

STOCKHOLM SCHOOL OF ECONOMICS

Master of Science in Business and Economics

Specialization in Management

Master Thesis, 30 ECTS

Fall 2011

IS CREDIT ALONE ENOUGH?
THE CRITICAL COMPONENT OF BUSINESS TRAINING
FOR MICROENTREPRENEURIAL PERFORMANCE

A Minor Field Study on women microentrepreneurs in village and loan associations receiving business training from MAPLE Microdevelopment in Mbale, Uganda



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ABSTRACT

Due to commercialization of the microfinance industry, fewer MFIs offer business training to their clients. The debate whether commercialization of microfinance is good or not takes two positions; the *minimalist model* which emphasizes that specialization on credit alone is the key to poverty alleviation, and the *credit-plus approach* in which credit alone will not accomplish poverty reduction. As a consequence of the commercialization of the industry, a growing number of non-profit organizations offer business training in order to build the human capital of microentrepreneurs and improve their standard of living in the work against poverty.

To investigate how business training affects the performance of microentrepreneurs, a natural experiment has been conducted. The treatment group consists of 91 women who have attended a 12 week long business training program from MAPLE and who sell fresh. The control group consists of 101 women selling fresh, and neither of them has received business training. A survey was conducted based on questions regarding human capital, social capital, financial capital, self-efficacy, and business characteristics. Performance was measured in terms of profits, sales, salary to oneself and employees, and whether the entrepreneur reinvests and has repaid VSLA loans on time.

From the regressions and interviews it can be inferred that business training has a significantly positive effect on performance, hence credit alone is not enough for the goal of poverty alleviation.

Key words: Microentrepreneurship, Microfinance, Business Training, Human Capital, Financial Capital, Uganda

ACKNOWLEDGEMENTS

This Minor Field Study has been an incredible experience and there are many people involved in this project who we would like to express our sincere gratitude to. First, we would like to thank the Swedish International Development Agency (SIDA) and Stockholm School of Economics for granting us the Minor Field Study scholarship which made this thesis possible.

Further, we would like to thank our supervisors. Karl Wennberg, our Swedish supervisor, who has been a tremendous help during the process of this project. No matter the time of the day, you have always given us support and encouragement, and provided us with valuable comments and guidance. Dr. Isaac Nabeta Nkote, our field supervisor from Makerere University Business School (MUBS), who has given us valuable assistance, information and connections, and who also made sure that we experienced Uganda and its nature and culture.

We would also like to take the opportunity to thank everyone at MAPLE MicroDevelopmnet in Mbale, Uganda. Thank you Heidi Friis Jakobsen, Country Director, for giving us access to the organization and your support. A special thanks to Rogers Raymond Muduku, Field Officer, and Eddie Kasumbien, Field Officer, for helping us identify and access VSLA groups. Without you this field study would not have been possible.

Thank you Wiwo Esther Juliet and Christopher Namugowa for being our interpreters during the fieldwork. Your hard work and positive attitude encouraged us to overcome obstacles and setbacks that we encountered in the field. Thank you Mr. Fred Iga Luganda, Director at the Microfinance Center at MUBS, for your valuable information and assistance during our time in Uganda.

Last but not least we would like to thank all the women who we had the great honor to interview. Thank you for greeting us with big smiles, giving your valuable time, sharing your experiences, and helping us to find our interviewees.

Thank you,

Louise Lombach

Joneca Meurling

ABBREVIATIONS

AMFIU	Association of Microfinance Institutions of Uganda
GEM	Global Entrepreneurship Monitor
MAPLE	MAPLE MicroDevelopment
MFI	Microfinance Institution
MUBS	Makerere University Business School
NGO	Non-Governmental Organization
OLS	Ordinary Least Squares
UGX	Ugandan Shilling (currency)
VSLA	Village Savings and Loan Association

DEFINITIONS OF KEY TERMS

Business training	a program offered by non-profit organizations, usually for free, to microentrepreneurs in developing countries. The purpose is to build their human capital and teach them tools and concepts to improve their businesses
Commercialization	to exploit for profit or debase in quality for more profit
Credit plus approach	the belief that the financial services need to be complemented by non-financial services, credit alone will neither accomplish poverty reduction nor gender equality
Double bottom line	considering both financial and social consequences before arriving at a business decision
Fresh	fruits and vegetables
Microentrepreneur	owner of micro-enterprise, usually operate out of necessity
Microloan	a very small, short-term, loan made to an impoverished entrepreneur in a developing country. Usually no collateral is needed
Minimalist model	the belief that specialization on credit alone is the key to poverty alleviation
Mission drift	drifting away from original mission, e.g. serving the poor

TABLE OF CONTENTS

ABSTRACT	i
ACKNOWLEDGEMENTS	ii
ABBREVIATIONS	iii
DEFINITIONS OF KEY TERMS	iii
1 INTRODUCTION	1
1.1 BACKGROUND	1
1.2 PROBLEM DISCUSSION	2
1.2.1 The Commercialization of the Microfinance Industry	2
1.2.2 The Case of Uganda	3
1.3 PURPOSE AND RESEARCH QUESTION	3
1.4 DEMARCATIONS	4
1.5 DISPOSITION OF THE THESIS	6
2 THEORETICAL FRAMEWORK	7
2.1 POVERTY AND ENTREPRENEURSHIP	7
2.1.1 What is Poverty?	7
2.1.2 Entrepreneurship in Developing Countries	8
2.1.3 Entrepreneurship and Economic Growth	8
2.2 FACTORS AFFECTING PERFORMANCE OF AN ENTREPRENEUR	9
2.2.1 Human Capital	9
2.2.2 Financial Capital	13
2.2.3 Social Capital	16
2.2.4 Self-efficacy	17
3 METHODOLOGY	19
3.1 THE INITIAL WORK	19
3.1.1 Choice of Research	19
3.1.2 Interviews with Experts	19
3.2 SCIENTIFIC APPROACH	20
3.3 EXPERIMENTAL DESIGN	20
3.4 SAMPLE SELECTION	20
3.4.1 Choice of Country: Uganda	20
3.4.2 Choice of Study Object: MAPLE MicroDevelopment	21
3.5 SAMPLE DATA	22
3.5.1 Treatment and Control Group Characteristics	22
3.5.2 Treatment and Control Group Accessibility	23
3.6 VARIABLES	24
3.6.1 Dependent Variables	24
3.6.2 Independent Variable	26
3.6.3 Control Variables	27

3.7 SURVEY INTERVIEWS	27
3.8 STATISTICAL ANALYSIS	28
3.8.1 Variable Analysis	28
3.8.2 Correlation Analysis	29
3.8.3 Regression Analysis	29
3.9 IN-DEPTH INTERVIEWS.....	34
3.10 METHODOLOGICAL ISSUES.....	34
3.10.1 Reliability.....	34
3.10.2 Validity.....	36
3.10.3 Ethical Guidelines.....	37
4 EMPIRICAL RESULTS AND ANALYSIS	38
4.1 DESCRIPTIVE STATISTICS.....	38
4.2 RESULTS: OLS REGRESSIONS	42
4.2.1 Fitness of OLS Regression.....	42
4.2.2 Profit	42
4.2.3 Sales.....	43
4.2.4 Salary to oneself	43
4.3 RESULTS: LOGISTIC REGRESSIONS.....	44
4.3.1 Fitness of Logistic Regression	44
4.3.2 Reinvestments	44
4.3.3 Salary to Employees	45
4.3.4 Repayment ability of VSLA loans	45
4.4 ANALYSIS	45
4.4.1 Human Capital	46
4.4.2 Financial Capital.....	51
4.4.3 Social Capital	53
4.4.4 Self-Efficacy.....	54
5 DISCUSSION.....	56
5.1 CREDIT ALONE IS NOT ENOUGH	56
5.2 THE EFFECTS OF OUTREACH.....	57
5.3 TRANSFERENCE OF TACIT KNOWLEDGE.....	59
5.4 THE PROBLEM OF ATTITUDES	60
6 CONCLUSION.....	63
6.1 CONCLUSION.....	63
6.1 LIMITATIONS	64
6.3 FURTHER RESEARCH	65
7 REFERENCES	67
INTERVIEWS	73
8 APPENDICES	74
APPENDIX A: Maps.....	74

APPENDIX B: Pictures.....	75
APPENDIX C: Outline of business modules.....	77
APPENDIX D: Definitions of control variables and references.....	78
APPENDIX E: Survey to interviewees.....	80
APPENDIX F: Descriptive statistics of treatment group.....	83
APPENDIX G: Descriptive statistics of control group.....	85
APPENDIX H: OLS regression results.....	87
APPENDIX I: Logistic regression results.....	90

1 INTRODUCTION

In the first chapter the background of the thesis is outlined, followed by a problem discussion. Further, the purpose of the thesis and the research question are stated as well as the demarcations. Finally, the disposition of the thesis is presented.

1.1 BACKGROUND

Uganda, referred to as the “Pearl of Africa” by Winston Churchill, is an East African country that is bordered by South Sudan in the north, Kenya in the east, Tanzania in the south, Rwanda in the southwest and the Democratic Republic of Congo in the west (Appendix A; picture 1). It is defined as a low-income developing country in which 37.7 percent of the population lived on less than \$1.25 per day in 2009 (World Bank, 2011). The poor faced a lack of access to credit from formal financial institutions already at the time of independence in 1962 (Okurut, Banga & Mukungu, 2004). Therefore, the many organizations that constitute the microfinance industry in Uganda come as no surprise. The Association of Microfinance Institutions of Uganda (AMFIU) has 117 members of which 79 are microfinance institutions (MFIs) and 39 are other institutions that support microfinance activities (AMFIU, 2011).

Microfinance is a concept that refers to financial services for poor or low-income clients offered by different types of organizations. The financial services include microcredit, savings, insurance, remittances, payments and other services, which typically are provided by MFIs (Microfinance Gateway, 2011). However, many organizations believe that the financial services need to be complemented by non-financial services and uses what is referred to as the credit-plus approach (The Global Development Research Center, 2011 a). In this approach, organizations go beyond the problem of access and distribution of money and integrate credit into a larger development process in which the low-income clients learn different business skills in order to be able to adequately use the borrowed money (Ibid).

The methods used by the MFIs have been developed since Professor Muhammad Yunus, in 1976, designed an experimental credit program to serve the poor in Bangladesh (Microfinance Gateway, 2011; Global Envision, 2006). The loans provided by MFIs to the poor are very small and little or no collateral is needed. Several different credit-lending models are used, such as lending through associations, cooperatives and groups as well as lending to individuals directly (The Global Development Research Center, 2011 b). There is also an implicit guarantee that if the client is able to fully repay the loan on time, the client will have access to future, possibly larger, loans (Microfinance Gateway, 2011).

More than 430 000 people were active borrowers by formal MFIs in 2009 in Uganda (Mix Market, 2011). However, of the total population consisting of 30.7 million people, 17 percent applied for a loan in the same time period (Uganda Bureau of Statistics, 2010). Consequently, more than 5 million people applied for a loan. It is important to emphasize that the credit sought by the people come from different sources where informal sources are the most common (Ibid). Of the 5 million people that applied for a loan, 3.7 million sought their loans from informal sources (Ibid). The credit sought by people in the urban areas of Uganda is dominantly from formal sources whereas the people in rural areas seek credit mainly from informal sources (Ibid). It is therefore important to realize the central role that the informal microfinance sector, including traditional community-based cooperative groups and village associations, has on the establishment of saving systems among the poor and for the expansion of other microfinance services in Africa (Basu, Blavy & Yulek, 2004).

1.2 PROBLEM DISCUSSION

1.2.1 The Commercialization of the Microfinance Industry

Most MFIs started as non-profit organizations and non-governmental organizations (NGOs). However, during the last years there has been a shift in the microfinance industry and more MFIs have transformed into for-profit organizations (Microfinance Gateway, 2011). The strong emphasis on financial sustainability in the microfinance sector comes from the fact that there is a huge demand for microfinance services and a will to maximize the number of clients. It would not be reasonable for donors and governments to provide subsidized funds to meet the huge demand from microfinance clients (Ibid). It has also become more common that in order to obtain a license from banking authorities to be able to provide saving services, the organization must be registered as for-profit (Ibid). However, the early pioneers of microfinance believed that more than the provision of financial services was required in order to overcome poverty. Therefore they often provided financial services in combination with other services that they found important, such as literacy training, training in farming as well as business development services (Lensink & Mersland, 2009).

There is an ongoing debate on whether commercialization of microfinance is good or not for the poor in which two positions are taken. The first is the minimalist model, which emphasizes that specialization on credit alone is the key to poverty alleviation. Credit alone will empower women and make it possible for MFIs to be sustainable and thus reach a larger customer base. The other side argues for the credit-plus approach in which credit alone will neither accomplish poverty reduction nor gender equality (Pineda Ofreneo, 2005).

1.2.2 The Case of Uganda

In 1996, AMFIU was founded because there was a need for MFIs in Uganda to have a common voice, to lobby for favorable policies from the government, to share information and experience as well as to network with both local and international actors (AMFIU, 2011). Consequently, microfinance is not a new subject for discussion in Uganda but rather a well-developed industry. The industry has shifted as described above from being an industry dominated by non-profit organizations to one with an increased number of for-profit organizations.

MFIs have evolved towards specialization and most of them are using best practices in order to survive. To be profitable they have taken away training since it is a free service for clients and thus a large cost (Lydia Antonia Nalunga, Synovate, Uganda).

In order to understand the effects on the clients of such a shift in the microfinance industry, Uganda can be used as a case study with the possibility to generalize results to other countries with similar industry histories. Moreover, as a response to the minimalistic model, a few non-profit organizations have been founded with the primary goal of providing essential non-financial services to microentrepreneurs. One of these organizations is MAPLE MicroDevelopment, from now on called MAPLE, which was created in 2006 by students from the University of Oregon. The aim of the organization is to reduce poverty and empower women by providing microentrepreneurs in existing community based savings and loans groups with vocational and business training (MAPLE MicroDevelopment, 2011). At the current time, MAPLE is providing these services in the two areas Mbale and Lira, in Uganda (Appendix A; picture 2).

1.3 PURPOSE AND RESEARCH QUESTION

In the light of the background and problem discussion it is important to understand whether or not credit alone is enough for poverty reduction or if non-financial services, which were provided by the pioneers in the microfinance industry, have an important role to play. If credit alone is enough, it might imply that non-profit organizations, such as MAPLE, are investing money in unnecessary activities. On the other hand, if the results would show that credit is not enough it is important to emphasize the problematic situation with a commercialized microfinance industry in which non-financial services disappears due to increased competition.

More specifically, the purpose of this thesis is to analyze the importance of business training for different measures of business performance of women microentrepreneurs

in Mbale, Uganda¹. In order to achieve this purpose the attempt will be to answer the following research question:

Does the business training program provided by MAPLE increase the business performance for women microentrepreneurs in village savings and loan associations in Mbale, Uganda?

1.4 DEMARCATIONS

Several delimitations have been made in this thesis due to various reasons, but always with the intention to provide reliable and valid results. First, this thesis will only focus on business training provided by non-profit organizations to village savings and loan associations (VSLAs). This is because the training provided by MFIs mainly focuses on improving the repayment ability of clients and thus, not on pure business skills. Further, VSLA members are considered to be the poorest of the poor. Studying this socio-economic level will enable an analysis of poverty at the grass root level which is of great importance in order to contribute to the fight against poverty.

Second, only one non-profit organization that provides business training has been included in this study, namely MAPLE. This demarcation has been made due to time restrictions and due to the fact that there might be inherent differences between different business training programs. This would problematize the interpretation of the results and it is outside the scope of the thesis to compare different business training programs.

Third, the thesis focuses solely on VSLAs receiving business training from MAPLE in the outskirts of Mbale. This delimitation has been made in order to exclude any geographical differences that could impede on the validity and reliability of the results.

Fourth, the focus is only on women microentrepreneurs. The decision was made because of the high entrepreneurial activity in Uganda, and specifically the high rate of women engaging in entrepreneurial activities (Kelley, Brush, Greene, & Litovsky, 2010). Around 31 percent of women in Uganda are engaged in entrepreneurial activities, whereas the number for men is around 32 percent. However, it is more likely for men to be engaged in opportunity-based entrepreneurship whereas the opposite is true for women who have a larger probability to be necessity-based entrepreneurs (Ibid). Even though Uganda is fighting for more equality, there are still fundamental gender differences in the labor market. Women work longer hours than men, with a mean of 15 hours a day compared to 8-10 hours (World Bank, 2005). Despite this fact, most women earn less than men as a consequence of time poverty in which women are overburden with tasks and responsibilities (Ibid). Thus, by including both genders in the same

¹ For a visual understanding of the context in Mbale, Uganda, please see Appendix B

analysis it would be more difficult to reliably interpret the results. Moreover, while women are argued to engage in productive activities for the household, men are argued to spend much time in unproductive activities such as drinking, which is a waste of time and family resources (Ibid). Therefore, by focusing on women the thesis is expected to contribute more to the theory of how to alleviate poverty.

Fifth, to further increase the homogeneity of the groups, only women selling fresh (fruits and vegetables) have been included in this study. This decision was taken because information from MAPLE revealed that profits vary substantially between industries present in the training groups and thus, it would be difficult to reliably interpret the results with respect to performance. Second, most of the women in MAPLE's training groups are working in the fresh industry, which implies that the largest possible sample was to be found in this industry and therefore, the most reliable results since a large sample is more reliable than a small one. Third, by focusing on the largest group of MAPLE's clients we would be able to contribute with results of great value to the organization.

Last, several dependent variables have been chosen as indicators of business performance. In conformity with "Capital is not enough: Innovation in developing economies" by Bradely *et al.* (2011), profits have been determined to be the ideal dependent variable since it is argued to be a key indicator of success for entrepreneurs, especially in the context of a developing country. In order for the poor to be able to purchase basic necessities, revenues need to exceed expenses. However, the same specific context that makes profits the ideal variable in order to measure business performance in theory also provides practical difficulties to gather this information in the field, since there is a risk that the research objects are unable to give reliable information about their profits. Therefore the decision has been made to use additional proxies for profit such as sales, salary to oneself and employees, reinvestments, and repayment ability of VSLA loans. We argue that having several proxies for business performance will help us to get more robust and straightforward results and thus, the conclusions will be based on the aggregative results from all of the different performance measures.

1.5 DISPOSITION OF THE THESIS

Chapter 2: Theoretical Framework The introduction will be followed by a theoretical framework which covers relevant theories for the results of the thesis.

Chapter 3: Methodology In the third chapter the methodology will be described and the dependent, independent, and control variables will be defined. Further, the validity and reliability of the thesis will be critically evaluated.

Chapter 4: Empirical Results and Analysis This chapter contains descriptive statistics and empirical results of the regressions which will be analyzed.

Chapter 5: Discussion In the fifth chapter the results will be discussed as well as the most important implications.

Chapter 6: Conclusion The thesis ends with a summary covering the results and contributions of the thesis but also limitations and suggestions on further research.

2 THEORETICAL FRAMEWORK

In this chapter the theoretical framework will be presented. It is based on theories and previous research on entrepreneurship in both developed and developing countries and its importance for poverty alleviation. Further, the theoretical framework is based on factors affecting the performance of an entrepreneur, specifically a microentrepreneur where possible. These factors are human capital, financial capital, social capital, and self-efficacy. Since human capital in the form of business training and financial capital in the form of microloans provided by MFIs and VSLAs play a central role in this thesis, a more thorough description of theories within these areas will be presented.

2.1 POVERTY AND ENTREPRENEURSHIP

According to Amorós and Cristi (2010) there is an extensive literature on both poverty and entrepreneurship. However, there are few studies with a combined analysis of poverty and entrepreneurial activity (Ibid) although it is considered to be a significant economic and social phenomenon (Lingelbach, de la Viña & Asel, 2005). Consequently, due to the restrictive literature on entrepreneurship in developing countries, theories based on entrepreneurship in developed countries will be used to complement the theoretical framework.

2.1.1 What is Poverty?

There are numerous definitions of poverty but traditionally there has been a focus on income poverty in terms of material deprivation characterized by low income and low consumption (Soubotina, 2000) and the lack of necessities such as basic food, shelter, medical care, and safety (Bradshaw, 2007). More objectively, the World Bank defines absolute poverty as those living under the poverty line, \$1.25 per day², which is the minimum level of income necessary to meet basic needs (World Bank, 2011). More recently, human poverty, or human deprivation, has become more apparent in the discussion of poverty. Human poverty is the “low health and education levels that are either the cause or the result of low income” (Soubotina, 2000, p. 33). Consequently, there is a correlation between income poverty and human poverty which widens the traditional view on poverty and gives a clearer understanding of its causes. Due to this multidimensional view on poverty it can be inferred that more comprehensive policies are needed to fight poverty which target both income and human poverty (Soubotina, 2000).

² 2005 purchasing power parity (PPP) prices

2.1.2 Entrepreneurship in Developing Countries

Characterizing for poor countries is the high number of entrepreneurs. The Global Entrepreneurship Monitor (GEM) indicates that there is a positive correlation between developing countries and the number of people involved in entrepreneurial activities (Amorós & Cristi, 2010). Entrepreneurial activity differs depending on the motives of the entrepreneurs. Generally entrepreneurial activity can be distinguished into two types; opportunity-based entrepreneurship and necessity-based entrepreneurship (Wennekers, van Stel, Thurik & Reynolds, 2005). Opportunity-based entrepreneurs have created their businesses based on perceived business opportunities while necessity-based entrepreneurs become involved in entrepreneurial activity because it is the only way to earn a living (Amorós & Cristi, 2010). Due to the specific circumstances in developing economies where wage employment often is dependent on education and or social connections, the poor have little choice but to start their own businesses in an effort to provide their basic needs (Bradley *et al.*, 2011; Banerjee & Duflo, 2007). According to Naudé (2007), many of the entrepreneurs in developing countries are informal or survivalist entrepreneurs. Consequently, it can be argued that necessity-based entrepreneurship is more frequent in developing countries.

2.1.3 Entrepreneurship and Economic Growth

Entrepreneurial activity, according to many studies, promotes economic growth and human development (Amorós & Cristi, 2010; Naudé, 2007). However, not all entrepreneurial activities contribute to economic growth and poverty reduction (Naudé, 2007). There is a common belief that opportunity-based entrepreneurship contributes more to economic growth. This is because these entrepreneurs generally have higher levels of education, and more material and social capital which leads to higher productivity and profitability (Acs, Arenius, Hay & Minniti, 2005; Bhola, Verheul, Thurik & Grilo, 2006). However, according to Amorós and Cristi (2010) opportunity-based entrepreneurship cannot be regarded as superior since necessity-based entrepreneurs could be as successful as the opportunity-based entrepreneurs. Therefore, when necessity-based entrepreneurial activity is productive and profitable it could be argued to be of importance for economic growth. Consequently, it is the performance of firms rather than the type of entrepreneurial activity that determine their contribution to economic growth and poverty alleviation.

2.2 FACTORS AFFECTING PERFORMANCE OF AN ENTREPRENEUR

There are many factors affecting the performance of an entrepreneur and these can roughly be divided into human capital, financial capital, social capital and self-efficacy (cf. Bosma, van Praag, Thurik & de Wit, 2004; Luthans & Ibrayeva, 2006). However, more recently there has been an increased focus on human development as a mean of poverty alleviation (Amorós & Cristi, 2010), with an emphasis on specific human capital such as business training (cf. Amorós & Cristi, 2010; Karlan & Valdivia, 2009; Oppedal Berge, Bjorvatn and Tungodden, 2011).

2.2.1 Human Capital

The definition of human capital that will be used in this thesis is the one presented by Gary Becker and thus human capital is defined as a means of production, into which additional investment yields additional output (Becker, 1964). Further, human capital is distinguished between general and specific human capital (Ibid). Specific human capital is associated with firm-specific knowledge and thus, it is useful only to the firms providing it (Ibid). In contrast, general human capital is useful both in a specific firm and in other firms (Ibid).

There are different views on the importance of human capital on entrepreneurship performance but there is a tendency to support the existence of a positive relationship between human capital and entrepreneurial activity (Davidsson & Honig, 2003). In this thesis, the five specific factors: age, experience, family business background, education, and training have been chosen due to their argued importance for the build-up of human capital and thus, their effect on entrepreneurial performance (Ibid). Of these, age and education are argued to have the characteristics for general human capital while experience and family business background have characteristics for both general and specific capital. Training is argued to have the characteristics for specific human capital.

Table 1. Characteristics of human capital related to each factor affecting human capital

General Human Capital	General and/or Specific Human Capital	Specific Human Capital
Age	Experience	Training
Education	Family Business Background	

Age

Age is defined as general human capital because it is probable to increase an individual's human capital since an individual who is older have been exposed to more situations and learnt by experience how to handle different situations. It is important to stress that age is not synonymous with experience but has an impact on work experience due to the fact that older people most often have longer work experience (Parker, 2009). Since elderly people have had more time to build up important human capital, it can be argued that age is an important factor for entrepreneurship performance (Ibid), and it is commonly used as a proxy for human capital (cf. Wiklund, Delmar & Sjöberg, 2004). Further, individuals are increasingly likely to become entrepreneurs as they age, up to a certain point, after which they become less likely to become entrepreneurs (Lévesque & Minniti, 2006; Wiklund *et al.*, 2004). According to Parker (2009), most entrepreneurs are in the age of thirty-five to forty-five years.

Experience

There is a consistent positive relationship between experience and entrepreneurship, and it is also associated with higher entrepreneurial profitability (Parker, 2009). Experience captures the impact of skill acquisition from previous work experiences in a more informative way than age does (Ibid). Through previous work experiences an individual can gain tacit knowledge, knowledge that is not written and difficult to share. This kind of knowledge and insight is valuable since it gives the entrepreneurs an understanding of how things are done (Bradley *et al.*, 2011). Depending on the type of experience, different forms of human capital can be acquired (Wiklund *et al.*, 2004). Business experience from different industries or businesses is probable to affect the build-up of general human capital positively because the experience in problem solving that someone has accumulated is likely to be helpful when trying to solve a new problem in a new situation. Hence, the acquirement of general human capital facilitates the integration and accumulation of new knowledge (Ibid). Business experience from the same industry or business will affect the build-up of specific human capital positively since the entrepreneur will acquire experience in particular work tasks which is valuable in the specific job and the context which the entrepreneurs is currently engaged in (Ibid).

While experience increases the probability of higher performance, Alvarez and Shimer (2009) argues that unemployed people lose their skills while being inactive on the labor market and will thus have lower expected performance.

Family Business Background

There is evidence that a person who has self-employed parents has an increased probability to become self-employed (Dunn & Holtz-Eakin, 2000). When growing up in an entrepreneurial family the child acquires skills through observing the parent engaged in self-employment and through work experience in the family business (Carroll & Mosakowski, 1987). An individual who has grown up with self-employed parents has been exposed to an entrepreneurial environment and has thus been able to accumulate both general and specific human capital. According to Fairlie and Robb (2004) general human capital gained from family business background is general managerial expertise, as well as general administrative and personnel management skills. Further, the authors state that specific human capital from family business background includes enterprise-specific skills, and job- or industry-specific knowledge. Consequently, children with self-employed parents will have greater entrepreneurial abilities than children whose parents have not been self-employed (Dunn & Holtz-Eakin, 2000). In addition, it has also been shown that children of self-employed parents have higher expected profitability once they engage in entrepreneurship (Ibid). This evidence can be argued to be of specific importance for self-employed in the developing part of the world since more children have to help out in their parents' firms in comparison to children in the developed part of the world who attend school.

Education & Training

An individual who has been exposed to education have the possibility to acquire more theoretical knowledge that could be put into practice and thus education is also argued to increase human capital. Since the theoretical knowledge could be valuable in many different situations, education is defined as general human capital. However, training is argued to be a form of specific human capital since most of the aspects are directly linked to specific issues in specific contexts. Being taught things that are of specific importance for an individual's business, as part of a business training program, is argued to increase an individual's human capital since the individual will be taught how to improve the current business by learning how to apply relevant concepts and tools.

Although knowledge is predicted to be critical for entrepreneurship performance, previous research gives only imprecise understanding of what type of knowledge that is important (Parker, 2009). The impact of school education (elementary, middle and high school as well as university), hereafter called education, on the selection into entrepreneurship has been shown to be neither positive nor negative (van der Sluis, van Praag & Vijverberg, 2003). However, the effects of education differ between developed and developing countries. There is a

greater tendency for educated workers in developing countries to choose paid employment instead of self-employment (van der Sluis *et al.*, 2005). Due to the specific circumstances in developing economies where wage employment often is dependent on education and or social connections, the poor have little choice but to start businesses in an effort to provide their basic needs (Bradley *et al.*, 2011). Further, there is significant evidence that education leads to higher entrepreneurial performance (Bates, 1990; Wiklund *et al.*, 2004).

However, in order to reduce poverty it is central to find ways to increase performance and thus it is of importance to determine the effects of different types of knowledge generating activities on business performance. As stated, previous research has mainly focused on the effect of education on business performance and found positive correlations between the two. Research about how business training affects microentrepreneurial performance is very limited. To our knowledge there are two studies performed on this subject. “Human and financial capital for microenterprise development: evidence from a field and lab experiment” by Oppedal Berge, Bjorvatn and Tungodden (2011) and “Teaching entrepreneurship: impact of business training on microfinance clients and institutions” by Karlan and Valdivia (2009). Oppedal *et al.* (2011) concluded that the effects of business training are contingent on gender. They found that on average no effects on business performance of training for female entrepreneurs while male entrepreneurs experienced an increase in sales and profits. Karlan and Valdivia (2009) came to the conclusion that business training led to limited improvements in business knowledge, practices and revenues. Both these studies are based on a business training program designed by Freedom from Hunger, which is commonly used in developing countries.

Freedom from Hunger’s Business Training Program

Freedom from Hunger is a U.S. based international development organization which is non-profit, non-governmental, and non-religious. The organization’s mission is to bring innovative and sustainable self-help solutions to families in order to fight hunger and poverty. Training is one of their means towards this mission and they have therefore created a curriculum for *Credit with Education*, which is also used by MFIs and non-profit organizations that have a partnership with Freedom from Hunger. There are three modules: health, business, and money management. (Freedom from Hunger, 2011). The focus in this thesis will be on the business module.

The business module consists of additionally three modules; *Plan for a Better Business*, *Manage Your Business Money*, and *Increase Your Sales*. The trainers of the business training program have access to a *Facilitator Manual* for each business module. The manual provides a clear guidance on the aim and objectives for each session and contains instructions on how to organize

each step in the session, what questions to ask, and what information to provide (Ibid).

The training sessions in the modules are dialogue-based and the participants learn through stories, pictures, role-plays, demonstrations, and discussions. Hence, the participants do not have to be able to read or write. The sessions are supposed to be enjoyable and the trainers encourage the participants through applauses and positive feedback. The participants are continuously encouraged by the trainers and from each other to try new things in order to improve. Subsequently, the information provided is well adjusted to the situation of the participants and the benefits are easy to identify, adopt and put into practice (Ibid).

The business modules consists of 27 sessions on the topics Plan for a Better Business, Manage Your Business Money, and Increase Your Sales (Freedom from Hunger, 2004 a; Freedom from Hunger, 2004 b; Freedom from Hunger, 2004 c). For a detailed outline of the business modules please see Appendix C.

MAPLE MicroDevelopment

MAPLE is a non-profit and non-governmental organization that has a partnership with Freedom from Hunger. Students from the University of Oregon started the organization in 2006 and the operations in Uganda started in 2008. MAPLE operates in Lira and Mbale and has its headquarter in Mbale. The core activities of MAPLE are life skills education and mentorship to youth, business skills education, and entrepreneur-mentoring services to community groups engaged in VSLAs. (MAPLE MicroDevelopment, 2011).

The business training program is based entirely on Freedom from Hunger's *Credit with Education* curriculum and it is offered for free to committed VSLAs. The program is twelve weeks long with two training sessions per week. MAPLE has two trainers who speak the local language of the region, Ligishu. Both of the trainers visit each VSLA group during every training session to make it more convenient for the group members, specifically with respect to the cost and time of transportation. (MAPLE MicroDevelopment, 2011).

Proxies for measuring human capital: level of education, years of work experience, years of current business, years of unemployment, parents self-employed, age

2.2.2 Financial Capital

The lack of financial capital in developing countries is an inhibitor for economic growth. Research on entrepreneurship and more specifically on self-employment in developing countries support the view that capital constraints are barriers to entrepreneurship. It is argued that it is the

capital constraints rather than the ability to recognize profit potential opportunities that impede the poor in developing countries from becoming entrepreneurs (Bradley *et al.*, 2011) or continuing their entrepreneurial activities (Lingelbach *et al.*, 2005).

Entrepreneurs in developing countries are to a great extent dependent on different forms of financing when starting their ventures. Due to the unfavorable financial situation for many people in emerging markets it is difficult to rely on personal and family savings which severely impedes on the growth prospects of promising startups (Lingelbach *et al.*, 2005). Further, obtaining start-up funds from a bank is challenging for the poor. According to Malhotra, Chen, Criscuolo, Fan, Hamel & Savchenko (2006) information asymmetry and uncertainty creates difficulties in receiving a bank loan for these entrepreneurs since lenders demand collateral or high rates of return in order to compensate for the high risks (Malhotra *et al.*, 2006). Nevertheless, there is a positive correlation between loan size and profit (Wiig & Kolstad, 2011), stressing the fact that access to financial capital is important for entrepreneurial success. However, in order to obtain a significant amount of credit from a formal institution, the entrepreneur needs to show some evidence of being successful (Ibid), hence they are facing a catch-22.

Due to limited personal and family savings and access to loans, few women can invest in property and land. There are also legal aspects hindering women from investing in land and property (Niethammer, Saeed, Mohamed & Charafi, 2007). However, being able to invest in land and property can serve as a form of savings and constitute as a safety for the entrepreneur. Additionally, it can act as collateral when applying for a loan and thus give easier access to financial capital (Lingelbach *et al.*, 2005). Consequently, owning land and or property can indicate entrepreneurial success.

Selling on credit can affect the entrepreneurs' financial capital negatively. Some entrepreneurs are desperate to sell even though they may not get paid instantly. The value sold on credit can be of considerable amount and in worst case undermine the whole business if the customers fail to pay back (Ben Hamida, 2000). Consequently, it can be argued that entrepreneurs who do not sell on credit could be indicated to be more successful.

Microfinance Institutions

The spread of MFIs have played an important role in reducing the barriers to entrepreneurship due to capital constraints. By introducing joint liability, where groups agree to be jointly liable for each other's loans, there is no need for collateral in order to acquire financial capital (Bradshaw, 2007). By providing small loans to poor people without collateral, MFIs have made resources

available to the poor and thus provided them with larger opportunities to be included in the broader economy.

Historically, MFIs provided business training and loan management before providing the loan (Lensink & Mersland, 2009). However, since borrowers want to receive the loan fast and due to the increased competition among microfinance firms, business training is generally no longer offered by MFIs (Kagaba, 2011; Munyagwa, 2011; Microfinance Gateway, 2011). At the same time as there has been a strong pressure for financial sustainability in the microfinance industry; the institutions have increasingly been subject to criticism. The criticism has focused on the potentially negative aspect of the growing commercialization of the industry, where the focus of the institutions is increasingly on size and profitability (Center for the Study of Financial Innovation, 2011). In addition, the decline in lending standards among the institutions has been criticized, which has further lead to the criticism that emphasizes the drift away from its original “double bottom line” purpose (Ibid). This is often referred to as mission drift. One of the most commonly argued forms of mission drift is that microfinance no longer has the focus to reach the people at the very bottom of the socioeconomic scale, thus the poorest people in the society (CGAP, 2006). There has also been a focus on that many new firms funded through microfinance start as self-employment efforts and remain so. Thus, firms do not grow or employ other people (Morduch, 1999). Consequently, many researchers suggest that capital alone is not enough in order to reach the ultimate goal of poverty alleviation (Oppedal Berge *et al.*, 2011).

Village Savings and Loan Associates

There are many informal forms of microfinance with the goal to target the people at the bottom of the socioeconomic scale. A Village Savings and Loan Association (VSLA) is a group of people who save together and take small loans from those savings (VSL Associates, 2011). The concept is introduced to a village by an external agency³ or a local development organization which facilitates the process of forming groups consisting of approximately 15-25 self-selected individuals where five of these are selected to the management committee during the annual election (CARE, 2011). Once the group is formed, training is provided in order to educate the members on how to run and manage the savings group and in order to give support to the members over a period of time (CARE, 2011).

The groups meet once per week and the members save by purchasing shares. The price of the share is decided by the group at the beginning of every cycle and remains the same for the entire period. However, the amount saved varies between members and between

³ E.g. Care International, Oxfam, Plan International

meetings. The purpose of VSLAs is to encourage people to save smaller amounts more frequently in order to build savings which provides security for the household (VSL Associates, 2011). The savings are maintained in a loan fund and the members can borrow up to three times their individual savings. During the first year the loans have to be repaid within three months, after that loans can be repaid in more flexible installments (Ibid). In general, loans range from \$10 to \$20 and the interest rate is between 5 to 10 percent (Singer, 2008).

There is no complex system of accounts or a group ledger. At the end of every meeting the balance is counted, announced, and noted in a notebook and the members of the group are encouraged to remember the balance until next meeting. Further, in order to track the individual savings and loan liabilities the group members use a simple passbook. The passbooks together with the loan fund are kept in a lock-box. The box is secured by three padlocks and the different keys are kept by three members of the group. The three key keepers are not allowed to be members of the Management Committee (VSL Associates, 2011).

At the end of every cycle, at least one year, the financial assets are divided amongst the members according to the amount each member has saved (VSL Associates, 2011). In addition, VSLA groups usually have a social fund that provides the members with a basic form of insurance. The social fund is not shared out at the end of the cycle in order to ensure that members are able to access money in case there is an emergency or at particularly vulnerable times. The contribution by each member is decided by the group at every meeting (Ibid).

Proxies for measuring financial capital: accumulated total loan size, saved to start business, savings per week, sell on credit, own land, own property

2.2.3 Social Capital

In the literature of social capital there is no general agreement of the concept or its definition (Akçomak & ter Weel, 2006). However, in this thesis the definition by Boxman, De Graaf and Flap (1991) will be used where social capital is "... someone's personal network and all the resources a person has access to through this network [...] who can be expected to provide support, and the resources those people have at their disposal" (Boxman et al. 1991, p. 52).

Social capital can be used to compensate for limited financial or human capital, the so-called network compensation hypothesis (Rooks, Szirmai & Sserwanga, 2009), and can thus be argued to be of specific importance in developing economies (Parker, 2009). Much research has focused on the impact of social capital on entrepreneurial performance and there is a consensus that membership of formal and informal networks enhance entrepreneurial performance, thus

supporting the network success hypothesis (Gomez & Santor, 2001; Brüderl & Preisendörfer, 1998). Brüderl and Preisendörfer (1998) discuss four success factors of social networks and entrepreneurship. First, through their social networks entrepreneurs can gain access to information. This information is assumed to be more useful, reliable, exclusive, and less redundant than information from formal sources. Second, a social network gives access to customers and suppliers. The amount of access to these people determines the success of the entrepreneur. An entrepreneur with a diverse network is likely to gain due to the snowball effect where customers, in particular, might spread information through their networks. Third, a social network may increase the possibility to get access to financial support such as informal credits from relatives or acquaintances. Last, the family network plays a significant role for the success of the entrepreneur. A family network gives access to unpaid family work and provides emotional support. In addition, a person who has self-employed parents is presumed to have better opportunities since he or she has access to their parents' social networks (Sørensen, 2004; Davidsson & Honig, 2003).

Social capital is due to the absence of a common concept or definition, and its seemingly subjective nature, problematic to measure (Parker, 2009). In the research conducted to date, researcher has used support from friends and family, family members in business, or being married as proxies of social capital (Davidsson & Honig, 2003; Kim, Aldrich & Keister, 2006).

Proxies for measuring social capital: number of people self-employed in the household, number of people who can help out, number of people to ask for advice, number of people in household, being married, support from friends and family

2.2.4 Self-efficacy

Self-efficacy is defined as how self-confident a person is, and it is based on the individual's self-perception of their skills and abilities (Wilson, Kickul & Marlino, 2007). Feeling confident about having the relevant skills to run one's firm is emphasized as important for self-employment performance (Davidsson, 2006). Further, another personal characteristic that is often related to entrepreneurship performance is the locus of control (Luthans & Ibrayeva, 2006). Locus of control is the extent to which an entrepreneur tends to perceive performance outcomes as being either internally or externally determined (Ibid). A personal desire for success and the belief that oneself is the source of success, hence internal locus of control, makes the entrepreneur more prone to make efforts with respect to the business. Entrepreneurs in developing countries face many obstacles when running their businesses and a high level of frustration is a common

element. In order to be successful in such an environment it is of significant importance for the microentrepreneur to have a personal desire for success and an internal locus of control (Ibid).

Proxies for measuring self-efficacy: confidence, knowledge

3 METHODOLOGY

This chapter will describe the selection sample as well as the definitions of the dependent, independent, and control variables. Further, the two regression models used in this thesis will be explained and the reliability and validity of will be critically evaluated.

3.1 THE INITIAL WORK

3.1.1 Choice of Research

Due to a genuine interest in development issues and microfinance, it was early on decided that the thesis should be written within this area. The ongoing discussion about the commercialization process and its effects on the microfinance industry was found particularly interesting. During the initial research stage it became apparent that a fundamental part of microfinance was about to vanish, namely the business training. Consequently, a questions was raised: “is credit alone enough?”. To be able to examine this question, the decision was taken to investigate the effects of business training on microentrepreneurial performance. It became clear early on in the process that few studies had been made in this area and thus there was an opportunity to contribute to academic research in a valuable way.

3.1.2 Interviews with Experts

In order to get an enhanced understanding of the microfinance industry, expert interviews were conducted as a complement to secondary data. The aim was first to understand the evolution of the microfinance industry in general and then more specifically for Uganda. The first expert interview was conducted in Sweden with Sofia Nilsson Altafi, PhD student at Stockholm School of Economics with her doctoral project on Indian microfinance organizations and with experience in the development field in Tamil Nadu, India. Thereafter four interviews were conducted in Kampala, Uganda, in order to understand the specific characteristics of the microfinance industry in the country. Solomon Kagaba, Operations Manager at AMFIU was interviewed in order to fully understand the evolution of the microfinance industry in Uganda with respect to the component of non-financial services such as business training. In order to further understand how MFIs deal with the dual focus on profit and social mission in the time of commercialization, Lydia Antonia Nalunga, Research Manager at Synovate Uganda was interviewed. Finally, to understand how some established, well-reputed MFIs deal with the component of business training, Thenge Hannington, Agency Manager at FINCA and Nasser Munyagwa, Training Officer at BRAC were interviewed.

3.2 SCIENTIFIC APPROACH

The relationship between theory and empirical findings is affected by the choice of research approach (Wallén, 1996). In this thesis the research question has been derived from existing theories, thus a deductive research approach has been applied. Consequently, there will be no attempt to create new theories which is the aim of an inductive research approach. Since the study aims to investigate a causal relationship a natural experiment has been chosen which is a commonly used method by developmental economists (cf. Deaton, 2009).

3.3 EXPERIMENTAL DESIGN

The aim of this thesis is to investigate the effect business training has on different measures of business performance. According to Humphreys and Weinstein (2009), randomized field experiments are seen as a rigorous method of testing general theories about economic behavior. The authors further state that field experiments are an “excellent way to obtain a valid estimation of causal effects” (Humphreys & Weinstein, 2009, p. 373) since the researcher is able to create exogenous variation in the variables (Reiley & List, 2008). Similar studies to this thesis have used field experiment as their experimental design (cf. Oppedal Berge *et al.* 2011; Karlan and Valdivia, 2009). However, this experimental design was not possible to undertake since we were not able to randomly assign the participants to treatment and control groups and create the exogenous variation in the independent variable, giving business training to one group. Nevertheless, natural experiment is similar to field experiment and was therefore used. Natural experiments are observational studies where populations are analyzed as if they had been part of an experiment (Reiley & List, 2008) where one population has received the treatment, business training, and the other has not, without the intervention of the researchers. Randomization of the two sample groups is important for the validity of the thesis (Ibid) since it is critical for the statistical analysis. How the aspect of randomization has been handled will be further discussed under *3.8.3 Regression Analysis*.

3.4 SAMPLE SELECTION

3.4.1 Choice of Country: Uganda

In order to understand what effects the commercialization of the microfinance industry has on the end client, it is import to conduct research in a country that has witnessed a shift in the industry towards more for-profit organizations. This is the case of Uganda, which has a long history in the microfinance industry.

For the client of microfinance services, the purpose is to receive a loan. As non-financial services, such as business training, take time from the client and are more abstract in nature than the financial services, it is not certain that the client perceives these services as beneficial.

Overall, many clients are reluctant towards the concept of training because they want to see quick results and they have large time constraints. It is hard to change these attitudes. (Nasser Munyagwa, Training Officer, BRAC).

Due to the attitudes of the clients and the competitive situation in the microfinance industry, it has become increasingly important for MFIs to be able to deliver financial services quickly. Consequently, the training provided to clients has been minimized and it focuses mainly on improving their repayment ability, thus the minimalist approach has become the general approach. This compromise of non-financial services has been subject to criticism and a few non-profit organizations have been created with the main purpose of providing these non-financial services to microentrepreneurs.

Consequently, the choice to conduct the study in Uganda was based on its specific characteristics of the microfinance industry. It is one that has witnessed a commercialization process in which the minimalist approach has become the general approach. The commercialization process has further been criticized and non-profit organizations have started to provide the non-financial services that were once a critical part of microfinance.

3.4.2 Choice of Study Object: MAPLE MicroDevelopment

The initial idea was to compare clients from two MFIs with substantial differences in terms of their approaches towards business training. However, since the minimalist approach has become dominant, it was difficult to find suitable organizations.

During the expert interviews the organization MAPLE was mentioned as a serious organization with a strong focus on business training. Therefore, the Field Director was contacted and she found the topic of the thesis interesting and was willing to provide the necessary resources in order to enable the study. The organization's focus on business training is evident through their company statement: *Microdevelopment for the alleviation of poverty through learning and entrepreneurship* (MAPLE MicroDevelopment, 2011). It was clear from the initial contact with the Field Director that she regarded business training as an essential factor for the performance of microentrepreneurs. MAPLE's business training program is provided to committed and

serious VSLAs in Mbale and Lira and it consists of a set of activities during a time period of three months. Since the central office of the organization is located in Mbale, the decision was taken to work with VSLA members in this area. Consequently, the initial plan of conducting the study in the urban areas of Uganda was abandoned for a more rural approach.

The rationale for the choice of MAPLE as a case study was first and foremost the serious business training program that the organization provides to VSLAs and the fact that they base the program on Freedom for Hunger's curriculum for *Credit with Education*, which makes it easier to generalize the results. Another major aspect was that the organization had VSLA groups in mind for the start of the next business training program. This would facilitate the critical aspect of randomization. Finally, the willingness of the organization to provide internal information and knowledge and to open up the doors to the training sessions was important for the decision.

3.5 SAMPLE DATA

3.5.1 Treatment and Control Group Characteristics

In order to achieve the purpose of the thesis, the impact from a natural experiment was analyzed using average treatment effects, thus a treatment and a control group were defined. The treatment group consisted of seven VSLAs that had received business training from MAPLE. All of these VSLAs were in the final stage of the training program or had recently completed the program. The effort has been to isolate the training that the treatment group has received to solely the business training provided by MAPLE. However, in order to reach a sufficient sample size, women who have received additional training from other organizations have also been included.

The control group consisted of six VSLAs that had not received any business training, neither from MAPLE nor from any other organization. However these groups all wanted to be part of the training program and fulfilled the requirements set up by MAPLE to receive training. However, due to limited resources MAPLE is not able to provide training to all VSLAs that fulfill the requirement, instead some groups are randomly chosen before others.

All of the VSLAs have been active in around two years time. Therefore the members have saved money in a structured manner and have had the possibility to receive loans from the groups during the same time period. The groups are similar in size, with around 20 people in each group. The geographical location of the groups is also similar with one exception. One of the training groups is located one hour away by car whereas it is less than one hour walking distance between the other groups and as close as a few minutes walk between many of

them. The decision to include the group located further away was based on the critical aspect of sample sizes. Moreover, since the characteristics of the group are similar to the other groups with respect to number of inhabitants, major industries, living standards etc. it is argued to be unlikely to negatively affect the results.

All research objects are women who work in the same industry; they are all selling fresh. This industry was chosen because it was the largest industry among all the VSLAs. Therefore the results of the research would be applicable to the largest group of VSLA members and thus, have the largest impact. Each woman has also received a minimum of one loan from her saving group. The strong similarities between the two groups are important because it isolates the effect of the business training and give the opportunity for more reliable results.

3.5.2 Treatment and Control Group Accessibility

The field officers at MAPLE provided contact information to the chairperson for each VSLA group and thereafter a meeting was held with each of them in order to give information about the thesis and open up for questions. These meetings were used as a way to build the necessary trust for the interview process. In particular, the issue of voluntarily participation was emphasized together with the fact that there would be no gains for individuals who chose to participate. Moreover, the chairpersons were asked to help to create a list with the names of all group members and their occupations and as soon as the list was completed the interview process got started. The effort was made to interview all individuals in one community group before starting on another group in order to build trust by being present during a continuous period of time. However, due to time constraints there were some overlaps.

To enhance randomization in the samples, the aim was to interview all women who were selling fresh in each of the VSLAs. That would assure that the women who were interviewed represented the complete group. This strategy was energy demanding but successful since only few individuals were not reached because of sickness or travel issues. Moreover, there is no risk that the field officers from MAPLE have chosen groups with particularly high performance for the study. This is because all the VSLAs that have received training from MAPLE, have fresh as the largest industry and has been active for two years are represented in the sample.

3.6 VARIABLES

3.6.1 Dependent Variables

In order to be able to answer the research question several dependent variables were identified as important in order to give robust and straightforward results. In this section the rationale for each of the dependent variables, how they are defined and how they were measured will be explained.

Profit

Profit, as the main dependent variable, aims to explain whether or not business training is important for women microentrepreneurial performance. It is not self-explanatory to use profit as the main variable to explain performance. However, in conformity with “Capital is not enough: Innovation in developing economies” by Bradley *et al.* (2011), profits have been chosen since it is argued to be a key indicator of success for entrepreneurs, especially in the context of a developing country. In order for the poor to be able to purchase basic necessities, revenues need to exceed expenses. Due to this, *net profit* has been calculated in order to measure profit since it is what is ultimately left after subtracting all expenses.

In order to define the variable profit there was a thorough discussion with each interviewee. This is due to the fact that the interviewees found it difficult to tell their profits during the pilot survey. The aim of the discussion was to step-by-step build up costs, sales and profit by using concepts that were simple for the interviewees to understand. First the interviewee had to tell how much she pays when she buys product X. Thereafter a discussion about other costs was held in which the interviewee was stimulated to think about all possible costs related to the product, such as costs for transport, packaging, market fees, salaries etc. Further on there was a discussion about how long product X lasts in order to understand the frequency of the interviewee’s purchases. Thereafter, in order to understand sales, the interviewee had to answer how much someone has to pay for product X. Finally the discussion focused on if the interviewee threw away some of the products because they had gone bad or if she took products home without paying for them, as well as the frequency of these behaviors. All the information from the interviewee was later on summarized and the profit per day in numbers was calculated from this information. The currency used is the Ugandan shilling (UGX⁴). In order to ensure normal distribution the specification of the variable had to be altered to the logarithmic specification of the variable.

⁴ 1 USD = 2 440 UGX; 1 EUR = 3 220 UGX; 10 SEK = 3 556 UGX
1 000 UGX = 0.31 EUR; 1 000 UGX = 0.41 USD; 1 000 UGX = 2.81 SEK

Sales

Even though profit has been argued to be a more accurate measure of performance in the specific context outlined in this thesis, sales is also a helpful indicator of performance. The benefit of this variable is that it is less complex than profit, which would imply a smaller margin of error. Sales per day in UGX were calculated from the information given in the discussion explained above. To ensure normal distribution the specification of the variable had to be altered to the logarithmic specification of the variable.

Reinvestments

The variable reinvestment is also used as an indicator of profit. Harvie and Lee (2005) argue that there is a strong relationship between profit and reinvestment, where low profits lead to low reinvestments. Further, the rationale is that the interviewees are not likely to reinvest their profit before they have bought necessities for themselves and their families. Therefore, an interviewee who understands the concept of reinvestments and who is capable to reinvest could be argued to be better off than someone who does not reinvest. However, the outcome of this variable is not only dependent on the performance of the interviewee but also on the choices that she makes together with the rest of her household.

The definition of the variable is simply if the interviewee reinvests or not. The interviewee was asked if she reinvest and if the answer was yes, she was asked a control question in which she had to explain how she reinvests in order to fully ensure that she understood the concept. If her explanation made sense she was defined as someone who reinvests. The variable is a binary variable with two possible outcomes; either the interviewee reinvests or she does not.

Salary to oneself

Another dependent variable is whether or not the research object pays herself a salary. The rationale is that if the interviewee continuously pays herself a salary, her business could be argued to be more stable than a business in which the owner does not have the ability to pay herself. However, in accordance with several of the other dependent variables, this variable is not only dependent on performance but also on the decision making of the interviewee and her family. The variable is defined as salary per day in UGX. The specification of the variable did not need to be altered in order to ensure normal distribution.

Salary to employees

In the context in which the microentrepreneurs work, it is not unusual that people help out for free. The most common reasons for this are that unemployment rates are high and unemployed people like to help out without any salary rather than doing nothing. It is also implicit that family and close friends help each other, sometimes very frequently. As for the variable salary to oneself, the variable salary to employees is also argued to indicate how stable the business is. In addition it is probable that the research object makes sure that she can buy necessities for herself and her family before she pays her employees. However, this variable is also dependent on both the performance of the microentrepreneur and her decisions. If the research object pays salary to any of her employees she is regarded as someone who pays salary to employees. The variable is a binary variable with only two outcomes; either the interviewee pays her employees or she does not.

Repayment ability of VSLA loans

The last dependent variable is one that is often used to evaluate the performance of microentrepreneurs is the repayment ability (Vigenina & Kritikos, 2004). It is an indicator of performance but it is also affected by how an individual or a household chooses to spend their money. In this case the repayment ability refers to how well the women have repaid their loans from the savings groups. The variable has been defined as whether or not the interviewee has repaid her VSLA loan or loans on time. It is measured as a binary variable with two possible outcomes; either the interviewee has repaid all her loans on time or she has not been able to repay them on time.

3.6.2 Independent Variable

Business training

The purpose of the thesis is to understand the importance of non-financial services, particularly business training, on the performance of microentrepreneurs and ultimately its implications for poverty alleviation. Therefore the independent variable that will be tested is business training provided by MAPLE.

Since there are many different types of trainings provided by numerous MFIs it is important to clearly define what is meant by the business training of MAPLE. This type of training is provided in order to give microentrepreneurs the necessary skills to run their businesses more successfully, thus it is focused mainly on improving business related skills. The program is run for three months time and the groups have two training sessions per week, where

each training session is two hours long. Moreover, the training is given on a community-based level and it is voluntarily. This implies that not everyone will have to attend all the training sessions. However, no matter how many training sessions an individual in the training group has attended, she will be regarded as part of the treatment group. This might not seem rational for the analysis because a person who does not attend the training sessions will not learn the skills. However, a critical component of the business training program is to access the microentrepreneurs and raise their motivation to learn new business skills. That is why MAPLE has the requirements of seriousness and willingness to participate in the training program in order for VSLAs to receive training. Therefore, all women who are participants in the business training program will constitute the treatment group. Thus, the variable will be measured as a binary variable with only two possible outcomes; either the microentrepreneurs is part of the business training program or she is not.

3.6.3 Control Variables

In order to avoid that any correlation found between business training and the different dependent variables could be explained by other endogenous variables, important variables that affect microentrepreneurship performance will be controlled for. More specifically, 26 control variables (please see Appendix D for a more detailed explanation) were included in the analyses. By controlling for as many factors as is rationally possible it can be argued that the assumption of zero conditional mean⁵ is met. The control variables are based on previous studies (please see Appendix D) and will be focused in the areas of capital constraints, human capital, social capital and self-efficacy. In addition there will be some variables controlling for business characteristics specific to this case in order to ensure not to exclude factors that might have a significant impact on microentrepreneurship performance. All of the control variables will help to isolate the effect of the independent variable business training on the dependent variables.

3.7 SURVEY INTERVIEWS

The main part of the information from which the results were analyzed was gathered through interviews based on structured survey questions. The decision not to distribute the questionnaires had a couple of reasons. The first and foremost reason was the context in which these interviews were conducted, namely in an area where illiteracy rates are high. The second reason was to ensure the data set to be as complete as possible, thus minimizing the missing values.

⁵ “Zero conditional mean” will be further explained in chapter 3, section 3.8.3 *Regression Analysis*

The questionnaire was created with the focus on structured questions in order to be able to reliably quantify the answers. The structured questions were of different types: dichotomous, multiple choice and scale questions. Moreover, the questionnaire had six different focus areas based on the theoretical framework: capital constraints, human capital, social capital, self-efficacy, business training and general business characteristics. The intention was to understand the differences between the interviewees with respect to these areas since they have been proven to be important for microentrepreneurship performance.

A draft of the questionnaire was constructed in Sweden and reconstructed several times in cooperation with Professor Isaac Nabeta Nkote, head of the Microfinance Center at Makerere University, Kampala. This was necessary in order to make sure that the formulations of the questions would make sense to the interviewees. Thereafter pilot tests of the questionnaire were conducted after which it was reconstructed a few times until it reached its final stage; a questionnaire consisting of 70 questions (please see Appendix E for the complete questionnaire).

Since most of the women in Mbale do not speak English, interpreters were used during the interviews. At first it was considered to use the field officers at MAPLE as interpreters but due to their position and their relationship with the women this option was disregarded. Instead, two cousins to one of the field officers were hired as interpreters during the complete interview process.

In total 192 interviews were conducted. Of these, 91 interviews were conducted with women from the treatment group and 101 interviews were conducted with women from the control group. The average length of an interview was 45 minutes.

3.8 STATISTICAL ANALYSIS

The statistical analysis was conducted by three phases. First the variables were analyzed in order to fully understand the pattern of each variable. Thereafter a correlation analysis was conducted to understand the interrelations between the different variables. Finally, a regression analysis was conducted to find an answer to the research question.

3.8.1 Variable Analysis

During the time period when the interviews were conducted, the gathered data was continuously transferred to an excel sheet in order to be able to detect possibly strange patterns in the data set as fast as possible. In order to understand the structure of each of the variables a table was constructed portraying the maximum, minimum and mean values as well as standard errors, kurtosis and skewness for each variable. Histograms were also constructed in order to visually

understand how each variable was distributed and to decide whether or not the specification of each variable needed to be altered to the logarithmic form in order to meet the criteria of normal distribution. The data showed no extreme outliers and therefore the decision was made not to interfere in the data set.

3.8.2 Correlation Analysis

In order to better understand the relationship between the variables, a correlation matrix was constructed. Wherever there was a correlation larger than 0.5 between two control variables or a control- and an independent variable, a marking was placed. This was done to ensure to avoid multicollinearity, thus to understand which variables that could be used together in the regressions later on. One major part of the correlation analysis was to understand the relationship between the dependent variables and the independent variable business training. This first correlation test indicated that business training had an impact on several of the dependent variables. However, since all the control variables are excluded from a correlation test it cannot by itself explain anything about the real relationship between the independent and the dependent variables. The benefit of the test is the indication it gives to whether the data can help to answer the research question.

3.8.3 Regression Analysis

In similar studies conducted by Karlan and Valdivia (2009) and Oppedel Berge *et al.* (2011), two different regression models have been used to analyze the treatment effects of business training. A logistic regression model have been used when the dependent variables have been binary, otherwise an ordinary least squares (OLS) regression model have been used. Subsequently, the regression analysis has been conducted based on these two regression models.

The regression analysis conducted in this thesis was built up step-by-step, adding one control variable at the time in order to understand the implication of each control variable on the dependent- and the independent variables. Moreover, in order to minimize problems with heteroscedasticity, the models were fitted using White's robust standard error.

OLS regression model

For the dependent variables profit, sales and salary to oneself the OLS regression was applied. In this method the goal is to minimize the sum of the squared vertical distances between the observed responses and the responses predicted by the linear approximation, this is called "least squares" regression fit. The linear regression is expressed as:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_n x_n + \varepsilon$$

The least squares estimates are given by the following formulas:

$$\hat{\beta}_i = \frac{\sum x_i y_i - \frac{1}{n} \sum x_i \sum y_i}{\sum x_i^2 - \frac{1}{n} (\sum x_i)^2} = \frac{cov[x, y]}{var[x]}, \quad \hat{\beta}_0 = \bar{y} - \hat{\beta}_i \bar{x}$$

In order to use the multiple OLS regression model several key assumptions must be fulfilled (Wooldridge, 2008). Below are the five key assumptions stated and defined.

Linear in parameters

The model should be linear in the relationship between the predictors and the outcome variable

Random sampling

The errors should be normally distributed

Homoscedasticity

There should be homogeneity of variance, thus the error variance should be constant

No perfect collinearity

The errors of one observation should not be perfectly correlated with errors of any other observation

Zero conditional mean

The expected value of the error term should be equal to zero given all predictors

In order to fulfill the assumptions of a linear relationship between the parameters, the data has carefully been studied and tabulations, plots and outlier analysis have been conducted. Based on this information the assumption gives the flexibility to change the specifications of parameters in order to achieve a linear relationship and thus, some of the parameters have been altered to the logarithmic form in order to fulfill the assumption.

The assumption of random sampling has been critical throughout the work. The first important point regarding this assumption is that all of the women, in both the treatment and the control group fulfill the requirements to receive training from MAPLE and it is the limited resources of the organization that has excluded some women from training in a random matter. Further on, the treatment group consists of women from all the training groups that

MAPLE have in the area of Mbale, which limits the possibility to have a focus on for example specifically well-performing groups. In addition, there has been a strong focus on including all the women in the training groups that are selling fresh in order to make sure that there is no specific explanation to why some women participate in the interviews whereas others do not. These actions have been critical to the work process because of the knowledge that it is difficult but important to achieve a random sample in order to be able to interpret the results in a reliable way.

In order to test for heteroscedasticity the Breusch-Pagan test was used to detect any linear form of heteroscedasticity (Williams, 2011). The test tests the null hypothesis that the error variances are equal against the alternative that the error variances are a multiplicative function of one or more variables (Ibid). When conducting the test for the different models it was concluded that heteroscedasticity was present due to the high chi-squares (see appendix H; table 1, 2, and 3). This problem is difficult to avoid, however, White's robust standard errors have been used in order to minimize the problem since it makes it more difficult to find significant results and thus, increases the reliability.

A correlation matrix has been used in order to understand the relationship between the predictors and thus, make sure that there is no perfect correlation between these. Where the predictors have shown high correlations, a careful consideration has been done with respect to which variables to include in the regression in order not to get omitted variable bias.

The assumption zero conditional mean is highly important and extremely difficult to completely fulfill since it is impossible to know for sure all of the things that can affect the dependent variable. However, by building up an understanding of which factors that are important for entrepreneurs in general as well as for microentrepreneurs in the specific context of Mbale, 26 control variables have carefully been worked out and included in the regressions. This action clearly minimizes the information in the error term and increases the probability of not having left out any important variable. In addition, as mentioned earlier, careful consideration has been taken in order to use the right specification for each variable to make sure that the sample follows normal distribution, thus the population. This is important because if the specifications of the variables are wrong, it would imply that the error term is also wrong, which would negatively affect the reliability of the results. Moreover, in order to assure that the data that has built up the variables is correct, control questions have been used in the survey interviews where there has been reasonable to expect answers with low reliability for different reasons.

Depending on the specification of the variables the coefficients are interpreted differently:

Model	Dependent variable	Independent variable	Interpretation of β_i
level - level	y	x	$\Delta y = \beta \Delta x$
level - log	y	$\log(x)$	$\Delta y = (\beta/100)\% \Delta x$
log - level	$\log(y)$	x	$\% \Delta y = (100\beta) \Delta x$
log - log	$\log(y)$	$\log(x)$	$\% \Delta y = \beta \% \Delta x$

Logistic regression model

For the dependent variables salary to employees, repayment ability for VSLA loans, and reinvestments, a logistic regression has been applied. This is because these dependent variables are binary, either the entrepreneurs pay their employees salary, repay their VSLA loans on time, or reinvest - or they do not. Consequently, the logistic distribution constrains the estimated probabilities to lie between 0 and 1. Therefore, it is not possible to reliably equate the expected value of the dependent variable using OLS regression or linear discriminant function analysis which traditionally have been used (Czepiel, 2002; Peng, Lee & Ingersoll, 2002). Instead, in the logistic model, the logit transform is used as a function to calculate the probability of a given outcome on the dependent variable. The logit transform is the natural logarithm of the odds that some event will occur (Czepiel, 2002). Further, in a logistic model, the regression coefficients are estimated by maximum likelihood estimation (Peng *et al.*, 2002). Maximum likelihood estimation is an approach by which the probability distribution that gives the observed data the greatest probability is sought (Kim & Park, 2005; Myung, 2001).

The logistic function is:

$$P_i = \frac{e^u}{1+e^u}$$

where P_i is the estimated probability that the i th case is in category 1, e is the base of the natural logarithm (≈ 2.718), and u is the regular linear regression equation:

$$u = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_n x_n$$

Further, the coefficient in a logistic regression model is the amount the logit of the probability of the outcome changes with a unit increase in the independent variable. Consequently, there is a nonlinear relation between x and P_i hence there is no straightforward interpretation of the coefficients as in the OLS regression. There are two different ways of interpreting the results, *odds ratios* and *marginal effects*. The odds ratio is obtained by dividing the probability of being in the category 1 by the probability of being in the category 0.

The probability of being of belonging to category 0 is:

$$1 - P_i = \frac{1}{1+e^u}$$

Thus, the odds ratio is:

$$\frac{P_i}{1-P_i} = \frac{1+e^u}{1+e^{-u}} = e^u$$

The odds ratio is the ratio of the probability of being in category 1 to the probability of being in category 0. In this study the microentrepreneur belongs to category 1 if she pays salary to her employees, repaid her VSLA loans on time, or reinvests money in her business. If not, the entrepreneur falls into category 0. The odds ratio ranges from zero to infinity, however by taking the log of odds one gets around the restricted range since log odds ranges from negative infinity to positive infinity (UCLA, 2011). Log of the previous function gives:

$$L_i = \ln\left(\frac{P_i}{1-P_i}\right) = u_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_n x_n + \varepsilon$$

The β -coefficients of this model give the ratio by which the dependent variable changes of a unit change in the independent variable. Consequently, the effect is presented on a multiplicative scale (Buis, 2010).

The marginal effect is the partial derivative of the prediction function with respect to each covariate x .

$$\frac{dP}{dx} = \beta_K P(1 - P)$$

The interpretation of marginal effects is similar to the one of odds ratio (Peng, So, Stage & St. John, 2002). However, the marginal effect is an approximation of how much the dependent variable is expected to increase or decrease for a unit change in an explanatory variable. Hence the effect is presented on an additive scale (Buis, 2010).

Both odds ratios and marginal effects have been analyzed but only marginal effects are reported in this thesis. This is because marginal effects are more intuitive to interpret since they are presented on an additive scale. Further, odds ratios give higher and more extreme values than the marginal effects and hence a more conservative alternative has been chosen.

Both odds ratios and marginal effects are difficult to interpret when the x -variable is logarithmic. Consequently, in this study only a decrease or increase in the dependent variable will be indicated when presenting these results. Further, White's robust standard errors have been conducted to ensure the validity of the results.

3.9 IN-DEPTH INTERVIEWS

After the quantitative analysis, one more qualitative approach was adopted in order to understand what in the business training program that led to improved performance and to understand what the perceived benefits of joining the program would be to the women in the control group. The interviews were conducted in a semi-structured way with open questions that allowed the interviewees to speak freely about the subject of business training. Ten in-depth interviews were conducted, five with women from the treatment group and five with women from the control group. The average length of the in-depth interviews was one hour.

3.10 METHODOLOGICAL ISSUES

3.10.1 Reliability

Reliability refers to what extent the results are consistent over time and if the results of the study can be reproduced under similar methodology (Golafshani, 2003). Due to cultural differences, an important aspect for the reliability of the study is how the questions in the survey were finalized. Before launching the survey, both our supervisor at MUBS and the field officers at MAPLE took part in evaluating the wording of the questions to make them appropriate to the context. Afterwards, a pilot study was conducted to see if the respondents understood and interpreted the questions correctly. During the pilot tests, one interviewing team observed the other and vice versa in order to control that all questions were asked in a similar way to ensure reliable results. When the necessary changes had been made and tested, the final survey was launched. Due to the rigorous process of finalizing the questions in the survey, the ambiguity of the questions is low as

well as the level of necessary interpretation of the answers. The reliability could therefore be argued to be high since it would most likely yield the same results if replicating the study.

However, not all respondents spoke English and an interpreter was used for the majority of the interviews. Two interpreters were used in the study who were fluent in English, Luganda and Lugisu which are the major languages spoken in eastern Uganda. The field officers at MAPLE verified the language skills of the interpreters. A few days before the interview process started, the interpreters were informed about the thesis and trained on exactly how they should ask each question in order to minimize errors in the process. During the interviews, the interpreters did not translate directly; instead they gave a review of the respondent's answer to each question. This implies that some information, that might have been valuable for the study, got lost hence reducing the reliability. In addition, there is the risk that the interpreter has misunderstood the interviewee or draw own conclusions from her answers, thus resulting in wrong answers. However, some interviews were conducted in English by the researchers and no differences could be detected in the answers. In addition, there was always an ongoing discussion and questioning of the answers between the interpreter and researcher in order to avoid mistakes and misunderstandings. However, it is important to emphasize that using non-certified interpreters will decrease the reliability since there is less control. Specifically, section 4.4.4 indicates that the variables approximating entrepreneurial self-efficacy might have been interpreted differently by the interviewees than was intended.

Further, the choice not to transcribe interviews was made due to the trade-off between quality and time. Transcribed interviews have the advantage that it is possible to go back and review answers, hence higher reliability. However, the sample size was perceived as more important and thus, the decision not to transcribe was taken.

One aspect which could affect the reliability is that some women might have portrayed themselves in a too positive way, thus exaggerated their abilities, profits or sales. In the attempt to minimize this problem, all the women were informed of the importance of giving truthful answers. They were assured that the answers would not be associated with them specifically and informed that we were not there to judge them in any way. In addition, control questions were used where it was possible in the attempt to overcome this problem. However, there is a risk that the interviewees had the desirability to portray themselves in a better light for us.

Both authors have checked all data gathered from the surveys in order to reduce any typing errors. Thus, to the best of our ability, the analysis is based on reliable data with low levels of errors. Further, logistic and OLS regressions have been used in this study since it has

been used in similar studies (cf. Karlan & Valdivia, 2009; Oppedel Berge *et al.*, 2011). These two statistical models are well-recognized and used in similar prior studies, therefore they are argued to provide results that are easily replicable by other research. The statistical program used when conducting the regressions is STATA version 11. This is a reliable tool which is widely used by practitioners and researchers (MacKie-Mason, 1992; Kohler & Kreuter, 2005)

3.10.2 Validity

Validity is defined, according to Joppe, as “whether the research truly measures that which it was intended to measure or how truthful the research results are.” (Joppe, as cited in Golafshani, 2003). The aim has been to draw valid conclusions that can be generalized to the real population. Thus ensuring internal and external validity has been of great importance.

Internal validity

Internal validity refers to what degree we can accurately state that the independent variable produced the effects in the dependent variable, thus the cause-effect relationship (Golafshani, 2003). The two samples in the study were constructed with great care to make them as similar as possible. The strong similarities between the groups with the exception of the variable business training, imply that the results found in the dependent variables are due to the independent variable business training. Hence, there is a high internal validity. Further, the many control variables in the study further strengthens the internal validity since the change in the dependent variable can be explained more accurately.

It is also important to mention that different proxies for entrepreneurial performance were included. There are many different ways of measuring performance, and different authors use different measurements. By including a wide spectrum of accepted proxies of performance, more robust and vivid conclusions can be drawn from the study.

External validity

The external validity determines whether the results concerning the cause-effect relationship can be generalized or not. It can be argued that the groups participating in the study are representative for the majority of the population in Uganda, and thus the external validity can be regarded as high. Further, the business training is based on the curriculum from Freedom from Hunger, which is widespread and well used in many countries; hence it is easier to generalize the results. However, it is important to keep in mind the small sample sizes in order not to exaggerate the results. In addition, the study has only been conducted on women selling fresh and one

should therefore be careful to generalize the results to the other gender as well as to other industries.

3.10.3 Ethical Guidelines

Before conducting each survey, the respondent was informed about where we came from, what our intentions were, and that there was no monetary compensation involved when participating in the survey. This was done in order to avoid any misconceptions or false expectations. Further, in order to set a frame for the interview process, respondents were informed of the purpose of the thesis, the length of the survey as well as what kinds of questions the survey contained. It was explained that participation was completely voluntary and respondents were ensured anonymity as well as the possibility to withdraw from the survey at any moment, in order to encourage truthful answers.

4 EMPIRICAL RESULTS AND ANALYSIS

In this chapter the descriptive statistics and the results from the regressions will be presented. Only the results from the regressions conducted with a robustness test will be considered and presented. Thereafter follows an analysis of the results taking into account both quantitative and qualitative data.

4.1 DESCRIPTIVE STATISTICS

The descriptive statistics focuses on the characteristics of the interviewees in the treatment and the control groups. It presents the similarities of the groups in the form of mean, minimum and maximum values as well as standard deviations. Please see Appendices F and G for a detailed outline of the descriptive statistics.

The t-test reveals that the characteristics of the groups are very similar, thus stressing the point that the two groups are as identical as possible with the exception of the variable business training. The following table and diagrams summarize the characteristics between the two groups.

Table 2. Summary of mean values of characteristics between the treatment and control groups as well as t-values.

Characteristics	Treatment Group	Control Group	T-test
<i>Human capital</i>			
Years of work experience	6	6	-0.35
Years of current business	8	7	-0.56
Years of unemployment	9	8	-0.97
Parents self-employed	84%	86%	0.27
Age	39	38	-1.03
<i>Financial capital</i>			
Accumulated total loan size (UGX)	583 071	640 806	0.47
Savings per week (UGX)	10 708	14 761	1.07
Saved to start business	75%	74%	-0.07
Sell on credit	81%	78%	-0.53
Own land	36%	39%	0.33
Own property	51%	52%	0.27
<i>Social capital</i>			
No of people in household self-employed	2	2	-0.11
No of people to help out	2	2	1.01
No of people to ask for advice	3	3	0.59
No of people in household	5	6	0.74
Support from friends and family	33%	55%	3.19
<i>Self-efficacy</i>			
Confidence	4.18	3.86	-2.16**
Knowledge	3.96	3.74	-1.33
<i>Business characteristics</i>			
No of owners	1	1	2.03
No of employees	1	1	0.50
No of products	5	5	1.80
No of businesses	2	2	0.04
Business license	62%	67%	0.83

*** p<0.01, ** p<0.05

Diagram 1 & 2. Marital status of the members in the treatment group and control group

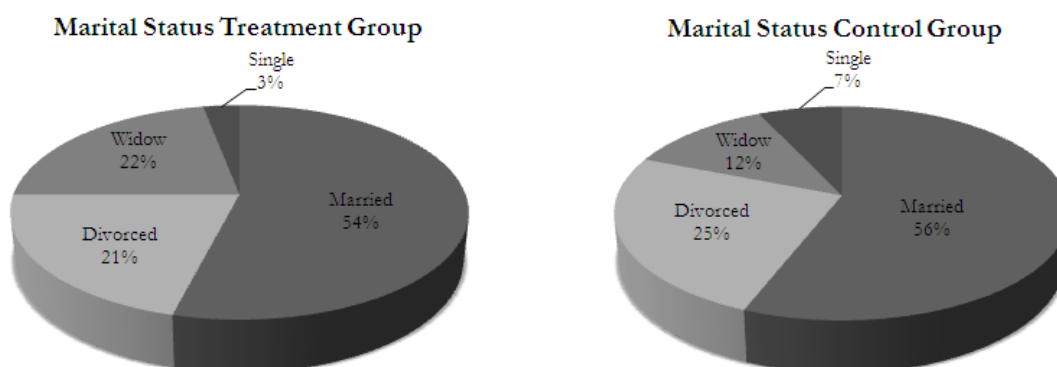


Diagram 3 & 4 Level of education of the members in the treatment group and control group

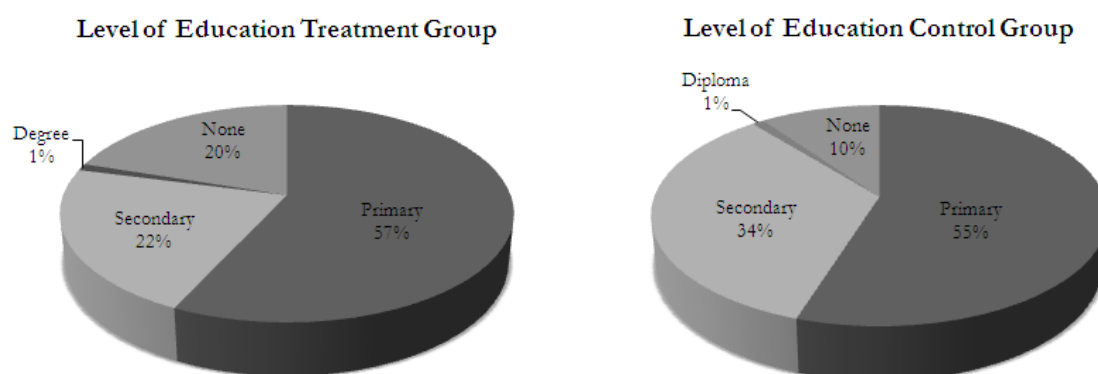
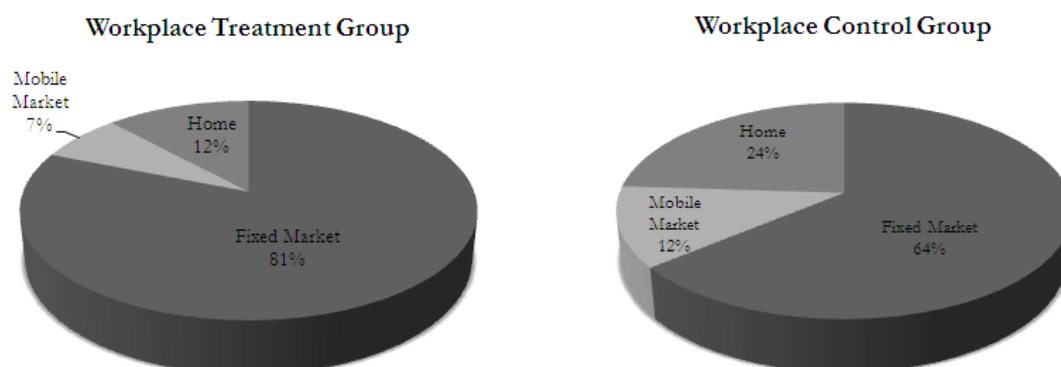


Diagram 5 & 6 Workplace of the members in the treatment group and control group



In addition to the similarities that have been found between the groups, there are some characteristics that are interesting to highlight further. The average age of the women, which is 38 for the control group and 39 for the treatment group, are in line with the theory stating that most entrepreneurs are in the age between thirty-five to forty-five (Parker, 2009). Further, the percentage of women who have self-employed parents is very high, around 85 percent for both the treatment and the control group. This is in line with the theory on entrepreneurship in developing countries which states that it is characterizing for developing countries to have a high number of entrepreneurs due to the fact that many poor people have little choice but to start their own businesses (Bradley et al., 2011; Banerjee & Duflo, 2007).

The average years of unemployment in the samples are high. This is not in line with the findings presented in the national household survey conducted in 2009-2010, where the unemployment rate was estimated to 4.2 percent (Uganda Bureau of Statistics, 2010). However, the way of gathering this information differs to a large extent. In the household survey, a person who had worked for at least one hour in the reference week was regarded as employed and people who were “without work”, “available for work”, or “actively seeking work” were counted as unemployed. During the interviews conducted in this field study, the women were asked if they had ever been without work; if there had been a time when they had only been “sitting around”. This phrasing was carefully worked out in order to make sure that the women understood what we meant with being unemployed since the word itself was not self-explanatory to the women. Unemployment in this study is therefore likely to be perceived as regarding formal work by the women and it is likely that they have stated that they have been without work even though they have been working in the household, since household work is considered as a natural part of a woman’s life in Uganda. In addition, it became clear during the interview process that the women counted the years of unemployment from the time they finished school, which means that the numbers are high since most of the women in the samples did not have many years of schooling. Moreover, the household size of the samples is completely in line with the household survey, which estimated the average household size in Eastern Uganda to 5.6 (Uganda Bureau of Statistics, 2010).

Although the t-tests show the similarities between the two groups there are some differences that should be highlighted. There is a statistically significant difference ($p > 0.05$) between the groups with respect to perceived confidence levels, where the treatment group reported higher levels. Moreover, when comparing the circle diagrams, there are noticeable differences regarding from where the women sell. 81 percent of the women in the treatment group sell from a fixed market whereas only 64 percent of the women in the control group sell

from a fixed market. It is unclear to what extent these characteristics are results of the business training or mere differences between the groups. Finally, it is important to consider the fact that the treatment group generally has a lower level of education than the control group.

4.2 RESULTS: OLS REGRESSIONS

4.2.1 Fitness of OLS Regression

In order to test if business training affects the continuous dependent variables (1) Profit, (2) Sales, and (3) Salary to oneself, an OLS regression model have been used. The model has been tested whether or not it provides significant results for the different dependent variables. The adjusted R^2 stated in the STATA output is good concerning sales where it is 0.3. For profit and salary to oneself it is 0.13 and 0.10, respectively. This indicates a worse fit compared to the model for Profits, but not inappropriately low compared to other studies (cf. Wilde, McNamara & Ranney, 1999; Hull, Mazachek & Ockree, 1998). F-tests of the fully fitted OLS model for Sales is significant on the $p < 0.01$ level, on the $p < 0.05$ level for Salary to oneself while it is significant on the $p < 0.10$ level for Profit.

Table 3. OLS regression output

y-variable	F	Prob > F	Adj R2
Profit	1.50	0.069	0.13
Sales	4.34	0.000	0.30
Salary to oneself	1.58	0.047	0.10

4.2.2 Profit

The statistical analysis of business training on Profit in the OLS regression (Appendix H; table 1) shows that business training has a positive effect on profit ($\beta = 2.0668$, $p < 0.05$). From the results it can be inferred that women receiving business training from MAPLE has an expected increase in profit per day of about 206.68 percent, holding other variables constant. This is a quite remarkable effect, speaking to the validity of theories highlighting the importance of business training for microentrepreneurial success.

The OLS regression on Profit also shows that there are other factors influencing the size of the profit. Access to financial capital is an important factor with a positive effect on profit ($\beta = 0.8237$, $p < 0.05$). For any 10 percent increase in the accumulated loan size, the expected ratio of the two geometric means will be 8.24 percent. Thus, an 8.24 percent increase in profit is expected when the accumulated loan size increases by 10 percent.

4.2.3 Sales

The statistical analysis does not show any statistically significant relationship between sales and business training (Appendix H; table 2). Nevertheless, there are other factors affecting sales. The number of years the microentrepreneur has been running her business is statistically significant at the $p < 0.01$ level. For any 10 percent increase in the number of years of the current business, the expected ratio of the two geometric means will be 2.69 percent ($\beta = 0.2687$). Hence, a 2.69 percent increase in sales is expected if the number of years the microentrepreneurs has run the business increases by 10 percent. Further, the results show that the number of people a microentrepreneur can ask for advice affect the sales. If the number of people a microentrepreneur can ask for advice increases by 10 percent, a 3.18 percent increase in sales is expected ($\beta = 0.3181, p < 0.01$).

The statistical analysis also revealed that business characteristics such a number of employees and number of products affects the sales of the microentrepreneurs at the $p < 0.05$ level. Subsequently, if the number of employees increases by 10 percent the sales are expected to increase by 2.30 percent ($\beta = 0.2298$). Consequently, sales will increase with the number of employees. The number of different products sold also affects the sales positively. If the number of different products increases by 10 percent, the sales are expected to increase by 3.72 percent ($\beta = 0.3719$).

4.2.4 Salary to oneself

According to the OLS regression (Appendix H; table 3), women receiving business training from MAPLE have a higher probability to pay themselves more in salary than the women in the control group. The statistical analysis shows that at the $p < 0.05$ level, women who have received business training pay themselves 1 050.52 UGX ($\beta = 1\,050.5200$) more in salary every day, which corresponds to approximately 7 350 UGX every week.

The results from the OLS regression also revealed that other factors than business training positively affect how much the microentrepreneurs pay themselves in salary. Most notable are years of work experience and whether their parents have been self-employed or not. For every additional year of work experience, the salary per day is expected to increase by 371.50 UGX ($\beta = 371.4954, p < 0.05$). Further, regarding whether their parents have been self-employed or not, the microentrepreneurs are expected to pay themselves 1 267.10 UGX more per day if their parents have been self-employed ($\beta = 1\,267.0970, p < 0.05$). However, there are also factors that affect the salary negatively according to the OSL regression, such as working on a fixed

market. At the $p < 0.05$ level, women microentrepreneurs who sell from a fixed market stall are expected to pay themselves 1 631.68 UGX less in salary ($\beta = -1\,631.6800$).

4.3 RESULTS: LOGISTIC REGRESSIONS

4.3.1 Fitness of Logistic Regression

In order to test if business training affects the following binary dependent variables (1) Repayment ability of VSLA loans, (2) Reinvestments, and (3) Salary to employees, a logistic regression model has been used. The model has been tested whether or not it provides significant results in the different regressions. The Pseudo R^2 reported in the STATA output is good; it is 0.37 for Reinvestments, 0.69 for Salary to employees, and 0.33 for Repayment ability of VSLA loans. The logistic model is significant, on the $p < 0.01$, for all regressions except for Salary to employees, as can be seen from the high Wald chi-squared values. However, Salary to employees is almost significant on the $p < 0.10$ level and will therefore also be commented.

Table 4. Logistic regression output

x-variable	Wald chi-square	Prob > Chi2	Pseudo R2
Reinvestments	72.77	0.000	0.37
Salary to employees	36.43	0.106	0.69
Repayment ability of VSLA loans	60.59	0.000	0.33

4.3.2 Reinvestments

The results from the logistic model, in Appendix I table 1, predicting reinvestment probability indicates that business training indeed affects whether or not the women microentrepreneurs reinvest money in their businesses. At the $p < 0.01$ level, business training positively affects the reinvestment decision. Computation of the marginal effects reveals that women microentrepreneurs who have received business training are 60.56 percent more likely to reinvest money in their businesses than microentrepreneurs without training. Further, the logistic model indicates that there are other factors affecting reinvestment. At the $p < 0.05$ level, if the microentrepreneur owns property, she is 23.66 percent more likely to reinvest in her business. However, from the computation of marginal effects it can be inferred that for every additional unit the microentrepreneur rates her knowledge, she is 12.45 percent less likely to reinvest ($p < 0.05$).

4.3.3 Salary to Employees

At the $p < 0.01$ level, the logistic model predicts that business training has a positive effect on whether the microentrepreneur pays salary or not to her employees (Appendix I, table 2). Computation of the marginal effects indicates that women microentrepreneurs receiving business training are 85.47 percent more likely to pay salary to their employees than those who have not received any business training.

Nevertheless, the model also shows that there are other factors affecting to what extent they pay salary. The most noticeable is the number of employees the microentrepreneur has. At the $p < 0.01$ level, for every additional employee the probability of paying salary decreases. At the $p < 0.05$ level, if the entrepreneur owns property she is 81.22 percent less likely to pay salary to her employees. At the same significance level, the more people the entrepreneur can ask for help and advice the more likely it is that the entrepreneur will pay salary to her employees. This is also the case regarding number of products.

4.3.4 Repayment ability of VSLA loans

The statistical results from the logistic model (Appendix I; table 3) show that women receiving business training are less likely to repay their loans from the VSLA group on time ($p < 0.01$). Computation of the marginal effects shows that women in the treatment group have a 12.52 percent lower probability of repaying their loans on time.

Further, the logistic regression model indicates that microentrepreneurs perceiving that they have support from both friends and family are more likely to repay their VSLA loan on time (ME: 0.2077, $p < 0.01$). When computing the marginal effects, microentrepreneurs having support have 20.77 percent higher probability to repay their loan on time. Unsurprisingly, how much a microentrepreneur saves every week also affects the likelihood to repay the loan on time. The more the entrepreneur saves during a week the more likely she is to repay her VSLA loan on time ($p < 0.01$). At the $p < 0.05$ level, the more co-owners the microentrepreneur have make her less likely to repay her VSLA loan on time. When computing the marginal effects, for every additional co-owner the microentrepreneur is 13.55 percent less likely to repay her VSLA loan on time.

4.4 ANALYSIS

The results outlined in the previous section are based solely on the quantitative data gathered during the survey interviews. This analysis aims to include the information given in the in-depth interviews as well as taking into account important observations from the field in order to discuss

the results from the quantitative data. The four important areas for entrepreneurship performance: human capital, financial capital, social capital and self-efficacy will all be discussed with respect to the predictors that have shown to have a significant effect on the dependent variables. Since business training is the independent variable in this study, its effect or defaulted effect on all dependent variables will be discussed.

4.4.1 Human Capital

From the previous section it is evident that human capital has an overall positive effect on entrepreneurial performance. It is specifically the independent variable business training and the control variables years of current business and years of work experience that show to be of importance. Business training is argued to be of specific importance for entrepreneurial performance since it has shown to have a positive statistically significant effect on four of the six dependent variables. This is despite the fact that the general level of education is lower for the treatment group than for the control group.

Profit

Business training

Women receiving business training from MAPLE have significantly higher profit than those in the control group. The received business training has evidently helped the microentrepreneurs to identify strategies as well as given them the tools to make necessary changes in order to improve their businesses and increase their performance. Consequently, it can be argued that the women in the treatment group have acquired specific human capital, in line with academic theory on human capital (cf. Davidsson & Honig, 2003; Parker, 2009). The interviews revealed that the participants have learned the concept of costs and revenues, how to identify them and how to figure out if the business is profitable. Several of the interviewees stated that they used to consume their own products without paying for them before the training, hence not considering it a cost. However, after the business training they consume less or have completely stopped consuming their own products as a result of that they have learned that it is a cost for the business.

I know now that whatever I eat from my business, I must pay for it like any other customer (Interviewee from the treatment group)

Another common cost for the businesses has been wasted products, i.e. products which have gone bad and had to be thrown away. The interviewees claimed that they have learned how to reduce these costs during the training sessions. They have learned to plan for their purchases in order to meet demand and diminish excessive amounts of products. In addition, they have understood the importance the quality has for the sustainability of the products and consequently they try to buy products of good quality. Further, they have learned to give discounts on products that are soon to get bad as well as raising the price on high quality products in order to increase their revenues and hence the profit margins.

The survey and the in-depth interviews conducted among the microentrepreneurs in the control group revealed that they wished to learn how to calculate profit and loss, how to plan for more profit, and how to operate and manage the business. It was not uncommon for them to state that they were unsure about if their businesses were profitable at all. Since they had several businesses and did not separate money, they often lacked an understanding of which business that was profitable and which was not. This infers that the women in the control group lack the knowledge and tools to be able to increase their profit, hence lacking specific human capital.

Consequently, by acquiring knowledge and tools from the business training, these microentrepreneurs have been able to apply different strategies in order to reduce their costs and increase their revenues, hence increasing their profit margins and explaining their higher profits.

Sales

Business training

One important element of the business training is how to increase sales. The women have been taught how to identify their customers, how to attract customers, how to implement customer care, and how to promote their products. However, the statistical analysis did not show any significant relationship between sales and business training. Nevertheless, the women in the treatment group claim that they have gained a greater understanding about the relationship with customers. They are now aware of how it looks at their sales place, because if it is dirty in comparison to other stands, customers are more likely to buy from others. They also claim that they have realized that it is important to greet customers and act in a friendly manner towards them. Additionally, they have understood the importance of having reliable opening-hours to attract customers. This was also evident in the search for the interviewees; the ones from the treatment group had more structured opening-hours than the ones from the control group. This indicates that they have learned the strategies of how to increase sales. However, the lack of

statistically significant quantitative results might be due to the short time period between the start of the business training program and the data collection. Increasing revenue streams takes longer time than cutting costs due to customer inertia.

Further, the women in the control group had greater problems to explain what makes a good businesswoman. Women from the treatment group consistently identified several important aspects such as customer language, promoting the products, and keeping their stand clean. In contrast, women from the control group had very little to say and often they could only say obvious things such as that a good business woman should have many customers. From this it can be inferred that the business training gives the women a more vivid and complex view of business and entrepreneurship as well as a greater understanding. This has increased their human capital positively but it is not expressed by concrete output such as higher sales.

Years of current business

Sales are affected positively by the number of years the entrepreneur has had her business. During the interviews some women claimed that they have learned along the way, they have tested different methods and looked at how others are doing. This implies that tacit knowledge where one learns along the way affects performance, which is in line with previous research such as Parker (2009). Consequently, it is much due to trial and error that they have learned how to increase sales. Consequently, the longer the microentrepreneur has had her business, the more time she has had to try different strategies in order to increase the sales. Further, some women stated that since they have been in the business for a long time, they have been able to obtain many loyal customers.

Reinvestments

Business training

Reinvesting money in the business will most likely lead to business growth and yield higher profits in the future (Karlan & Valdivia, 2009), and it is thus an important indicator of entrepreneurial performance. The results revealed that the women receiving business training are more prone to reinvest money in their businesses. Since reinvestment is an important part of the business training it could be argued that the women have gained specific knowledge on how to reinvest in their businesses. The interviews revealed that women receiving business training understood the concept of reinvestment to a higher extent than the women in the control group. It was also prominent that the women in the treatment group perceived reinvesting as a main strategy to increase their living standards.

I need to reinvest. I will get more profit because sales will increase more than my costs when I expand the business.
(Interviewee from the treatment group)

Women who had not received business training commonly stated that they reinvested money in their businesses but when they were asked to explain how they reinvested, they usually failed to give a correct explanation. A common explanation of reinvestment was that if their businesses went really bad they could sometimes put in some money to save it. This strategy has the potential to save the business but it will not make it grow, which is the goal of reinvestments as a tool to reduce poverty.

Consequently, by having the specific knowledge and tools regarding reinvestments these women are more able to create an environment for their business where it can grow, yield higher profits, and eventually contribute to higher economic growth, rather than just injecting money in order to save the business for the moment and keep the status quo.

Salary to oneself

Business training

Women receiving business training from MAPLE are more likely to pay themselves more in salary than the women who have not received any business training. This indicates that their businesses are more stable, thus that their performance is superior to that of the control group.

A prominent element in the business training provided by MAPLE is separating business money from personal money, where it is emphasized that paying oneself a salary is important in order to keep track of the money generated by the business and to control personal spending. Having control over both their business money and their personal money enables them to plan and retain more money in their businesses. This will most likely lead to better performance and the ability to progressively pay oneself more in salary. Further, having a higher income increases the consumption level and consequently the standard of living. In several in-depth interviews it was evident that it was during the training that they had understood the importance of paying themselves a salary.

There is no way that I would have paid myself a salary before the training, no way! (Interviewee from the treatment group)

In the control group it was evident that many of the women did not understand the importance of paying themselves a salary or the implications of doing so. However, somewhat paradoxical,

the women in the control group had the perception that paying oneself a salary was something good to do. Nevertheless, this was down prioritized since they, according to the in-depth interviews, lacked both the financial resources and the practical skills to do so. Consequently, our results indicate that the women in the control group lack specific human capital regarding paying oneself a salary which the women in the treatment group have acquired.

Parents self-employed

Whether the entrepreneur's parents have been self-employed or not affects how much salary the entrepreneur pays herself and hence her performance. The entrepreneurs have apparently, to some extent, learned from their parents the value of paying themselves salary. It is probable that they have learned this by observing or working in their parents' businesses. Consequently they have acquired the knowledge and the tools needed to pay themselves salary.

Years of work experience

From the results it can be inferred that the more previous work experience, prior to the current business, the entrepreneur has, the more she will pay herself in salary. Consequently, through work experience the microentrepreneur has learned how to allocate business money to be able to pay herself a salary and how to increase the amount of the salary over time. This is supported by the in-depth interviews where women microentrepreneurs who did not pay themselves salary expressed the wish to do so, and the women microentrepreneurs who paid themselves salary wished to increase their salary. Hence, there is a common understanding that it is good to pay oneself salary but the women with short previous work experience are not able to do so due to lack of experience and hence the possibility to build up their human capital.

Salary to employees

Business training

The interviewees claimed that having better control over their financial capital made it easier for them to pay their employees a salary. Thus, the business training has given the entrepreneurs the tools to create more stable businesses with secure cash flows, where they are able to pay their employees for their work. Paying the employees a salary may enhance their motivation and make them more productive. In addition, the income levels of the employees increase and thus their standards of living.

The women in the control group knew that in the cases they had employees working for them, they were supposed to pay them. However, there was often the explanation

that this was not feasible because of the financial insecurity they faced on a day-to-day basis. Once again, this stresses the fact that the control group lacks the specific skills on how to manage their business money in order to be able to pay salaries to employees.

Repayment ability of VSLA loans

Business training

From the results it can be inferred that the women receiving business training are worse at repaying their VSLA loans on time. Both the groups have been taught about the importance of repayments when they established their saving groups. However, during the business training program there has not been a specifically strong focus on repayments.

It is not probable that the business training would decrease the microentrepreneurs' ability to repay their loans. However, since much focus is placed on several things it could be argued that the teaching about repayments could be perceived as less important to the women in the treatment group than the women in the control group. Moreover, the average loan size from an MFI is higher, although not significantly, among the women who have received business training. The MFIs' repayment conditions are much stricter than the VSLA's and the women might therefore prioritize to repay their MFI loans before they pay their loans from the saving group. Other than that, we have not been able to identify any logical reasons to why the women microentrepreneurs receiving business training fail to repay their loans on time to a greater extent compared to the control group.

4.4.2 Financial Capital

The accessibility to financial capital has, as is strongly supported by previous research, an impact on entrepreneurial performance. There is a general tendency that the more financial capital an entrepreneur has access to, the better their performance is. Thus, the basis for the concept of microfinance as a tool for poverty alleviation is once again supported by this study.

Profit

Accumulated total loan size

From the results it can be inferred that access to microloans affect the entrepreneurs' profit, hence their performance. Thus, women who have received more borrowed money from VSLA groups and from MFIs have higher profits. The regressions do not tell whether the entrepreneurs perform better because they receive loans or if they have better access to financial capital because they perform well. However, during the interviews many of the women claimed that they would

be able to perform much better if they had access to more capital. This indicates that capital constraints are a major barrier for business growth and performance, and that MFIs do not satisfy the existing need for credit. In order to reduce the financial constraints and subsequently increase the performance and profits of the microentrepreneurs it is important to spread the concept of VSLA and establish more VSLAs across the country, especially in the rural areas. By doing this, one can reach out to more people facing credit constraints and hence work around the problem that MFIs do not reach out to large sections of the population in the rural areas.

Reinvestments

Own property

The results indicate that there is a positive relation between financial capital in the form of property and whether the entrepreneurs reinvest money in their businesses. It can be argued that being an owner of property is a form of investment although it is not necessarily made in their businesses. However, several women argued that their investments in property had a twofolded reason. First, by owning property they had a security in case of difficult times. Second, after an accumulation of investments in property some of it could be sold off in order to expand the business if the situation allowed. However, there was also a third reason for why the women invested in property, namely to generate more sources of income, for example by investing in a cow or a goat that could provide them with milk. The additional income from the property could then be used for reinvestments in the fresh business.

Salary to employees

Own property

Women who own property are less inclined to pay their employees a salary. The interviews do not reveal why women owning property pay their employees to a lesser extent. Nevertheless, the women microentrepreneurs face credit constraints and hence may have to choose to either pay their employees or invest in property. Thus women who own property may simply not have enough money over to pay their employees.

Repayment ability of VSLA loans

Savings per week

Not surprisingly, the more an entrepreneur saves the more likely she is to repay her VSLA loan on time. All the women are required to save money in their VSLA group, but by saving more money than required the entrepreneur has more financial capital available. With a growing capital

they can more easily repay their loans than they would if they consumed their money instead. Consequently, savings is of importance and can prevent microentrepreneurs from getting trapped in indebtedness. Thus, increasing the presence of VSLAs in the rural areas more people could become aware of and adopt the habit of saving money.

4.4.3 Social Capital

The results reveal that social capital has a positive effect on performance in terms of sales, salary to employees, and repayment of VSLA loans on time. This is coherent with previous research, which identifies social capital as a key factor for entrepreneurial performance such as Gomez & Santor (2001) and Brüderl & Preisendörfer (1998).

Sales

Number of people to ask for advice

Due to time restrictions we were not able to identify what kind of advice the women received or how these could be applied in their businesses. Nevertheless, it can be inferred from the results that by having a big network they are able to access business-specific advice that is more relevant, useful and helpful in order to improve their performance and increase their sales (cf. Brüderl & Preisendörfer, 1998). In addition it can be assumed that having a variety of people to ask for advice gives the microentrepreneur better access to potential customers and suppliers which could explain higher sales (cf. Ibid).

Salary to employees

Number of people to ask for advice

By having a big network the chances increase that more people in the entrepreneur's surrounding will pay their employees salary. This can thus impact the entrepreneur's decision to pay salary to her employees due to the exchange of information. In addition, the entrepreneur can receive advice of how to be able to pay her employees and how much. Consequently, the results are in line with the network success theory where there is a positive correlation with social capital and the performance of the microentrepreneur, in this case if the entrepreneur is able to pay salary to employees (cf. Gomez & Santor, 2001; Brüderl & Preisendörfer, 1998).

Number of people to help out

If the entrepreneur has many people who can help out in the case of an emergency for example she will be more able to receive help when needed. This could imply that fewer regular employees

are needed, although we do not have any specific information supporting this. Having few employees make it is easier to pay them salary and in the case of an emergency the microentrepreneur could instead rely on free help from family and friends.

Repayment ability of VSLA loans

Support from friends and family

The women microentrepreneurs often face rough and hard times where the money they have is not enough. Women during the interviews claimed that the support they receive from their friends and family is an important factor that keeps them putting more effort into their businesses in order to make more money and pay for their loans. However, it became clear during the in-depth interviews that support was perceived somewhat differently between the women in the two groups. The women in the treatment group perceived it as financial support to a larger extent than the women in the control group. Therefore, the results should be interpreted carefully. Most probable, it is a combination of financial support and encouragement that make the women feel empowered to repay their loans.

4.4.4 Self-Efficacy

Reinvestments

Knowledge

Somewhat surprising, self-efficacy did not have a positive effect on the entrepreneurs' performance. Instead it had the reverse effect. Women who perceived that they have high knowledge were less inclined to reinvest money in their businesses. This is surprising since women from the treatment group rated their knowledge higher than women in the control group as well as had a greater tendency to reinvest.

Due to time restrictions we were not able to obtain more information on the subject. However, it could be because of the different way of measuring these variables. In the questions concerning self-efficacy, the women had to value themselves how they perceived their knowledge and their confidence in running their businesses. Almost all of the women became somewhat embarrassed and started to laugh, which was followed by a long time period before they finally decided on a number. Perhaps it might be regarded as culturally bad to boost ones self-efficacy when being a successful microentrepreneur, hence the tall poppy syndrome might be prominent among these entrepreneurs. This would explain the small difference found between how women from the two groups rated their knowledge. Additionally it was not uncommon, specifically in the control group, that women gave a high number on the scale even though the

rest of the interview had portrayed that they felt that insufficient knowledge was a barrier for their performance. Consequently, it is possible that women in the treatment group have underestimated their knowledge while women in the control group have overestimated theirs, because we have not been able to obviate the cultural obstacles inhibited in the variable. This leads us to caution the validity of the variable approximating entrepreneurial self-efficacy.

5 DISCUSSION

In this chapter the results of the thesis will be highlighted and discussed, after which the main conclusions will be presented. Further, the implications of the study will be discussed and how these could contribute in the fight against poverty. Consequently, this section aims to give a more nuanced understanding of whether or not the commercialization of the microfinance industry benefits the clients of microfinance services.

5.1 CREDIT ALONE IS NOT ENOUGH

There is no doubt that microfinance is an important tool to fight poverty. This fact was acknowledged in 2006 when Muhammad Yunus received the Nobel Peace Prize for his work with the microfinance institution Grameen Bank in Bangladesh. There is also substantial research supporting the view that capital constraints are barriers to entrepreneurship (Bradley *et al.*, 2011). The conducted analysis in this thesis is in conformity with the academic theory. There is a prominent result showing the importance of accumulated loan sizes for the profitability of women microentrepreneurs. Consequently, it is critical to stress that nothing in this thesis aims to disparage the tool of microfinance.

The issue of financial sustainability in the microfinance industry is critical because it can help MFIs to reach a larger amount of end clients and thus, play a greater role for poverty alleviation. As the client base increases, the shortcomings of the use of subsidized funds as financial resources become apparent. After a certain level of demand it is no longer possible to rely on donors and government money (Microfinance Gateway, 2011). The idea of financial sustainability not as an end in itself but rather as a tool to reach out to more clients is a promising one. However, as an industry transforms from being dominated by non-profit organizations to become ruled by for-profit organizations, there will be both positive consequences and those of a more problematic nature. This is the underlying reason for the criticism that the commercialized microfinance industry has been subject to. The criticism has focused on different aspects but the main message is that the social performance has been compromised due to the goal of financial profitability. The term mission drift has commonly been used to describe this phenomenon. The specific criticism that has been central to this thesis is the argumentation that overcoming poverty requires more than access to capital, thus the argumentation for the credit-plus approach instead of the minimalist approach.

The results from the analysis argue that credit, while essential for microentrepreneurs in developing countries due to large capital constraints, alone is not enough for the goal of poverty alleviation. Non-financial services that have been compromised due to the

preferences of the end clients and the high competition in the microfinance industry play an important role for the profitability of women microentrepreneurs in Mbale, Uganda. Keeping in mind the small sample size of the study in order not to exaggerate the significance of the results, it is still intriguing that business training reports greater effect on profitability than the variable of accumulated loans size. Business training is also statistically significant on a one percent level with respect to reinvestments. Consequently, it appears to be highly important for both profitability and growth of the microenterprises. Thus, the focus on a minimalistic approach and the exclusion of the component of business training bears with it a risk of preventing microentrepreneurs to get to the next level.

Microloans make people survive but businesses do not grow (Thenge Hannington, Agency Manager, FINCA Uganda).

This quote might be argued to refer to more advanced businesses. It could be argued that the compromise of non-financial services is likely to affect more advanced businesses more severely because the owners of these businesses could benefit more from skills provided by business training. This would however only indicate that the results of the study would have been stronger if the focus had been on poor clients instead of the poorest of the poor.

5.2 THE EFFECTS OF OUTREACH

In the light of the discussion, the criticism of the possibility of mission drift and the disappearance of non-financial services is not difficult to understand. However, many studies have already been conducted and they show different results. It is therefore interesting to look at authors who have studied both the effects of mission drift and the effects of the minimalist approach and who have used econometric models to investigate their research question, in order to be able to compare it with this study. Mersland has been studying both of these effects in rigorous and reliable studies. The main conclusions are that it has not been possible to find any evidence for mission drift, instead the argument is in line with Christen and Drake (2002), that the new motive of profits in the microfinance industry lead MFIs to seek out new markets and be more efficient (Mersland & Øystein Strøm, 2010). Several ways how mission drift could have affected the outreach has been taken into account in the study. More specifically, a shift in loan sizes, a shift from group- to individual lending, and a shift from rural to urban areas by MFIs could all be argued to be indications of mission drift (Ibid). When the average size of the loans provided by MFIs increase it could indicate that the MFI has shifted its customer base and no

longer serve the poorest of the poor, thus the outreach of the MFI would be decreased. Moreover, a shift from group lending to individual lending could also be criticized since group lending enables the poorest of the poor access to financial services because it requires no or very little collateral and instead loans are secured because peer groups control each other. In the case of individual lending some collateral is needed and therefore it could be argued that there is a shift in the targeted clients away from the poorest of the poor. Since most of the poor people live in rural areas, a shift of the relative weight of loan allocation to the urban market could also be a sign of mission drift. However, even though these aspects could be indicators of mission drift there could also be natural explanations for these situations to occur, which is argued to be the case in the study by Mersland and Øystein Strøm (2010).

Mersland and Lensink (2009) have also been studying the effects of the credit-plus approach versus the minimalist approach in 61 countries (Mersland & Lensink, 2009). The paper examines whether the plus approach differs from the minimalist approach with specialist MFIs. The findings are that credit-plus providers are NGOs that have lower financial results than specialist MFIs. However, it is argued that providers of microfinance services that have adopted the credit-plus approach reach out to poorer customers and more female customers compared to specialist MFIs (Ibid). The results also show that African MFIs are less involved in plus activities (Ibid). This is in line with the case of Uganda where most MFIs have concentrated on the minimalist approach.

It is interesting to investigate these results and apply them to the case of Mbale, Uganda. Mbale is the third largest city in the country and the women who have been interviewed lived no more than ten to fifteen minutes away from the city center by boda-boda (motorcycle taxi). However, nearly 80 percent of the interviewees had never had access to formal microfinance services. It is however important to emphasize that the lack of access was not merely due to the limitations of the formal MFIs in the area but also because the women showed a resistance and fear towards these institutions.

The conditions of MFIs scare me, what would happen if I couldn't repay, if something happens and I just can't pay back? (Interviewee from the training group)

Nevertheless, it is evident that many people in rural or even sub-urban areas lack access to formal microfinance services. Thus, both in theory and from the conducted study, it is possible to argue that the minimalist approach has a down-side of less outreach. It is also important to understand the context of the Ugandan economy in which women have a very important role. Thus, being

unable to reach out to as many women as the plus-providers, the specialist MFIs show a limitation that could have large and important effects.

5.3 TRANSFERENCE OF TACIT KNOWLEDGE

It is important to remember the specific context in which the study is conducted. It is one where necessity based entrepreneurship is common since wage employment often is dependent on formal education and or social connections. Among the women in the treatment group, nearly 85 percent had parents who were self-employed and this number is even higher for the control group. More than 70 percent of the women microentrepreneurs in the treatment and control group helped their parents in their businesses. This implies that the effect of business training can have an even larger effect than the direct effect on the women microentrepreneurs who participate in the business training program. This is important with respect to the fight for poverty alleviation. It was mentioned several times with women from both groups that the main motivation for business training was to get the ability to transfer this knowledge to children in the family.

By focusing on the minimalist approach, the aim is to provide money to a larger client base. The size of the client base is important in terms of poverty alleviation. However, if the clients do not understand how to use borrowed money in an efficient way it is possible that the result is a temporary one. Money will solve the issues facing the client at the moment, such as for example difficulties in paying school fees, which was emphasized as a difficult household cost by many interviewees, but it will not help the microentrepreneur to grow her business. In this study both the women in the treatment and the control group have received loans from their saving groups. The average loans are similar in size as are many other characteristics (See Table 1 and Diagrams 1-6) and thus, it has been possible to investigate the effect of business training on the profitability measures that have been worked out. The quantitative results show strong indications that business training is highly important for the profitability of microentrepreneurs in the “fresh industry”. Additionally, it was evident from the in-depth interviews that the women in the treatment group had a better understanding of how to use borrowed money and that this understanding came from the training program.

Before the training I did not even know if I was earning from the business or not and today I know my profit and I divide it for different needs (Interviewee from the treatment group)

These results are also in line with the findings presented in the Uganda report by the GEM, where education and training is listed as the factor that constrain entrepreneurship activity the most, even more than financial support (Kelley, Brush, Greene & Litovsky, 2010). A stronger focus on education and training is also listed as the most important recommendation in order to stimulate entrepreneurship activity. This is interesting since the financial industry that focuses on the poorest of the poor have adopted best practices where the component of training is compromised.

In a context where poverty is extensive, it is important to understand that people will do almost anything to get hold of money, since money is seen as the ultimate solution. However, when the money that reaches the clients is borrowed money and not donations it is extremely important to make sure that the clients understand how to use this money. With donated money it is inefficient if the client does not know how to use the money in the best possible way, however it has no far-reaching consequences. This is however the opposite for borrowed money, where little knowledge about how to use the money may not only result in a most inefficient use of the provided money but also in difficulties from indebtedness. This is the worst-case scenario, that such a powerful tool for poverty alleviation as microfinance would result in a further increase of poverty. It is important to underline the limitations of understanding regarding how to use money in areas such as Mbale. It was evident from the study that by providing this information and take it a step beyond the push for the importance of repayments the clients will get an understanding of how to use the money and why it is important to use it correctly. Since many children work together with their parents, the probability of knowledge transference is large. By learning how to use money more effectively, less money will be needed in order to achieve the same results. This means that the children will have increasing possibilities to reach higher standards of living and dissolve their situation of living in poverty.

5.4 THE PROBLEM OF ATTITUDES

During the expert interviews in Uganda, a fundamental attitude problem came up as the key obstacle to poverty alleviation.

The most important thing is to change attitudes. (Theenge Hannington, Agency Manager, FINCA)

First, it was argued that the poorest of the poor in Uganda feel helpless and do not believe that there is any possibility to change their destiny. Second, it was argued that the clients of microfinance services do not appreciate the non-financial components but rather, they are

longing for quick fixes by receiving money fast and easy. Regarding the first part of the problem it could be argued that the women in the control group felt more helpless than the ones in the treatment group. In the in-depth interviews it was evident that they perceived their situation as difficult. It was not uncommon for the women to put their hope to God instead of hoping for a change in this world. In contrast many of the women in the treatment group explained how their confidence had increased during the training program because they have completely new tools to use and someone who cares for the performance of their businesses. With respect to these findings, we would have expected a larger difference regarding self-efficacy between the groups in the quantitative analysis. In the t-test, it was evident that the women in the treatment group were more confident but the regressions do not show that it was a result of the business training. Consequently, we believe that we have been unable to correctly gather the information for the variables that have been used as approximations for self-efficacy due to cultural obstacles.

Before the training I was very insecure. Now I can solve problems that come up, it makes me confident.
(Interviewee training group)

Disregarding the quantitative part of the analysis, it is possible to argue that the importance of a business training goes beyond the increased performance of the business as a consequence of new possible strategies and techniques. It helps to change the attitude problem that is argued to be inherent to the poorest part of the population. The results from a change in this attitude could be argued to be of, if not greater, at least the same importance as that of pure business tools.

Considering the second part of the attitude problem; that the poorest of the poor believe that money alone is the key out of poverty. The overall perception of the women in both groups was that they were highly motivated to be trained. This is not surprising since this was a requirement to be part of the study. However, during the weeks in the field, we met with several women who were not part of either the treatment or the control group and they did not seem to be reluctant towards the concept of training. One important factor with respect to this part of the attitude problem could be the type of training provided. Since several of the borrowers who have access to individual microloans receive a short training with focus solely on repayments it is understandable that these women do not see a benefit in hearing the same story over and over again with different MFIs. However, if they understand that they can learn new tools for a longer period of time where they also get closer to the other individuals in the group and therefore has a greater possibility to learn from each other, it is possible that their attitude is different. No matter what, in the light of the result of this thesis, it is problematic to compromise this type of non-

financial service due to the received benefits of the clients. This should be in the interest of serious MFIs, because the trade-off between quantity and quality, between outreach and the success of every single client, is an unsuccessful one. If it is impossible for the MFIs to provide quality as a consequence of increased quantity, it is important to discuss who holds the responsibility for the quality. As in the case of MAPLE it is evident that the training could come from a non-profit organization whereas the capital comes from pure microfinance and the result could be a positive one. However, if this is the case, it is important to give the non-profit organizations the necessary publicity and recognition that they need in order to be able to provide their services on a larger scale.

6 CONCLUSION

The final chapter will summarize the main conclusions of the thesis and illuminate the limitations of the study. Finally, the chapter will be concluded with suggestions of further research.

6.1 CONCLUSION

In this thesis the question *Does the business training program provided by MAPLE increase the business performance for women microentrepreneurs in village savings and loan associations in Mbale, Uganda?* has been raised. It is a central question since it evaluates whether or not the microentrepreneurs are maximizing their profits given the financial constraints they are facing, or if business training can lead to increased performance. The result from this field study is that business training has a significant positive effect on the majority of the used performance measures.

Table 5. Summary of the effects of business training on the performance measurements as well as significance levels.

Profit	Sales	Reinvestments	Salary to oneself	Salary to employees	Repayment ability of VSLA loans
+	+	+	+	+	–
$p < 0.05$	n.s.	$p < 0.01$	$p < 0.05$	$p < 0.01$	$p < 0.01$

Women receiving business training had a remarkably higher expected profit than the women in the control group. The expected increase in profit is 206.7 percent per day for the women in the treatment group thus highlighting the importance of business training for entrepreneurial success. Furthermore, whether the women reinvest or not is highly affected by if they have received business training. Women receiving business training are 60.56 percent more likely to reinvest money in their businesses than the women in the control group. The results also indicate that women in the treatment group are more likely to pay themselves more in salary than women in the control group but also to pay their employees to a higher extent. Women receiving business training paid themselves approximately 7 350 UGX more every week and were 85.47 percent more likely to pay salaries to their employees. However, women receiving business training have 12.53 percent lower probability to repay their VSLA loans on time. The women in the treatment group generally have more microloans from MFIs and they might prioritize to repay these before the VSLA loans. Lastly, although business training indicated a positive effect on sales it was not statistically significant.

Consequently, the results from this field study indicate that credit alone is not enough for the goal of poverty alleviation. Hence, the trend towards a minimalistic approach and the exclusion of non-financial services, such as business training, amongst MFIs may inhibit the microentrepreneurs and their possibilities to develop and increase their performance. It is therefore important to emphasize potential drawbacks with a commercialized microfinance industry and find ways to overcome the problem of limited outreach without compromising critical components for entrepreneurial success.

6.1 LIMITATIONS

The thesis is subject to unavoidable limitations. First, the sample size is relatively small, 192 observations⁶, and would ideally be larger in order to strengthen the results. The studies conducted by Karlan and Valdiva (2009) and Oppedal Berge *et al.* (2011) had 3 457 observations⁷ respectively 644 observations⁸. Nevertheless, these studies were conducted during a time period of one to three years. Consequently, given the scope of this field study it was not possible to achieve a significantly larger sample.

Second, profits were calculated based on the microentrepreneurs' estimation of their sales and costs and does not reveal how their profits fluctuate. It would be of interest to investigate how the profits change between good and bad periods in order to understand if women in the treatment group are better at smoothing fluctuations. Having a stable income would imply greater security for the entrepreneurs and their families and better prospects to improve their businesses and standard of living. Consequently, by calculating profits in bad and good periods, a more nuanced analysis of how business training affects profits could have been conducted.

Third, we argue that the two sample groups are identical to the greatest possible extent. However, there are two differences between the groups that need to be highlighted. First, 81 percent of the women in the treatment sell from a fixed market whereas the number for the women in the control group is 64 percent. Second, the women in the treatment group reported to be more confident. There are indications that both of these things are results from the business training, however, it is difficult to say to what extent it is a result and to what extent it was a characteristic before the training. Therefore, even though we control for these variables in the statistical analysis, it could have an effect on the results.

⁶ 91 receiving training

⁷ 2 093 receiving treatment

⁸ 319 receiving treatment

Last, the field study was conducted at the very end of the business training. Hence, the women in the treatment group have not had much time to implement what they had learnt, which could imply that the effects may not be observable yet. Consequently, the results may be imputed by something else which was not observable to the researchers. Moreover, it is also possible that the business training showed greater effects than it would have if the study had not been conducted at the very end of the business training program. It is possible that the recently learned business skills have had exceptionally good penetrating power among the women because they have not yet forgot any of the concepts. This is an important limitation since it would imply that the results are exaggerated.

6.3 FURTHER RESEARCH

This research paper is one of first few evaluating the effects of business training on performance in developing countries. Consequently, further research within this area is vital in order to verify the results and investigate if they can be applied to different contexts.

There are numerous business training programs and it would be interesting to compare and evaluate these to understand what in the training that is giving an effect on microentrepreneurial performance in developing countries. This information is essential in order to design effective business training programs which can be taught to a large number of people.

Further, this study only includes women selling “fresh”. Therefore it is important to see if these results apply to other industries, since microentrepreneurs in some industries may benefit more than others. This type of information is of importance for the designing of business training programs in order to make sure everyone in the program is benefitting.

It would further be interesting to conduct a longitudinal study in which the same individuals were followed during a longer time. This would reveal how sustainable the concepts from the business training are, and in an even longer perspective how well knowledge can be transferred between generations. Thus, it would show the impact of business training rather than the outcome.

Moreover, with this field study as a base, research regarding who is the most suitable actor to provide business training should be conducted. Are MFIs able to provide both outreach and business training if they are to remain financially sustainable? Are non-profit organizations best equipped to provide business training or is there potential for other actors to step in with their competencies?

Consequently, this field study serves as a base for a wide variety of future research which is important in order to contribute to academic theory regarding human capital,

microentrepreneurship in developing countries, and poverty alleviation, but also to practical contributions and implications when designing policies.

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INTERVIEWS

Hannington, Thenge (June 18th, 2011, Kampala), Agency Manager at FINCA. (L. Lombach & J. Meurling interviewers)

Kagaba, Solomon (June 17th, 2011, Kampala), Operations Manager at AMFIU. (L. Lombach & J. Meurling interviewers)

Munyagwa, Nasser (June 19th, 2011, Kampala), Training Officer at BRAC. (L. Lombach & J. Meurling interviewers)

Nalunga, Lydia Antonia (June 14th, 2011, Kampala), Research Manager at Synovate. (L. Lombach & J. Meurling interviewers)

Nilsson Altafi, Sofia (May 12th, 2011, Stockholm), PhD student at Stockholm School of Economics. (L. Lombach & J. Meurling interviewers)

8 APPENDICES

APPENDIX A: Maps

Picture 1. Where Uganda is situated



Source: <http://www.niaid.nih.gov/topics/globalresearch/africa/pages/uganda.aspx>

Picture 2. Map of Uganda



Source: <http://benedictbjerknes.wordpress.com/uganda/>

APPENDIX B: Pictures

Picture 1. Business training session



Picture 2. Typical market street



Picture 3. Woman (control group) selling fresh



Picture 4. Woman (treatment group) selling fresh



APPENDIX C: Outline of business modules

Business Module 1: Plan for a Better Business
Use planning steps to grow your business
Examine how your business is doing
Decide how you can improve your business
Develop and test new business ideas
Plan how much to make and sell
Plan business costs
Plan for more profit
Find help for your business
Prepare for unexpected events
Business Module 2: Manage Your Business Money
Separate personal and business money
Use the business loan for your business
Calculate your profits
Track, plan and invest your business money
Decide how to use your profits to meet business and personal needs
Prevent business money losses
Manage credit sales
Review the manage your business money learning sessions
Business Module 3: Increase Your Sales
Understand your customers
Treat the customer well
Sell to the right kind of customer for you
Improve your products or services
Sell new, complementary products or services
Seize opportunities to sell
Sell where customers buy the most
Set the right price
Promote your business with good selling tools
Plan for increased sales

APPENDIX D: Definitions of control variables and references

Human Capital		
Level of education	0 = No education 1 = Primary 2 = Secondary 3 = Certificate/Diploma 4 = Degree	van der Sluis <i>et al.</i> , 2003; Bates, 1990; Wiklund <i>et al.</i> , 2004
Years of work experience	Years of total work experience, both self-employment and employment, prior to the current business	Bradley <i>et al.</i> , 2011, Wiklund <i>et al.</i> , 2004
Years of current business	Years the microentrepreneur has operated their current business	Wiklund <i>et al.</i> , 2004
Years of unemployment	Unemployment after the age of 18	Alvarez & Shimer, 2009
Parents self-employed	Dummy, If mother or father or both have been self-employed	Dunn & Holtz-Eakin, 2000; Carroll & Mosakowski, 1987; Fairlie & Robb, 2004; Sørensen, 2004
Age	How old the entrepreneur is	Lévesque & Minniti, 2006; Wiklund, <i>et al.</i> , 2004
Financial Capital		
Accumulated total loan size	Total amount the microentrepreneur has borrowed from any financial institution	Bradley <i>et al.</i> , 2011; Wiig and Kolstad, 2011
Savings per week	How much the entrepreneurs saves every week	Lingelbach <i>et al.</i> , 2005
Saved to start business	Dummy, If the microentrepreneur has saved in order to start her business	Lingelbach <i>et al.</i> , 2005
Sell on credit	Dummy, If the microentrepreneur sells on credit	Ben Hamida, 2000
Own land	Dummy, If the microentrepreneur the owner of any land	Lingelbach <i>et al.</i> , 2005; Niethammer <i>et al.</i> , 2007
Own property	Dummy, If the microentrepreneur is the owner of any property	Lingelbach <i>et al.</i> , 2005; Niethammer <i>et al.</i> , 2007
Social Capital		
No of people in household self-employed	Number of people in the household who have their own separate business	Brüderl & Preisendörfer, 1998; Sørensen, 2004
No of people to help out	Number of people who can help in the microentrepreneur's business in the case of emergency, illness, etc.	Brüderl & Preisendörfer, 1998
No of people to ask for advice	How many people the microentrepreneur can ask for business related advices	Brüderl & Preisendörfer, 1998; Gomez & Santor, 2001
No of people in household	How many people living in the same household as the	Brüderl & Preisendörfer, 1998;

	microentrepreneur	Sørensen, 2004
Married	Dummy, If the microentrepreneur is currently married	Davidsson & Honig, 2003; Kim, Aldrich & Keister, 2006
Support from friends and family	Dummy, If the microentrepreneur receives support from both family and friends	Brüderl & Preisendörfer, 1998
Self-Efficacy		
Confidence	1 = Very little confident 2 = Some confident 3 = Mostly confident 4 = Confident 5 = Very confident	Wilson, Kickul & Marlino, 2007; Davidsson, 2006; Luthans & Ibrayeva, 2006
Knowledge	1 = Very little knowledgeable 2 = Some knowledgeable 3 = Mostly knowledgeable 4 = Knowledgeable 5 = Very knowledgeable	Wilson, Kickul & Marlino, 2007; Davidsson, 2006; Luthans & Ibrayeva, 2006
Business Characteristics		
No of owners	How many people own the business	N/A
No of employees	How many are working in the business at a regular basis, except the owner(s)	N/A
No of products	How many different products the microentrepreneur sells	N/A
No of businesses	How many businesses the microentrepreneur has	N/A
Fixed market	If the microentrepreneur sells from a fixed market place	N/A
Business license	If the business is registered or if the microentrepreneur pays market fee	N/A

APPENDIX E: Survey to interviewees

a) Have you received a loan from the saving group?		
b) Have you received business training?		
c) What is your business?		
Question		Answer
Business Background		
1	Where do you work?	Fixed market=1 Mobile market=2 Home=3
2	For how long have you had this business?	
3	Do you own your business alone?	
4	If not, how many owners are you?	
5	Do you have any business license or permissions of any kind?	
6	Do you have any other businesses?	
7	If yes, how many?	
Previous Experience		
8	Have you been self-employed before?	
9	If yes, for how many years?	
10	If yes, in what type?	
11	Have you been employed before?	
12	If yes for how many years?	
13	If yes, in what type?	
14	Have you been unemployed?	
15	If yes, how many years?	
Education & Training		
16	What is your formal education?	No education=0 Primary=1 Secondary=2 Certificate /Diploma=3 Degree=4
17	Have you been part of a business-training program?	
18	If yes, from which organization?	
19	If yes, for how many sessions?	
20	Have you benefitted from the training?	
21	If yes, what have you learned?	

22	If no, do you want to join a training program?	
23	If no, have you tried to join a training program?	
24	If you have, do you know why you could not join?	
Networks		
25	Have your parents been self-employed?	
26	If yes, have you helped out in their business?	
27	Does anyone else in your household run their own business?	
28	If yes, how many?	
29	How many people could you ask for advice in order to improve your business?	
30	How many people could potentially help out with your business?	
Workforce		
31	Do you have any people helping out with your business?	
32	If yes, how many?	
33	If yes, how much do they help out and why?	Assignment Time
34	If yes, how many are working full time?	
35	If yes, how many are working causally?	
36	Do you pay salary to yourself?	
37	If yes, how much?	
38	Do you pay the people helping you out and how much?	Family Outsiders
Finance		
39	How many loans from the saving group have you received?	
40	What is the loan size/sizes?	
41	How many of your loan/loans have you repaid on time?	
42	How many loans have you received from an MFI?	
43	Did you receive these loans before or after you started the training?	
44	What is the loan size/sizes?	
45	Have you repaid your loan/loans on time?	

46	Have you saved money in order to start this business?	
47	How often do you save?	
48	How much do you save each time?	
49	Do you separate business money from personal money?	
50*	If yes, how do you do that?	
51	Do you reinvest profit into the business?	
Sales		
52	Do you record your sales and costs?	Look at books if possible!
53	When you buy product X, how much do you pay? Ink transport, packing, salaries, market fees...	
54	For how long does product X last?	
55	If I want to buy all product X that you have bought, how much do I have to pay?	
56	Do you have to through away some products because they are bad?	
57	If yes, how often do you have to do that?	
58	Let's imagine you have only 10 of product X, how many do you have to through away because they are bad?	
59	Do you sell on credit?	
Self-Efficacy		
60	How confident do you feel in running your business?	1=very little 2=some 3=mostly 4=confident 5=very
61	How knowledgeable do you think you are in running your business?	1=very little 2=some 3= mostly 4=knowledgeable 5=very
62	Do you feel that you have sufficient support from your household to run your business?	
63	Do you feel that you have sufficient support from your friends to run your business?	
64	What do you think your business will look like in five years time?	
General Information		
65	How old are you?	
66	What is your marital status?	Married=1 Divorced=2 Widow=3 Single=4
67	How many people are in your household?	
68	How many children do you have?	
69	Do you own land?	
70	Do you own any property?	

APPENDIX F: Descriptive statistics of treatment group

Treatment Group	Continuous and discrete variables				Dummy variables	
Variable	Mean	Std Dev	Min	Max	1 (%)	0 (%)
Received business training					100	0
Profit	9 744,08	10 963,53	-1 000	45 700		
Sales	51 746,58	45 042,87	1 800	212 648		
Reinvest					82,42	17,58
Salary	1 628,73	2 956,72	0	20 000		
Salary to employees					62,79	37,21
Repaid savings group loan on time					73,49	26,51
<i>Human Capital</i>						
Level of education 0 = No education 1 = Primary 2 = Secondary 3 = Certificate/Diploma 4 = Degree	1,05	0,72	0	4		
Years of work experience	6,48	7,56	0	41,40		
Years of current business	7,84	7,62	0,05	36		
Years of unemployment	9,12	10,04	0	54		
Confidence 1 = Very little confident 2 = Some confident 3 = Mostly confident 4 = Confident 5 = Very confident	4,18	0,96	1	5		
Knowledge 1 = Very little knowledgeable 2 = Some knowledgeable 3 = Mostly knowledgeable 4 = Knowledgeable 5 = Very knowledgeable	3,96	1,08	1	5		
Age	39,42	12,54	15	80		
<i>Social Capital</i>						
Parents self-employed					84,44	15,56
No of people in household self-employed	1,64	0,84	1	4		
No of people to help out	1,86	1,34	0	6		
No of people to ask for advice	2,78	3,21	0	30		
No of people in household	5,45	2,36	1	12		
Married					53,85	46,15
Support from friends and family					32,97	67,03
<i>Capital Constraints</i>						
Accumulated total loan size	364 719,80	494 700,10	30 000	2 900000		
Savings per week	10 708,24	10 062,91	0	52 500		
Saved to start business					74,73	25,27
Sell on credit					81,32	18,68
Own land					36,26	63,74
Own property					50,55	49,45
<i>Business Characteristics</i>						
No of owners	1,01	0,10	1	2		

No of employees (log)	0,64	0,81	0	4		
No of products	4,70	2,24	1	11		
No of businesses	1,56	0,60	1	3		
Fixed market					81,32	18,68
Business license					61,54	38,46

APPENDIX G: Descriptive statistics of control group

Control Group	Continuous and discrete variables				Dummy variables	
Variable	Mean	Std Dev	Min	Max	1 (%)	0 (%)
Received business training					0	100
Profit	10 033,13	15 182,95	-9 762	90 000		
Sales	60 635,95	92 486,34	350	622 500		
Reinvest					36,63	63,37
Salary	891,73	1 792,50	0	10 000		
Salary to employees					24,44	75,56
Repaid savings group loan on time					91,84	8,16
Bookkeeping					21,78	78,22
<i>Human Capital</i>						
Level of education 0 = No education 1 = Primary 2 = Secondary 3 = Certificate/Diploma 4 = Degree	1,27	0,65	0	3		
Years of work experience	6,08	8,34	0	50		
Years of current business	7,23	7,43	0,12	41		
Years of unemployment	7,77	9,20	0	38		
Confidence 1 = Very little confident 2 = Some confident 3 = Mostly confident 4 = Confident 5 = Very confident	3,86	1,05	1	5		
Knowledge 1 = Very little knowledgeable 2 = Some knowledgeable 3 = Mostly knowledgeable 4 = Knowledgeable 5 = Very knowledgeable	3,74	1,13	1	5		
Age	37,69	10,66	18	67		
<i>Social Capital</i>						
Parents self-employed					85,86	14,14
No of people in household self-employed	1,62	0,93	1	7		
No of people to help out	2,07	1,54	0	10		
No of people to ask for advice	3,04	2,93	0	25		
No of people in household	5,66	2,24	1	12		
Married					56,44	43,56
Support from friends and family					55,45	44,55
<i>Capital Constraints</i>						
Accumulated total loan size	640 806,40	941 028,90	20 000	6 300 000		
Savings per week	14 760,89	34 704,53	0	250 000		
Saved to start business					74,26	25,74
Sell on credit					78,22	21,78
Own land					38,61	61,39
Own property		85			52,48	47,52

<i>Business Characteristics</i>						
No of owners	1,07	0,26	1	2		
No of employees	0,70	0,99	0	4		
No of products	5,47	3,06	1	14		
No of businesses	1,56	0,68	1	3		
Fixed market					64,36	35,64
Business license					67,33	32,67

APPENDIX H: OLS regression results

Table 1. OLS regression results on profit

Dependent variable	Profit (USH) log		
	β	S.E. (robust)	dy/dx
Independent variable			
Received business training	2.0668**	(0.8347)	2.0668
Control variables			
<i>Human capital</i>			
Level of education	0.4637	(0.6004)	0.4637
Years of work experience (log)	-0.1204	(0.4007)	-0.1204
Years of current business (log)	0.6861	(0.5125)	0.6861
Years of unemployment (log)	-0.4011	(0.3717)	-0.4011
Parents self-employed	2.5141	(1.4579)	2.5141
Age (log)	4.0256	(2.8550)	4.0256
<i>Financial capital</i>			
Accumulated total loan size (log)	0.8237**	(0.4012)	0.8237
Savings per week (log)	0.4866	(0.2750)	0.4866
Saved to start business	0.7170	(1.0052)	0.7170
Sell on credit	-1.5125	(0.8363)	-1.5125
Own land	0.2831	(0.9344)	0.2831
Own property	-0.6630	(1.0280)	-0.6630
<i>Social capital</i>			
No of people in household self-employed (log)	-1.8848	(1.1195)	-1.8848
No of people to help out (log)	-0.3399	(0.8551)	-0.3399
No of people to ask for advice (log)	0.3874	(0.5781)	0.3874
No of people in household	-0.1840	(0.2355)	-0.1840
Married	0.0473	(1.0105)	0.0473
Support from friends and family	-0.8492	(0.9981)	-0.8492
<i>Self-efficacy</i>			
Confidence	-0.5530	(0.4554)	-0.5530
Knowledge	0.4409	(0.4738)	0.4409
<i>Business characteristics</i>			
No of owners	-0.0555	(3.3154)	-0.0555
No of employees (log)	0.2283	(0.5859)	0.2283
No of products (log)	0.7730	(0.9705)	0.7730
No of businesses (log)	-0.5493	(1.2836)	-0.5493
Fixed market	1.1283	(1.1310)	1.1283
Business license	-0.7980	(1.1567)	-0.7980
Number of individuals			166
Adj R ²			0.13
F-value			1.50
Prob > F			0.069

Huber-White's standard errors in parentheses

*** p<0.01, ** p<0.05

Table 2. OLS regression results on sales

Dependent variable	Sales (UGX) log		
	β	S.E. (robust)	dy/dx
Independent variable			
Received business training	0.2465	(0.1830)	0.2465
Control variables			
<i>Human capital</i>			
Level of education	-0.0266	(0.1093)	-0.0266
Years of work experience (log)	-0.0345	(0.0694)	-0.0345
Years of current business (log)	0.2687***	(0.0849)	0.2687
Years of unemployment (log)	-0.1011	(0.0681)	-0.1011
Parents self-employed	0.3306	(0.2406)	0.3306
Age (log)	0.7577	(0.4563)	0.7577
<i>Financial capital</i>			
Accumulated total loan size (log)	0.0910	(0.0636)	0.0910
Savings per week (log)	0.0722	(0.0515)	0.0722
Saved to start business	0.0128	(0.1808)	0.0128
Sell on credit	0.2047	(0.2471)	0.2047
Own land	-0.0309	(0.1951)	-0.0309
Own property	-0.1721	(0.1739)	-0.1721
<i>Social capital</i>			
No of people in household self-employed (log)	-0.1184	(0.1627)	-0.1184
No of people to help out (log)	-0.2507	(0.1313)	-0.2507
No of people to ask for advice (log)	0.3181***	(0.1148)	0.3181
No of people in household	-0.0210	(0.0394)	-0.0210
Married	0.2361	(0.1843)	0.2361
Support from friends and family	-0.0012	(0.1574)	-0.0012
<i>Self-efficacy</i>			
Confidence	0.0956	(0.0817)	0.0956
Knowledge	0.0627	(0.0720)	0.0627
<i>Business characteristics</i>			
No of owners	0.4993	(0.3225)	0.4993
No of employees (log)	0.2298**	(0.1100)	0.2298
No of products (log)	0.3719**	(0.1855)	0.3719
No of businesses (log)	-0.4814	(0.2546)	-0.4814
Fixed market	0.2185	(0.1890)	0.2185
Business license	0.2513	(0.2259)	0.2513
Number of individuals			166
Adj R ²			0.30
F-value			4.34
Prob > F			0.000

Huber-White's standard errors in parentheses

*** p<0.01, ** p<0.05

Table 3. OLS regression results on salary

Dependent variable	Salary (UGX)		
	β	S.E. (robust)	dy/dx
Independent variable			
Received business training	1051.5200**	(517.1770)	1051.5200
Control variables			
<i>Human capital</i>			
Level of education	-242.8431	(364.8806)	-242.8431
Years of work experience (log)	371.4954**	(148.6285)	371.4954
Years of current business (log)	-4.4630	(303.0467)	-4.4630
Years of unemployment (log)	26.6354	(153.0891)	26.6354
Parents self-employed	1267.0970***	(385.8682)	1267.0970
Age (log)	-1235.6940	(1108.9700)	-1235.6940
<i>Financial capital</i>			
Accumulated total loan size (log)	220.2703	(196.7501)	220.2703
Savings per week (log)	34.3447	(161.4022)	34.3447
Saved to start business	-139.8151	(436.1767)	-139.8151
Sell on credit	264.7175	(515.0264)	264.7175
Own land	-22.6166	(491.9661)	-22.6166
Own property	-473.8491	(405.2003)	-473.8491
<i>Social capital</i>			
No of people in household self-employed (log)	-555.5236	(399.3838)	-555.5236
No of people to help out (log)	106.4346	(217.2590)	106.4346
No of people to ask for advice (log)	174.1741	(200.1143)	174.1741
No of people in household	130.8632	(101.0186)	130.8632
Married	-662.0633	(586.2051)	-662.0633
Support from friends and family	-416.2395	(374.8744)	-416.2395
<i>Self-efficacy</i>			
Confidence	261.4335	(166.0704)	261.4335
Knowledge	-166.6807	(200.1942)	-166.6807
<i>Business characteristics</i>			
No of owners	437.2095	(711.8332)	437.2095
No of employees (log)	59.2333	(287.2867)	59.2333
No of products (log)	-169.6500	(391.6971)	-169.6500
No of businesses (log)	-817.9131	(727.1298)	-817.9131
Fixed market	-1631.6800**	(799.1179)	-1631.6800
Business license	-125.5066	(523.4402)	-125.5066
Number of individuals			166
Adj R ²			0.10
F-value			1.58
Prob > F			0.047

Huber-White's standard errors in parentheses

*** p<0.01, ** p<0.05

APPENDIX I: Logistic regression results

Table 1. Logistic regression results on reinvestment

Dependent variable	Reinvest		
	β	S.E. (robust)	dy/dx
Independent variable			
Received business training	3.2332***	(0.5428)	0.6056
Control variables			
<i>Human capital</i>			
Level of education	0.2857	(0.4462)	0.0659
Years of work experience (log)	0.1853	(0.2354)	0.0428
Years of current business (log)	-0.1325	(0.2613)	-0.0306
Years of unemployment (log)	0.1492	(0.2034)	0.0344
Parents self-employed	0.4508	(0.7470)	0.1075
Age (log)	-0.3910	(1.3821)	-0.0902
<i>Financial capital</i>			
Accumulated total loan size (log)	0.2191	(0.1783)	0.0505
Savings per week (log)	0.2210	(0.1219)	0.0510
Saved to start business	-0.0163	(0.4809)	-0.0038
Sell on credit	-0.0724	(0.5611)	-0.0166
Own land	-0.1438	(0.5554)	-0.0333
Own property	1.0364**	(0.4924)	0.2366
<i>Social capital</i>			
No of people in household self-employed (log)	-0.4789	(0.5882)	-0.1105
No of people to help out (log)	0.0451	(0.4165)	0.0104
No of people to ask for advice (log)	0.3335	(0.2750)	0.0769
No of people in household	0.1046	(0.1435)	0.0241
Married	0.5500	(0.6429)	0.1272
Support from friends and family	-0.6767	(0.4901)	-0.1550
<i>Self-efficacy</i>			
Confidence	0.4055	(0.2742)	0.0936
Knowledge	-0.5396**	(0.2543)	-0.1245
<i>Business characteristics</i>			
No of owners	-1.2991	(1.2849)	-0.2998
No of employees (log)	0.5868	(0.3306)	0.1354
No of products (log)	0.4055	(0.3777)	0.0934
No of businesses (log)	-0.8891	(0.6325)	-0.2051
Fixed market	-0.3894	(0.6107)	-0.0876
Business license	-0.8335	(0.5204)	-0.1803
Number of individuals			166
Pseudo R ²			0.37
Wald Chi2			72.77
Prob > Chi2			0.000

Huber-White's standard errors in parentheses

*** p<0.01, ** p<0.05

Table 2. Logistic regression results on salary to employees⁹

Dependent variable	Salary to employees		
	β	S.E.	dy/dx
Independent variable			
Received business training	6.1237***	(2.2141)	0.8547
Control variables			
<i>Human capital</i>			
Level of education	-3.3757	(2.5672)	-0.4660
Years of work experience (log)	-2.6364	(2.3069)	-0.3639
Years of current business (log)	-3.4003	(1.7804)	-0.4694
Years of unemployment (log)	-1.3425	(0.7813)	-0.1853
Parents self-employed	-1.3463	(5.0528)	-0.2448
Age (log)	7.0774	(8.6933)	0.9770
<i>Financial capital</i>			
Accumulated total loan size (log)	0.0052	(0.6927)	0.0007
Savings per week (log)	-1.3143	(1.1870)	-0.1814
Saved to start business	0.4967	(1.4760)	0.0644
Sell on credit	-2.0534	(3.0935)	-0.3858
Own land	3.7997	(4.7308)	0.5785
Own property	-5.9355**	(2.9628)	-0.8122
<i>Social capital</i>			
No of people in household self-employed (log)	1.4172	(2.2726)	0.1956
No of people to help out (log)	1.9747**	(0.9538)	0.2726
No of people to ask for advice (log)	1.7886**	(0.8252)	0.2469
No of people in household	-1.3249	(1.6562)	-0.1829
Married	-0.7409	(3.2941)	-0.1050
Support from friends and family	6.8309	(3.5004)	0.8752
<i>Self-efficacy</i>			
Confidence	0.2624	(0.5603)	0.0362
Knowledge	-0.3858	(0.7183)	-0.0532
<i>Business characteristics</i>			
No of owners	3.3002	(4.1621)	0.4556
No of employees (log)	-10.1663***	(3.5137)	-1.4034
No of products (log)	-3.7207**	(1.5583)	-0.5136
No of businesses (log)	14.8077	(9.1374)	2.0441
Fixed market	0.7269	(1.9922)	0.0891
Business license	1.2053	(3.5325)	0.1374
Number of individuals			75
Pseudo R ²			0.69
Wald Chi2			36.43
Prob > Chi2			0.1060

Huber-White's standard errors in parentheses

*** p<0.01, ** p<0.05

⁹ in the regression 4 non-payment of salaries and 1 payment of salaries were completely determined

Table 3. Logistic regression results on repaid VSLA loan on time

Dependent variable	Repaid VSLA loans on time		
	β	S.E. (robust)	dy/dx
Independent variable			
Received business training	-1.9848***	(0.5776)	-0.1252
Control variables			
<i>Human capital</i>			
Level of education	0.0854	(0.6054)	0.0041
Years of work experience (log)	0.2508	(0.2282)	0.0119
Years of current business (log)	0.2863	(0.2960)	0.0136
Years of unemployment (log)	-0.2902	(0.2032)	-0.0138
Parents self-employed	-0.9120	(0.9455)	-0.0340
Age (log)	-2.0714	(1.4623)	-0.0985
<i>Financial capital</i>			
Accumulated total loan size (log)	-0.3912	(0.3313)	-0.0186
Savings per week (log)	0.6743***	(0.1693)	0.0321
Saved to start business	-0.6259	(0.8250)	-0.0262
Sell on credit	-0.5050	(0.7721)	-0.0210
Own land	0.7402	(0.8255)	0.0331
Own property	0.3758	(0.7567)	0.0182
<i>Social capital</i>			
No of people in household self-employed (log)	-0.3721	(0.7591)	-0.0177
No of people to help out (log)	-0.7445	(0.4496)	-0.0354
No of people to ask for advice (log)	0.4816	(0.5058)	0.0229
No of people in household	-0.0171	(0.1634)	-0.0008
Married	-1.1671	(1.0291)	-0.0550
Support from friends and family	3.2024***	(1.0299)	0.2077
<i>Self-efficacy</i>			
Confidence	0.0596	(0.3618)	0.0028
Knowledge	-0.1029	(0.2413)	-0.0049
<i>Business characteristics</i>			
No of owners	-2.8499**	(1.3910)	-0.1355
No of employees (log)	-0.0263	(0.3401)	-0.0012
No of products (log)	-0.4774	(0.6674)	-0.0227
No of businesses (log)	-0.5860	(0.9036)	-0.0279
Fixed market	-0.0481	(0.8021)	-0.0023
Business license	0.0763	(0.6784)	0.00376
Number of individuals			159
Pseudo R ²			0.33
Wald Chi2			60.59
Prob > Chi2			0.000

Huber-White's standard errors in parentheses

*** p<0.01, ** p<0.05