals. In this situation the IV estimator will only recognize the average treatment effect under strong assumptions which hardly hold in practice (Blundell, 2002).

The Average Treatment Effect (ATE) is an average partial effect for a binary explanatory variable (Wooldridge, 2001). Estimating ATEs is important in program evaluation studies, such as evaluations of training programs (Wooldridge, 2001).

Considering the population of microfinance-receiving people, one is interested in the effect of entrepreneurial training on y, within this subpopulation. The effect variable y could be, among other things:
In case of absence of non-compliance everybody assigned to training receives training and the effect variable relates to the entrepreneurial training in the following way:

\[ y_i = \beta_0 + \beta_1 E_i + \epsilon_i \]

where:

\[ E_i = \begin{cases} 1, & \text{if training is assigned} \\ 0, & \text{otherwise} \end{cases} \]

and

\[ \beta_1 = \text{parameter of interest} \text{ measuring the Average Treatment Effect (ATE)}. \]

If random treatment assignment holds i.e. random training assignment and absence of non-compliance, the Ordinary Least Squares (OLS) estimator of \( \beta_1 \) is under the usual assumptions minimum-variance-unbiased.

However, if we are faced with non-compliance, we have

\[ y_i = \beta_0 + \beta_1 D_i + \epsilon_i \]

where:

\[ D_i = \begin{cases} 1, & \text{if } E_i = 1 \text{ and compliance} \\ 0, & \text{otherwise} \end{cases} \]

i.e. \( D_i \) is binary variable related to training received

and

\[ \beta_1 = \text{parameter of interest} \text{ measuring the Average Treatment Effect (ATE)}. \]

Hence we are in a situation where not everyone assigned to the treatment actually receives treatment, consequently the variable \( D_i \) becomes correlated with \( \epsilon_i \) which makes it an endogenous explanatory variable and the OLS estimators will therefore be biased. Therefore one should not use OLS to estimate the parameters but the instrumental variable method (IV) which is superior to OLS. In order to use IV one needs to define an instrumental variable \( z \) (where \( z \) is correlated with \( D_i \) but not with \( \epsilon_i \)). In our case the choice is straightforward because

\[ z_i = \text{the treatment assigned} \]
and

\[ D_i = \text{the treatment received.} \]

In other words, I can use \( E_i \) as an Instrumental variable (IV) for \( D_i \). IV would then estimate LATE (Local Average Treatment Effect: ATE for sub-population of “compliance”).

Binary variables will be used in the case of qualitative information whereas continuous variables will be used when variables are measurable on a real scale. Furthermore, for the binary dependant variable it would be interesting to test whether not only Probit models work but also Logit models. The collection of data should take place at least after 2 years and again after 4 years for results to be meaningful. Panel surveys should ideally be developed with the aim of interviewing the same people on both occasions.

After 2 years, the results can be compared against those obtained by Karlan and Valdivia and some inferences can be made based on the comparisons.

6. Conclusion

A fundamental point was raised regarding informal economies in developing nations: Can entrepreneurship be taught to clients in microfinance, and if so will it produce better results for microfinance? In my opinion the answer to both is yes but significant work has to be done in order to test this hypothesis. Particularly, training modules have to be developed with care taking into account cultural differences and making sure the concept of entrepreneurship and not of business is central.

A South African model was presented to be used in assessing whether the training package of KAB was suitable for Tanzania. Assuming this is true I suggest this package be used for an impact study in Tanzania.

Next, the landscape of microfinance in Tanzania was studied. I used the Technical Guide to establish the performance of the microfinance industry in Tanzania and various graphs were used to illustrate the various performance indicators. As was established, MFIs in Tanzania still had a lot of room for improvement and training initiatives such as the one suggested might be a welcoming change factor for future improvement.

An article by Karlan and Valdivia addressing the same topic as this study was reviewed with as aim educating me on the current state of research in the academic area. Karlan and Valdivia studied the marginal impact of adding business training to a Peruvian group lending program. The impact measured
was, as expected, positive. Although I agreed with a lot of their ideas and methods, I also found some pitfalls such as the training package used, choice of performance indicators, and short gestation period. Other remarks include the absence of a motivating factor as to why the authors chose a Probit model as opposed to a Logit model; and the overwhelming amount of variables used in their impact study which raised the question as to how indicative the variables were in proving a general positive impact. I did not agree or understand the need for a voluntary treatment group and how it implicated to the results of the study. On the other hand, their methodology was clean, empirical, and controlled for issues of selection bias and heterogeneity.

Karlan and Valdivia’s article further emphasized the need for future research due to the weak reported results. I believed an important factor for this was the weakness of the training package. For these and other reasons, Karlan and Valdivia’s article should be used primarily as a guideline rather than a manual on how to carry similar studies.

Subsequently, I proposed my framework with the assumptions that microfinance is positive and that the KAB model fits the South African model. With a strong belief that this training package is superior to the one proposed by Karlan and Valdivia I am convinced the impact will be strong and positive. I chose my own variables, omitting some used by Karlan and Valdivia and proposed a general plan of action. Particularly, I increased the gestation period; omitted the voluntary treatment group; and proposed a different econometric model for the study. Furthermore, since my focus is in Tanzania, I made sure the industry there was thoroughly studied.

Given the importance of human capital to our beliefs about growth and development, it is of the essence that we test whether these efforts have a positive effect on the poor. This idea is in direct contradiction with Muhammad Yunus presumption that credit limitations alone, and not skills, are the obstacle to the ‘entrepreneurial’ poor.

For this reason, further experimentation is required to verify replicability in different settings. Moreover, it is important to monitor the ongoing sustainability of the believed improvements both for the client and the lending institution.

7. Limitations and Future Considerations

As far as limitations and future considerations are concerned, many became obvious in this study. First and foremost was the problem of lack of data. When I first started with my thesis I overestimated the
amount of data available and expected collecting missing data by contacting all the Microfinance Institutes. Unfortunately only a few answered my repeated emails and not all were willing to give me sensitive information such as individual transactions by all their clients. Also rates such as repayment and retaintment were not easily found and only a few were willing to share the interest rates they covered their clients. Also, variables linked to household and businesses were impossible to retrieve at this stage so an analysis of the current situation was impossible. Nevertheless, I tried to make the study as complete as I possibly could, focusing on the current state of the different MFIs’ performance compared to an African average. The enormous lack of info made it difficult to assess whether the work of MFIs in a particular region was in fact helpful. It was impossible to establish whether the offer of microfinance services is sufficient in relation to the current demand for these services. There is, unfortunately, a huge gap of information.

Secondly, certain assumptions were made throughout the study that should constantly be monitored such as the assumption that microfinance is beneficial to society and helpful in the relief of poverty; and the assumption that a developed KAB model by the International Labour Organization would fit the South African model on entrepreneurial education. Both these assumptions are important for the validity of this study, particularly the latter since I criticized Karlan and Valdivia’s training package and over emphasis on business knowledge as opposed to entrepreneurship.

Next, an obvious limitation is the lack of replicability present in microfinance impact studies. Although this was a motivating factor in writing my thesis; it also presented an obstacle as I could only rely on a very limited amount of articles to learn from and replicate.

Lastly, my first idea for a thesis turned out to be too ambitious as I wanted to carry out the impact study myself. Although the thesis as it is now is not as empirical as an impact study would be, I tried to compensate this by providing an academic article review; a concise analysis of the microfinance landscape; a description of an entrepreneurial education model; and an in-depth econometrical model to be used in future impact studies.
8. References


APPENDIX

   A. Introduction to the Know About Business (KAB) package

   - What is the background and general aim of KAB
Why is training for entrepreneurship important?

Scope of enterprise

Gender considerations

Language versions

B. Objectives of KAB

C. Target group and beneficiaries of KAB

D. Modules, contents, format and duration of KAB

E. How and who to teach KAB?

F. Training methodology for KAB

G. Assessment and evaluation

H. References and further reading

MODULE 1 - What Is Enterprise?

Module objectives:

- To enable learners to recognize that everybody is involved in an enterprise in one way or another.
- To enable learners to appreciate that everybody’s lifestyle is affected by the roles they play in their enterprises.

Module coverage:

1. Meaning and scope of enterprise
2. Different forms of enterprises
3. Roles people play in enterprises
4. Small enterprises

MODULE 2 - Why Entrepreneurship?

Module Objective:

- To enable learners to recognize that utilizing entrepreneurship in all situations is a beneficial approach both at individual and society levels.

Module Coverage:
1. Entrepreneurship Defined
2. Reasons for Entrepreneurship in Business
3. Importance of Entrepreneurship in Society
4. Self-Employment

MODULE 3 - Who Are Entrepreneurs?

Module Objective:

- To enable learners to appreciate the personal characteristics needed to be a successful entrepreneur.

Module Coverage:

1. Assessing Entrepreneurial Potential
2. Identifying Entrepreneurial Characteristics
3. Entrepreneurs as Leaders
4. Entrepreneurial Decision-Making
5. Risk-Taking

MODULE 4 - How Do I Become An Entrepreneur?

Module Objective:

- To provide an understanding of the key competencies and determining factors for success in entrepreneurship and small business management.

Module Coverage:

1. Competencies for Successful Entrepreneurship
2. Key Success Factors in Setting Up a Small Business
3. The Entrepreneurial Decision
4. Being Involved in an Enterprise

MODULE 5 - How Do I Find A Good Business Idea?

Module Objective:
• To provide techniques for generating business ideas as well as for identifying and assessing business opportunities.

**Module Coverage:**

1. Generating Ideas
2. Identifying and Assessing Business Opportunities

**MODULE 6 - How Do I Organize An Enterprise?**

**Module Objective:**

• To enable learners to appreciate the procedures required for organizing an enterprise.

**Module Coverage:**

1. Selecting a Suitable Market
2. Selecting a Business Location
3. Legal Forms of Business Ownership
4. Money Needed to Start an Enterprise
5. Obtaining Money to Start an Enterprise
6. Ways of Getting into Business

**MODULE 7 - How Do I Operate An Enterprise?**

**Module Objective:**

• To enable learners to appreciate the various techniques that will affect the management of an enterprise.

**Module Coverage:**

1. Hiring and Managing People
2. Managing Time
3. Managing Sales
4. Selecting Suppliers
5. Using Technology in Small Business
6. Knowing the Costs of an Enterprise
7. Managing Money
8. Using Financial Statements

**MODULE 8 - What Are The Next Steps To Becoming An Entrepreneur?**

*Module Objective:*

- To enable learners to pursue plans to start an enterprise.

*Module Coverage:*
1. Sources of Information and Assistance
2. Preparing a Business Plan
3. Maintaining an Entrepreneurial Outlook
4. Evaluating Factors in Starting an Enterprise
5. Beyond This Package

**MODULE 9 - How To Elaborate One’s Own Business Plan**

*Module Objective:*

- To enable learners to apply KAB knowledge to a real market situation and to evaluate a business idea for either

*Module Coverage:*
1. Standard Business Plan
2. How to Elaborate the Business Plan
3. How to Interpret the Findings of the Business Plan

**IMPLEMENTATION STRATEGY**

The implementation process starts with a request from national ministries or educational institutions including ILO constituents, and generally progresses through the following steps:

- Program information workshop for representatives of the public and private education sector
- Selection of educational institutions interested to participate in a pilot phase
- Training of teachers/trainers with generic KAB materials by ILO certified trainers
Adaptation of KAB materials to local social and economic context

Pilot testing of KAB in selected institutions during on school year

Coaching and exchange of experience among the teachers under guidance of a KAB trainer

Assessment of KAB as entrepreneurship education for the national curriculum

Government decision on introduction of entrepreneurship education at national level

Training and certification of local KAB trainers

Assistance to the education sector during the general introduction phase of entrepreneurship education at national level

Starting from the initial request and completing the pilot phase takes two years on average. The second phase of the implementation starts with the Government decision to introduce entrepreneurship training as a part of the national curricula. The duration of this phase depends entirely on the Government’s strategy concerning how fast the subject should be introduced, at which education level, and how many education institutions will be covered.

THE GLOBAL KAB PROGRAM COORDINATION

The values of the Decent Work Agenda and the strategies of the Global Employment Agenda are the guiding principles for the Global KAB Program Coordination as part of the Employment Sector. The ILO’s KAB program forms an integral part of the Small Enterprise Development program SEED within the Job Creation and Enterprise Development Department (EMP/ENTERPRISE). The KAB program is managed by the Global KAB Program Coordinator who works in close cooperation with the ILO’s training centre in Turin, ILO’s Youth Employment Program YEP, and the UN Secretary General’s Youth Employment Network (YEN).

The main activities of the Global KAB Program Coordination are:

- to respond to requests from ILO member States
- to design projects and to assist in the implementation of the pilot test
- to adapt the training methodology and materials to new target groups
- to provide training for KAB promoters and KAB Facilitators
• to develop the needed facilitator and key facilitator capacity at national regional and international level for the quality assurance of the KAB program
• to develop a monitoring and evaluation system and conduct impact assessments

Promoting a global program of entrepreneurship education can only be done with an intensive cooperation and collaboration inside the ILO and outside the ILO with a variety of stakeholders, organisations and key players. The ILO International Training Centre in Turin is the main partner as it was involved in the promotion of KAB right from the beginning of the development of the KAB training package and methodology. ILO’s Youth Employment Program YEP promotes KAB for in and out-of-school youth.

Through the KAB coordinator EMP/SEED is partnering with UNECE, OECD, UNESCO and bi-lateral development agencies like SDC.

The Youth Employment Network YEN is the link to the YEN lead countries (currently 19), and in most of these countries that developed a National Action Plan to promote youth employment, entrepreneurship education is one of the main pillars of the national Youth strategies

At time KAB programs are introduced in the following countries:

| INTRODUCED in the national curriculum | Kenya, Kazakhstan, Kyrgyzstan, PDR Lao, Timor Leste, Bolivia, Peru, |
| IN PROCESS of introduction | Sri Lanka, Indonesia, Philippines, Syria, China |
| Ongoing school PILOTS | Uzbekistan, Azerbaijan, Viet Nam, Papua New Guinea, Morocco, Algeria, Tunisia, Egypt, Senegal Botswana Mauritius and Mongolia |
| REQUESTS for KAB | Mali, Burkina Faso, Ivory Coast, Togo, Burundi, Rwanda, Gabon, RD Congo, Ghana, Nigeria |

Due to these country activities the KAB materials have been translated and adapted from the generic English version into French, Spanish, Russian, Arabic, Chinese, Bahasa Indonesia, Khmer, Vietnamese, Kyrgyz, Tajik and Uzbek.

Entrepreneurship education at all levels of education is recommended and promoted by national and international organizations, national donors and private foundations.
The ILO’s field structure is essential for the implementation of KAB programs at national level. All KAB programs in the recent past were introduced as a result of a combination of activities among the KAB coordinator at EMP/SEED and the enterprise or employment specialists in ILO’s field offices. Donor funded projects were supervised from the Sub Regional Offices (SROs) with technical inputs from the KAB coordinator.

CERTIFICATION OF KAB KEY FACILITATORS AND FACILITATORS

The quality of the KAB programs introduced into national education programs depends highly from the quality training of the teachers selected for the KAB program in schools.

The teachers are the change agents for the introduction of this new subject.

The training covers two parts; that are the specific KAB training methodology and the KAB training material content.

KAB trainers operate at different stages of the implementation process of KAB programs.

*The standard KAB implementation process moves through the following steps:

- Request from an ILO member country
- Pilot testing of the KAB subject during one school year / Training of teachers from selected schools as KAB Facilitators
- Integration of KAB in the national curriculum / Training of highly qualified teachers or educators from teacher training departments or teacher training institutions as national KAB Key Facilitators who in turn will train the teachers.

For the sustainability of national KAB programs the teacher training institutions or universities will provide KAB training for future teachers/ Training of the staff of teacher training institutions.

In order respond to the increasing requests and to provide a high quality training the Global KAB Program had developed international, regional and national trainer capacities.

International Key Facilitators are able to work globally. They train Regional and National Key Facilitators and teachers as well and have the competence to certify them.
Regional Key Facilitators are able to work in a given regional area where they are originating from covering several countries. They train National Key Facilitators and teachers and have the competence to certify them.

National Key Facilitators are working in their own country and they train teachers. They have the competence to issue certificates of attendance of KAB courses to the teacher.

(The official certification as KAB subject teacher depends from the national certification and competencies system and has to be done by the National Education)

Role of the International Key Facilitator:

- An International KAB Key facilitator shall promote KAB as a comprehensive training program for Entrepreneurship Education in Vocational Education, Secondary Education and Higher Education. The International Key Facilitator operates at all levels of KAB programs. Upon requests from Governments to the Global KAB Program Coordination it is the International Key Facilitator who starts the implementation of new KAB programs by executing the following tasks.
  - animating awareness and information workshops for decision makers at ministerial level and at institutional level;
  - designing country specific KAB implementation strategies and KAB pilot test projects
  - training of teachers from selected schools and professors from teacher training institutes
  - animating short workshops for KAB training reviews and refresher training
  - follow-up and monitoring of KAB pilot tests run during one academic year
  - reporting on KAB activities to local authorities, project directors and the Global KAB program coordination in Geneva.

Role of the Regional Key Facilitator:

The role and the tasks of a Regional Key Facilitator are the same as those of the International Key Facilitator with the difference that the Regional Key Facilitator works in a limited number of countries.

Role of the National Key Facilitator:

The National Key Facilitator’s main task is to train the teachers who are selected for KAB classes in vocational, secondary and higher education.
Steps to become a National Key Facilitator:

A National Key facilitator should have the following competencies and experiences:

- familiar with enterprise promotion and entrepreneurship education
- having participated in an Key facilitator workshop organized by the Global KAB program coordination either in Turin or elsewhere
- worked as co-trainer with an international or regional Kay facilitator during 2 KAB ToFs
- knowing the Monitoring & and Evaluation method used for KAB and collecting monitoring data from the schools and transmit them a designated Regional Key Facilitator or to the Global KAB Program Coordination

Steps to become a regional KAB key facilitator:

A regional Key facilitator should have the following competencies and experiences:

- familiar with enterprise promotion and entrepreneurship education
- having participated in an Key facilitator workshop organized by the Global KAB program coordination
- Being certified as National Key Facilitator and having animated at least three KAB ToFs as main trainer at national level
- being involved in the design of a KAB country strategy
- being involved in a KAB pilot test program with follow-up and monitoring
- collecting monitoring data from National Key Facilitators and transmit them to the Global KAB Program Coordination
- doing regularly reporting to the Global KAB program coordination on KAB activities in their region
10. Tables and Graphs

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- RiskCoRAT
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- OpExp
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- D/E
- ROE
- ROA
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### Table 4. Pride Tanzania

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### Table 5. BRAC Tanzania

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Table 8. Small Enterprise Development Agency Tanzania (SEDA)

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<th>CoBor</th>
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Table 12. Mbinga Community Bank (Mbinga CB)

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Figure 9. Portfolio at Risk for all institutes over time and compared against the African average.

Figure 10. Write-Off Ratio for all institutes over time and compared against the African average.
Figure 11. Risk Coverage Ratio for all institutes excluding Pride over time and compared against the African average.

Figure 12. Operating Expense Ratio for all institutes over time and compared against the African average.
Figure 13. Cost per Borrower for all institutes over time and compared against the African average

Figure 14. Debt-to-Equity Ratio for all institutes over time and compared against the African average
Figure 15. Return on Equity for all institutes excluding Faulu over time and against the African average.

Figure 16. Return on Assets for all institutes over time and against the African average.
**Figure 17.** Operational Self Sufficiency for all institutes compared over time and against the African average

**Figure 18.** Return on Equity versus Return on Assets scatter plot for all institutes excluding Faulu
Figure 19. Number of Active Borrowers for all institutes over time and against the African average

Figure 20. Average Loan Balance per Borrower for all institutes over time and against the African average