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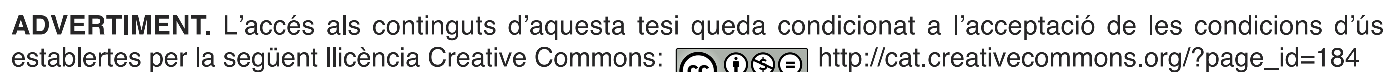

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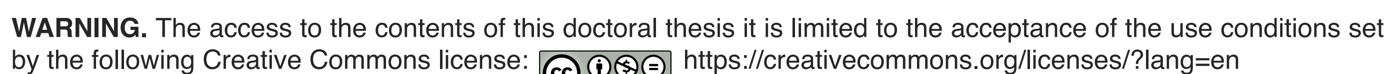

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Universitat Autònoma de Barcelona

International Doctorate in Entrepreneurship and Management

DEPARTMENT OF BUSINESS

ESSAYS ON MICROFINANCE IN EAST-AFRICA

DOCTORAL THESIS

2017

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Abbreviations and Acronyms

MFI	Micro Finance Institution
M-PESA	A money transferring facility developed by the mobile phone operator Safaricom
ROSCA	Rotating savings and credit association
SACCO	Savings and credit cooperative
SHG	Self-help Group

ABSTRACT

Microfinance has found itself at the center of development agenda for many a developing economy struggling to reduce poverty and spur economic growth by containing unemployment. This is based on the assumption that if marginalized people can access cheap loans, they could easily create micro enterprises and lift themselves out of poverty. This thesis investigates the effect of microfinance as a mode of financial inclusion in the East-African economy. Using 2 essays, we pose various research questions to achieve our overall objective 1) what are the themes arising from two decades of research in each of the three countries and what are the gaps in literature from the region? 2) How do existing modes of financial inclusion in East-Africa affect microfinance? Is microfinance necessary in light of on-going over indebtedness crisis? 3) How has microfinance helped marginalized individuals such poor women create sustainable enterprises? The study is modeled on human and social capital theories and will employ the use regressions to test the hypotheses and make recommendations.

Chapter I: INTRODUCTION OF THE DISSERTATION

1.1 FINANCIAL INCLUSION: PROBLEM STATEMENT

Policy makers have long held that financial inclusion is essential to a country's development. Yet, until recently, few countries had the correct depiction of their levels of financial inclusion (Klapper & Singer, 2015). For one, there is not a single agreeable way to measure financial inclusion. Traditionally, financial inclusion has been measured through geographical access -that is the percentage of population in proximity to a Commercial Bank and/or an ATM machine (Mohieldin, Iqbal, Rostom, & Fu, 2012), or by gauging bank outreach – which is the number of individuals that operate formal bank accounts (Shankar, 2013).

From this background, financial inclusion has been defined as the delivery of financial services to those who would otherwise not have afforded them (Leyshon & Thrift, 1995). Fuller (1998) finds that exclusion occurs when credit is redirected away from poorer social groups due to their perceived lack of credit-worthiness. It could also occur when clients cannot access financial services suited to them, where conditions are hostile or if they are edged out by pricing (Mohieldin et al., 2012). And while many scholarly definitions imply that financially excluded individuals are likely to be poor, Leyshon & Thrift, (1995) point out that personal preference can also keep individuals away from the banking sector, what Shankar, (2013)classifies as voluntary exclusion.

A number of scholars have argued that defining financial inclusion in relation to formal financial sector is inadequate as it presents a number of complications. First, and as Klapper & Singer, (2015) argue, growth of the formal financial system doesn't necessary lead to a higher levels of financial inclusion; for example some developed nations with robust financial systems still report segments of their population that remain unbanked. Second, technological innovations such as internet banking and mobile money have led to "branchless banking" and relegated the need for traditional methods of banking such as having an account. Finally as Sarma (2012)notes, using 'banked adults' as a measure of financial inclusion ignores other aspects of a financial

system such as usage. Indeed it is common to find many dormant accounts within financial institutions.

A development report by UNCTAD [1] showed that only 21.5% of Africa's population had access to formal financial services; in comparison East Asia had 54.9% of its population banked. In underdeveloped financial systems, financially excluded individuals who lacked enough money to finance their activities would often have to find expensive and often unreliable ways to credit. Co-operative unions and moneylenders became the immediate source of credit to cater to basic needs such as health, education as well as food security.

Furthermore, without adequate financing, micro entrepreneurs who are a core part of many African economies failed to realize any significant growth (Mohieldin et al., 2012; Ssewamala et al., 2012) as they had to rely on personal wealth. A number of scholars agree that financial development accelerates economic growth. Whether its demand driven (where growth in the economy generates a need for financial sector development) or supply driven (where financial sector facilitates productive activities) a developed financial system enables individuals to perform basic operations such as saving, borrowing and money transfer.

Economic development usually refers to a general increase in the living standards of a country. It is often measured based on the industry development, level of unemployment and technology adoption. Economists also argue that financial sector development and economic growth are the keys to poverty reduction. Bodies championing this cause (such as the World Bank) argue that through better access to credit, individuals (especially the poor) can exploit opportunities and consequently and contribute positively to the market economy. Sarma & Pais, (2011) emphasize accessibility and availability as key components of an inclusive financial system.

[1] UNCTAD (United Nations Conference on Trade and Development)- 2015 economic development report

In the Early 80s, policy makers who had been trying to find a way to reduce global levels of poverty, heard about the new method of lending to the poor being practiced in Asia. Championed by the Grameen Bank, the method worked by establishing a 'group liability' when lending to poor recipients. It became known as microfinance; 'micro' because it involved lending small amounts of money for a short period of time (Bhutt & Tang, 2001; van Rooyen, Stewart, & de Wet, 2012).

By the 1990s microfinance had become a development initiative largely touted by the World Bank as a clear path to poverty reduction(Buckley, 1997). However by the year 2000, less than a decade later, microfinance was receiving backlash for the simple reason that the poor were now struggling in debt (debate around debt in microfinance is covered extensively in chapter 2).

Notwithstanding the arguments put forward by scholars on whether microfinance actually uplifts people from poverty(Korth, Stewart, Van Rooyen, & De Wet, 2012; Morduch, 1999; Mosley & Rock, 2004), governments from developing economies have set up various mechanisms that foster the growth of the microfinance sector. For example in East-Africa, the Kenya Microfinance Act was reviewed in 2012 to regulate deposit taking MFIs. This was seen as a nod to the growing microfinance sector. Moreover, now that poor borrowers have proven to be reliable customers, a number of commercial banks have also entered this market and offer Microfinance services parallel to other credit facilities.

It is from this backdrop that this study embarks on a scientific research of Microfinance. In the following section, the study presents objectives of the research and formulates hypotheses. Later in **Section 1.3** the study will delve into the conceptual framework that is the basis of analysis in the articles presented in chapters 3 & 4. The research methodology which includes a brief description of the databases will be discussed under **Section 1.4**.

This study is rooted in the developing economies of Kenya, Uganda, Tanzania found on the Eastern part of Africa. A brief overview of these countries is discussed in

Section 1.5 under *context of the study*. Finally the structure of the research is laid out in **Section 1.6**.

1.2 OBJECTIVES OF THE RESEARCH

Microfinance operates under two assumptions; 1) that the people it targets are "financially excluded" i.e. they have no other way of accessing cheap financing and 2) that most borrowers are entrepreneurs which means they are capable of converting small sums of credit into valuable small businesses. If these assumptions are correct, borrowers who access microfinance products should be able to uplift their lives thus reducing the high levels of unemployment and poverty in developing nations. However despite the growth of microfinance sector, a tangible result on graduation from poverty is still not evident.

The general objective of this dissertation is to shed light on how microfinance as a mode of financial inclusion has changed the financial landscape in East-Africa. Through scientific dissemination of data, the study hopes to provide practical solutions to practitioners in the microfinance field who constantly need to adjust their product offering according to changing client needs.

The specific objectives of the dissertation are

1. Find themes that have dominated microfinance research in East-Africa
2. Disseminate how informal finance affects financial inclusion and consequently MFIs
3. Find out other factors other than micro credit that determines a borrowers success

The study will employ the use of two hypotheses to test these objectives:

Hypothesis 1: informal finance is ranks higher than microfinance among poor borrowers

Formal and informal sources of finance have been seen to operate side by side in many African economies (Steel, Aryeetey, Hettige, & Nissanke, 1997). Recent cases of over indebtedness among borrowers have led many to believe that microfinance does not replace informal finance as previously suggested (Turvey & Kong, 2010).

Hypothesis 2: microfinance beneficiaries are more predisposed to start subsistence businesses

This hypothesis will investigate the relationship between financial inclusion and enterprise development in East-Africa. Specifically we seek to prove that access to finance is not the main constraint to enterprise development among the poor as popularly depicted in various microfinance literatures. By acknowledging the other challenges facing entrepreneurs such as lack of technologies and poor business skills, we question if the sector is not overreaching in availing too much credit to people that have little ability to transform their micro businesses into successful enterprises.

1.3 CONCEPTUAL FRAMEWORK

The success of Microfinance is largely attributed to the fact that it operates within a social framework of borrowers. Poor people, while lacking in economic collateral, are considered to have strong social ties that enable them to benefit from human capital contained in their networks. By modelling our study on the social capital and human capital theories, we hope to ascertain the effect of social ties on choice of credit as well as on ability to utilize credit to grow businesses.

These theories are discussed in detail below.

1.3.1 Social capital theory

The social capital theory investigates an individual's ability to benefit from potential resources available through his/her social networks. Social capital resides in relation

between individuals and its impact can be seen on individual as well as community group level (Basargekar, 2010). It is normally measured on its impact on achieving mutual benefits in the group or community.

A number of scholars describe social capital as the expected collective benefit derived from co-operation between individuals or groups (Feigenberg, Field, & Pande, 2010; Woolcock, 1998). Social ties are a source of emotional support, business referrals, information and opportunity recognition. Studies have shown that individuals derive benefits from networks through information sharing, resource sharing and motivating each other psychologically. Networks such as family and community networks have now been seen to have a direct effect on entrepreneurial outcome of a people

Davidsson & Honig, (2003) identify two major dynamics of social capital that enhance trust: the first, bonding capital, results from pressure to conform due to obligations or threat of censure. The second, bridging capital consists of social ties that provide resources such as information.

The social capital theory is especially relevant to microfinance given that a large part of lending programs in MFIs is built around 'social assets' since physical assets are few (Morduch, 1999). A number of researchers have investigated the relationship between social capital and microfinance. Feigenberg et al. (2010) investigate how increasing a microfinance's client interactions with their group members' builds trust between them, Basargekar (2010) investigates the impact of social capital on social empowerment of women in India and Besley & Coate (1995) in their study of peer effects on repayment patterns find that group loans induce interdependence between borrowers.

Recently, studies have shifted attention from repayment rates and towards identifying effects of microcredit on the profitability of small businesses, investments and household consumption (Banerjee, Duflo, Glennester, & Kinnan, 2013). Interaction of members in credit meetings is especially seen to enhance learning amongst group

members as they have an opportunity to observe each other's repayment behavior (Feigenberg et al., 2010) as well as entrepreneurial patterns.

When entrepreneurs are in a group where members offer each other empathy, encouragement, feedback and motivation, it fosters a trust climate where members freely exchange ideas and resources. In addition belonging to a group has been seen to foster member's self-confidence, entrepreneurial spirit and creativity. Knowing other entrepreneurs has been seen to have a positive effect on opportunity recognition due to exposure to more ideas and information (Newman, Schwarz, & Borgia, 2014). Furthermore, the quality of networks that entrepreneurs are immersed in determines how well individuals can utilize the network to overcome resource deficiencies such as information asymmetry. Such information could be useful for improving business practices as well as identifying new markets and locations.

1.3.2 Human capital theory

Human Capital has been described as knowledge and characteristics (innate or acquired) that contributes to an individual's productivity. In labor economics increase in human capital is usually attributed to an increase in education and training. Since these are measurable parameters, individuals with high human capital tend to attract higher wages. In entrepreneurship, scholars have observed that aspects of education and industry experience are valuable in enabling an entrepreneur make appropriate growth decisions on his firm.

Wright & Stigliani (2012) research on entrepreneurial cognition has tried to understand whether entrepreneurs use knowledge structures differently from non-entrepreneurs to access and disseminate information. They show that successful entrepreneurs think differently from less successful ones since they have a more refined and adaptive behavior which allows them to perform better in their environment. Entrepreneurs with stronger skills tend to be more prepared to handle unforeseen circumstances in the business environment.

Labor economics identify four sources of differences in human capital: i) innate ability- attributed to genetics and has been widely used to explain why some individuals are able to grasp some concepts while others aren't; ii)education (level of schooling)- the most easily observable and measurable component of human capital and is related to knowledge, skills, problem solving ability, discipline, motivation and self-confidence; iii) (business) experience - one of the most consistent predictors of future entrepreneurial performance) (Barringer et al., 2005) ;iv) cultural influences- pre-labor market influences that affect how an individual thinks. For example some cultures are more aligned with an entrepreneurial orientation due to reinforcing certain personal characteristics (Mueller & Thomas, 2001). For this study we intend to test the education and experience aspects of human capital. Various elements of the network theory will be discussed in the various chapters.

The conceptual framework will be the backbone of our study as we analyze the themes in the subsequent chapters; how poor women utilize their networks to identify opportunities and a discussion of how indigenous sources of finance are embedded in social structures and continue to thrive in the presence of formal finance.

1.4 RESEARCH METHODOLOGY

1.4.1 The Database

For the primary data, this study employed the use of two databases;

The first database, used for article 1 was sourced from FinAccess Household Surveys (FinAccess, 2016) measuring Kenya's financial inclusion. The surveys were conducted on August to October 2015.

The second database, used for article 2 was created through a data collection exercise conducted in the months of July- August 2013 in Nairobi Kenya. Male and

female respondents who were part of credit groups were interviewed with the aim of obtaining a unique set of observations.

The study employs the use of peer reviewed academic articles, relevant books and resources available over the internet to obtain secondary data.

1.4.2 Data collection

In July 2013, the researchers identified 12 groups comprising of 5-11 individuals, whose members had been active borrowers. The interviews were conducted on individual members during the weekly group meetings so as to observe the aspect of cohesiveness among the group. The questionnaires were structured to collect both quantitative and qualitative data, which was coded into categories that had been designed to answer various research questions.

We were able to collect answers from 82 respondents, 52 of them were women. The usable sample consisted of 73 individuals, 46 women and 27 men.

1.4.3 Variables

The study uses two main dependent variables to formulate statistical analysis

Article 1: *Vulnerability index:* while most studies use late payments or loan default as measure of over indebtedness, this study will use borrower vulnerability as a proxy. As Schicks (2011) points out, effects of too much debt start to take effect way before actual loan default. Individuals reduce the number of meals, take their children out of school and are unable to make rent payments and so on.

Article 2: *Opportunity recognition*: Measuring opportunity recognition is not universally feasible since markets have different types of opportunities depending on technology as well as information available. In the case of the credit group members we are considering in this paper, we propose

to measure the aspect of opportunity recognition using a construct of four different and complementary variables; type of business, business income per month, age of current business and percentage of savings.

The study uses a number of independent variables that will be discussed in detail within the different articles.

1.4.4 Statistical analysis

In the first article, the study uses ordered logit model since the dependent variable is categorical and ordered into 3 outcomes. In the first model the relationship between vulnerability and causes of over indebtedness is examined. In the second model the relationship between vulnerability and the use of savings and insurance products is examined.

In the second article we construct two regression analyses using opportunity recognition as the dependent variable to test our two hypotheses

1.5 CONTEXT OF THE RESEARCH

The African Development Bank estimates that the fastest growth on the continent will be experienced in East Africa. Fortunately or unfortunately, the highest population growth rate on the continent is also expected to come from the same region. This rapid contribution (of predominantly young people) to the emerging workforce could easily turn chronic if the concerned governments fail to develop their labor markets.

Due to low employment rates, most East-Africans are engaged in some sort of informal business or trade. Governments and policy makers, having noted that encouraging entrepreneurship in a country spurs economic activity necessary for economic growth and poverty reduction, have put measures in place that aid new

enterprises such as relaxing stringent laws and bolstering small business services that ease the cost of doing business.

Most notable is that all the three East-African governments have put in place specialised funding programs that offer interest free loans for previously marginalized groups such as women and youth. For example Tanzania's National Youth Development Fund established in 1993, Kenya's Youth Enterprise Development Fund set up in 2006 and Uganda's Youth Venture Capital Fund launched in 2011. These funds are usually channelled through financial intermediaries such as Commercial Banks or MFIs.

Kenya, Uganda and Tanzania, the founding members of the East African Community (EAC [2]) have recently revived the regional body for purposes of creating a Free Trade Area. After the removal of internal customs tariffs in 2010 and a creation of a common external tariff (CET) in 2015, the region is now working towards an Economic Union- which will be an integration of fiscal matters and adoption of a single currency.

This study hopes to contribute towards literature on the financial sector in East-Africa ahead of the planned monetary integration. The financial landscape of each of the member countries will be discussed in detail

1.5.1 Kenya

Kenya is considered a low middle income country with per capital income of $ 1,300 and an estimated annual GDP of 55.3 million. Considered as the most developed economy on the region, the country has an estimated population of 45 million; with an estimated 17.68 million in the labor force. Agriculture, which is the largest employer in the country, contributes to about 25 % of annual GDP (Johnson, 2004a; Johnson & Arnold, 2012).

[2] First established in 1919 by the British for the purpose of forming a customs union to facilitate trade

Kenya's financial sector is well developed and can only be said to rival South Africa, as the country in Africa that offers comprehensive financial services. In addition to 43 commercial Banks, the country has a strong microfinance sector. In fact banks such as Equity bank and Kenya Women Finance Trust have made Kenya a hub for innovation in the microfinance field(Fuller, 1998; King, n.d.). Currently the number of MFIs in Kenya stands at 467 (see table 1) and reports 25% of its population as excluded. Unfortunately data of the total loan book is not available as many MFIs do not report to the MIXMarket database.

Kenya made remarkable steps in mobile and banking technology with the advent of the M-PESA service, a mobile banking service that has been hailed across the world and spanned imitations.

With the cheapest mobile phones ranging between $20 -$50, the rapid uptake of mobile money has surprised observers especially since almost 40% of the population on the continent is still categorised as living below a dollar a day (Aker & Mbiti, 2010). The GSM Association approximates mobile phone penetration rates of 67% as at 2014 (GSMA, 2015). However, since purchasing a mobile phone is more affordable than installing a fixed line (due to high costs and long waiting periods), a consumer might forego basic necessities to obtain a handset. This is especially important in the East-African market where many financial transactions are today increasingly being conducted through the mobile phone.

The financial mobile phone application 'mobile money', was successfully pioneered in the East-African market through Vodacom's Safaricom network. M-Pesa, short for Mobile *Pesa*[3], was piloted as a money transfer service to cater to the cultural habit prevalent among Kenyans of sending money to upcountry relatives. Rural areas had few if any formal banking institutions and early methods of sending money included Western Union and MoneyGram. Others simply relied on sending money through post office parcels , letters or even through bus drivers; methods that carried a

[3] Pesa is Swahili for money

high level of risk(Aker & Mbiti, 2010). The mobile money application therefore addressed a real need in the market.

The product was updated to include new functions such as paying bills and purchasing items when the company realized that many consumers preferred to keep some money in their M-Pesa phone account as they would in a bank account. Today considering that 75% of the Kenyan population is said to be banked through the mobile phones, practitioners are pointing out that Mobile banking may be more viable than microfinance.[4]

Formal banking institutions quickly moved to take advantage of the growth in the mobile money market by linking M-Pesa to bank accounts. By getting their customers to deposit or withdraw money through their mobile phones, banks were guaranteed a percentage of the lucrative commissions that Safaricom was monopolizing. Today, almost every other financial institution in East-Africa has linked their products to a mobile banking platform.

Microfinance institutions (MFIs) have also adopted mobile banking to strengthen their reach to the financially excluded poor. To them, the advantages of mobile banking are clear. Widespread use has removed the need for members to physically go to the bank for loan repayments or disbursements (Kumar, McKay, & Rotman, 2010).

1.5.2 Uganda

Uganda is a landlocked country with an estimated population of 37.8 million. The country is rich in mineral deposits and recently discovered oil. After independence the country experienced massive political instability first with the dictator Idi Amin (said to have been responsible for the deaths of over 300,000 Ugandans) and later Milton Obote. Since 1986, the country has been relatively stable under President Yoweri Museveni and this has led to a rapid economic growth (Hanak, 2000; Mosley & Rock, 2004)

[4] http://www.un.org/africarenewal/magazine/august-2015/microfinance-good-poor#sthash.6S00Wc0I.dpuf

The country is considered a low income country and its labor force is estimated at 17.98 million with the population below poverty line said to be at 34% in rural areas and 14% in urban areas(Ssewamala et al., 2012).

At 30% Uganda has the highest number of financially excluded individuals compared to the other two East-African countries (see table 1). In chapter 2, we see that this is largely due to preference for informal finance. Having experienced political instability in the 80s, the financial system did not get the chance to expand as many Ugandans were fleeing as refugees. Later in the 90s Uganda was hit by the scourge of HIV/Aids and any form of financial intervention went towards helping those affected.

Nevertheless, Ugandan's have shown resilience and as their economy has grown steadily to rival Kenya's and it is now common to find trade and enterprise thriving in many part of the country. The Ugandan government has also been proactive in trying to reduce poverty through encouraging entrepreneurship (Ssewamala et al., 2012). There are 406 reporting MFIs in the country who addition to being regulated by the Bank of Uganda, are required to report all loans to the credit bureau.

1.5.3 Tanzania

Of the three East-African countries, Tanzania has enjoyed the most political stability. Unfortunately this cannot be said for the economy, as more than half of its population is said to live below the poverty line.

Immediately after independence, mainland Tanganyika and Zanzibar Island merged to form the united republic of Tanzania in April 1964 and the country adopted the socialist mode of governance, popularized by the first president Julius Nyerere. The government of Tanzania maintains presence in crucial sectors such as communications and energy. Furthermore all land in Tanzania belongs to the government and is only available for lease for 99yrs. The country has vast natural resources and mainly depends on agriculture which just like its neighbor Kenya employs almost 80% of the

workforce. Its labor force comprises of 25.28 million (Demirgüç-Kunt & Klapper, 2012; Sheuya, 2009; van den Brink & Chavas, 1997).

The microfinance sector in Tanzania was initiated as part of financial rural programs under the Financial Sector Reform Policy statement of 1991 (Kato & Kratzer, 2013). Before then, micro entrepreneurs could only access credit through the National Bank of Commerce (NBK) and the Co-operative and Rural Development Bank (CRDB). The formal banking sector has been very strong with over 50 commercial banks operating in the region. However most of these are tailored towards government or large business banking. Retail banking is not prominent and this will be seen by the high percentage of financially excluded individuals later in this study.

Table 1: financial landscape of East African Countries

	ECONOMIC INDICATORS			MICROFINANCE INDICATORS	
	Population	**Ease of doing business**	**Population below poverty line**	**Number of MFIs**	**Excluded**
Kenya	45,010,056	108	45.90%	467	25%
Uganda	37,873,253	122	19.50%	406	30%
Tanzania	53,470,420	139	67.90%	1079	26%

Source: Source: CIA world fact book 2015 & MIXMarket data 2016

1.5.4 Discussions

According to data from the CIA world fact book 2015, Kenya's rate of unemployment stands at 40% compared to Uganda's 3.8% and Tanzania's 10.3%. Furthermore 45 % of the population in Kenya are said to live below the poverty line. This is a stark contrast to the steady growth experienced in the economy due to financial sector reforms.

And as the country boasts of pioneers in the microfinance industry such as Equity Bank- a building society turned bank, KWFT- a women's only microfinance, and M-Pesa- a money transfer service that has formed linkages with formal banking sectors, it makes it an interesting area to do microfinance research.

While a research on Microfinance in East-Africa would obviously benefit from a comprehensive database of the three countries, at the point of conducting this study,

homogeneous financial data on the three countries was not available. This study had to extract data from various sources such as MIXMarket, CIA World Fact book as well as financial sector deepening reports in the respective countries (Finscope in Uganda and Tanzania, Finaccess in Kenya).

Conducting a comprehensive study of the region has its challenges. For one, the three East-African economies have largely operated autonomously and economic policies differ sharply. For example Tanzania's post-independence policy of communal holding of property means that many commercial establishments belong to the government.

Second, often the various political establishments tend to front conflicting policy agendas. For example while the Kenyan economy seems to be more robust than that of her neighbors, she has to grapple with higher levels of unemployment. This means that while growth of industry would benefit Kenya's employment sector, the value might not translate for her neighbors.

While there are number of studies done on microfinance in Uganda and Tanzania, the literature review in the next session shows that due to outliers in the field such as Equity Bank and KWFT, the microfinance sector in Kenya has experienced a more robust growth.

Nevertheless, it is important to attempt some sort of regional study especially in the light of the revived East-African community. In the following section, the study will review peer articles on microfinance in the East-African region to find recurring themes and, point out research gaps and identify new research lines.

1. 6 STRUCTURE OF THE RESEARCH

Other than the introductory chapter, the study is divided into 4 chapters; 2 essays, each addressing specific aspects of microfinance will contain a literature review, research design and presentation of findings. Finally Chapter 5 will present the study's contributions and implications for policy and practice. The table below gives an overview of the dissertation approach

Table 1: Dissertation approach

Essay title	One: Over-indebtedness among the poor: Why MFIs need to redefine financial inclusion	Gender and opportunity recognition: does social capital rank higher than human capital among poor women?
Research questions	How do indigenous sources of finance impact on MFI risk	What is the effect of networks on women enterprises
Theoretical framework	Social capital theory	Social capital theory Human capital theory
Research design	Quantitative study FinAcess data survey of Kenyan households 2016	Empirical analysis Survey from 52 micro entrepreneurs in Kenya
Key findings	Informal types of borrowing such as moneylending and ROSCAs are prevalent among poor borrowers especially since they are embedded in social structures. Borrowers use different types of credit for different needs.	Poor women in social groups use their networks to gain viable business knowledge in the absence of formal education

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Chapter II: MICROFINANCE IN EAST-AFRICA: A LITERATURE REVIEW

1. Introduction

While scholars continue to be divided on the role of microfinance in poverty reduction, most agree that it offered financial inclusion to the "unbanked" (Buckley, 1997; Morduch & Graduate, 2002). Commonly associated with offering small loans to poor people, microfinance is the umbrella name that also includes savings, insurance and money transfer services offered by a Microfinance institution (MFI).

Loans to poor people are generally considered riskier since they (the poor) lack physical collateral and are prone to income fluctuations. As such MFIs prefer to lend through group liability programs. This method has been successful primarily because it removes the aspect of monitoring from the financial institution and transfers it to the borrowers (borrowers are able to exert social pressure on one another).

The idea of funding marginalized individuals to eliminate material poverty sounds practical; since by improving people's standard of living, non-material poverty indicators such as nutrition, education, shelter, sanitation and health can be addressed (Korth et al., 2012). However a decade after the UN declared 2005 the year of microfinance, the World Bank continues to report a large percentage of global population still living in dire conditions[10]. What more, recipients of credit seems to have gotten worse off than they were before (considering the over indebtedness crisis that peaked two years later in 2009 at Bosnia and manifested in borrower suicides in 2010 at India's Andhra Pradesh district).

Previously hailed as a social intervention, microfinance is today is criticized for profiting off the poor. With rising interest rates and claims about 'the poorest-of-the-poor' being excluded (Ghosh, 2013; Hermes & Lensink, 2011).

Despite the increased presence in poorer economies and subsequent growth in lending portfolio, recent years have seen microfinance compared to commercial lending. For one, the proof out of poverty seems to be absent. In addition, evidence of a

[10] In 2012, 13% of global population was living below $2 a day.
http://www.worldbank.org/en/topic/poverty/overview

number of poor people who are collapsing under debt has led to a public outcry and calls to evaluate lending procedures.

The idea of loaning money to poor people was popularized in Asia, specifically in Bangladesh, where Nobel laureate Yunus through his Grameen Bank loaned low value amounts to groups of village women (Ghosh, 2013). The model then spread to Latin American markets where microfinance has had its greatest success. Encouragingly, poverty statistics seems to have dropped in these two regions[11]. Africa, with reported poverty levels of 42.6% as at 2012, still lags behind in terms of number of credit borrowers despite the increased presence of MFIs in the region.

Microfinance in Africa is largely viewed as a social emancipation tool. Failure on the part of many African governments to provide social benefits (such as health schemes, food subsidies and affordable shelter) has turned microfinance into an endowment; more focused on borrowers' social needs than economic sustainability. For this reason, impact studies are hard to come by and a majority of microfinance evaluations still come from Asia (van Rooyen et al., 2012).

Academic interest in microfinance in Africa has grown steadily since the 1990s, with themes seemingly parallel to the tumult in the industry. While early research articles focused effect on poverty (Buckley, 1997), group lending and moral hazard (Berhane, Gardebroek, & Moll, 2009) sustainability of lending channels (Haq, Skully, & Pathan, 2010) scholars turned their attention to over-indebtedness in the wake of the crisis' in Bolivia and India (Jessica Schicks, 2014). Today, while still addressing the issue of excessive debt, research direction is more focused on the borrower with recent articles linking credit to borrower's ability to save and entrepreneurial outcomes. There is a need for emphasis on research in Africa especially since the continent receives a large portion of development aid yet is still considered one of the poorest regions in the world.

[11] East Asia from 80% in 1981 to 7.2% in 2012; South Asia from 58% in 1981 to 18.75 in 2012,; less than 6% in Latin America and the Caribbean and eastern Europe. However poverty in sub-Saharan Africa stood at 42.6% in 2012. http://www.worldbank.org/en/topic/poverty/overview

The East-African region has experience rapid growth in the microfinance industry, with Kenya and Uganda said to be leading among African countries. In the early 90s, microfinance was primarily channeled through Non-Governmental Organizations (NGOs) which were formed and funded by donors. But that was back when the poor were regarded as 'risky'. Today the sector is experiencing competition from commercial banks, co-operatives and government agencies –all keen to tap into this lucrative segment.

The upward trajectory in the industry might lead one to wonder, 'has it always been smooth sailing?' The following section will attempt to answer this question by presenting a discussion on popular microfinance themes arising from two decades of research. We note that unprecedented changes in any sector tend to generate discussions which lead to academic interest. We hope that by identifying peer reviewed literature in the region, we would be able to pinpoint past directions and future intentions for practitioners in the industry. The study employs the use peer reviewed journals[12] to obtain relevant literature for the period 1990-2015. Initially we searched systematically for academic articles on microfinance. Then we narrowed our focus to research on Africa by setting the search terms; "Microfinance", "Africa", "East-Africa", "Kenya", "Uganda", "Tanzania".

Research on microfinance seems to have grown gradually peaking in the year 2013. Social issues such as gender, health agendas (especially HIV/AIDS) and community marginalization have long been associated with microfinance. Obviously the bias is also due to the fact that a large percentage of these studies had been commissioned or funded by bodies that are mainly concerned with poverty, health and sanitation (such as World Food Program, USAID, World Bank). The highest number of documents by a single affiliation was the World Bank (36 articles). This may not come as a surprise since the World Bank, through its subsidiary the International Finance Corporation (IFC), has continued to push microfinance as a developmental tool aimed

[12] Scopus, the largest database of peer reviewed articles was primarily used

at reducing poverty. According to their website[13], the IFC's investment portfolio in microfinance exceeded $3.5 billion as at 2014.

Despite the fact that microfinance is a mode of financial inclusion, published articles were mainly featured in development journals as opposed to banking and finance journals with "Small Enterprise Development", "World development" and "Enterprise Development and Microfinance" journals publishing the most articles.

We set out to find the past themes in microfinance and specifically for the East-African region and found that popular research themes in the last two decades were gender and sustainability of MFIs. However we find that the research direction is changing, with more recent researchers linking microfinance to effect on borrowers. These themes are discussed in detail below.

2. Recurrent themes

2.1 MFIs; Outreach, sustainability and product portfolio

Providing credit to poor people often involves high monitoring and administrative costs (Wijesiri & Meoli, 2015). Scholars now believe that this and the call for sustainability in the sector has led to commercialization of microfinance (de Haan & Lakwo, 2010). When the microfinance market becomes too commercialized however, MFIs try to force every saver to be a borrower. Furthermore in order to improve their probabilities of success, some MFIs may decide to lend in 'less-poor' areas. For example Ayele (2015) finds that despite ranking highly on presence, MFIs in the East-African region have still not achieved depth.

Cull & Spreng (2011) wonder if it is possible for commercialization and outreach to coexist since, as Chijoriga (2000) notes, if microcredit providers are not sustainable, they depend on external financial support and this makes their success fragile.

13 http://www.ifc.org/wps/wcm/connect/Industry_EXT_Content/IFC_External_Corporate_Site/Industries/Financial+Markets/MSME+Finance/Microfinance/

While previously microfinance was considered as the only viable source of financing for the poor, today borrowers from the lower income segment are inundated with offers from, among others, commercial banks, Co-operatives and MFIs (Johnson, 2004b; Marwa & Aziakpono, 2015)

A number of scholars also acknowledge that the prevalence of an informal financial sector has affected the quality of microfinance loan portfolio (Johnson, 2004a; Johnson & Arnold, 2012). Hennink et al. (2013) point out that poor borrowers value psychological and social gains more than economic gains and as such prefer to use informal credit sources which are embedded within social frameworks.

In addition, since the product offering under the microfinance umbrella has remained stunted at credit and savings (Vandenberg, 2003), poor borrowers are still excluded from other financial products such as insurance (McCord & Osinde, 2005), mortgages (Sheuya, 2009), micro-equity (Pretes, 2002) and money transfer services.

More recently, technology has transformed the microfinance industry (Musa, Akodo, Mukooza, Kaliba, & Mbarika, 2012). In particular, the rapid growth of mobile money in the region has redefined 'financial exclusion' with more East-Africans transacting through their mobile money accounts than through formal banking institutions (Johnson & Arnold, 2012). However rather than compete with existing modes of financial inclusion, mobile money is being used to complement existing financial services via linkages such as agency banking and mobile apps.

2.2 Gender

Scholars note that one of the most celebrated achievements of microcredit both in Asia and Africa is that it has been used successfully to empower women to take control of their finances (de Haan & Lakwo, 2010).

Due to traditionally established gender roles, women in East-Africa have often found themselves excluded from both labor and financial markets. As a result they

organize themselves in informal groupings geared towards collective efforts (Coppock et al., 2013).

It is within these groups that they also find it easier to obtain finance with the formality of banking procedures being unfavorable especially in a region where most middle aged women are illiterate (Henderson, 2000; Lindvert, Yazdanfar, & Boter, 2015).

Despite being marginalized and unskilled, Sigalla & Carney (2012) found that the women were able to use their networks to transform their businesses once they had access to finance and adequate training. Coppock et al., (2013) also found that female credit groups went beyond finance and that their activities contributed towards the social and human capital among members.

2.3 Poverty alleviation Vs Economic empowerment

Microfinance has long struggled with its dual purpose of poverty alleviation and economic empowerment, with scholars arguing that it is not possible to target both. For example Hanak (2000) uses case studies of two MFIs FINCA and PRIDE to illustrate this dilemma. While the said MFIs offered financial empowerment to women, there was no real evidence that their clients had benefited from the loans. In fact many were seen to be struggling due to additional workloads to repay the loans.

Economic growth is positively related to the presence of a working and effective financial sector. By providing capital to enterprises, banks facilitate operations and growth which spills into the economy through employment and taxes. However the level of growth will depend on the prevailing socioeconomic climate. For example if health and social issues tend to be overbearing in a region, loaned money will be channeled to personal use.

De Haan & Lakwo (2010) argue against the 'welfarist' approach to Microfinance having found that borrowers in Uganda were not much better off than non-borrowers. Buckley (1997) also questions the ability of credit alone to transform poor livelihoods

noting that a much broader change in social economic conditions is needed for credit to be useful.

To adequately address the poverty problem, it is important that stakeholders are aware that the poor require more than just credit. Furthermore poverty is not homogenous since in some regions, the poor are just the comparatively less privileged while in other regions the physical effects of poverty are more evident. In East-Africa, the poor are characterized by lack of steady income and non-ownership of productive assets such as land and machinery. The poor will also not have health insurance since governments in developing countries do not subsidize medical care.

A large percentage of poor people will be found in the rural areas engaging in farming activities where they grow crop that is used for basic consumption. The seasonal nature of agriculture makes them vulnerable to droughts, floods and crop fails (Munyua & Stilwell, 2010). It is for this reason that some MFIs have attempted to structure some products for farmers (Below et al., 2012; James, 2010).

2.4 Social emancipation

Governments in developing economies are slow in providing social amenities such as access to clean water and sanitation, healthcare, education, energy, jobs and infrastructure. As such, microfinance finds the poor in these countries with a physical form of poverty and embarks on social emancipation goals such as health (Seiber & Robinson, 2007), sanitation (Trémolet, Mansour, & Muruka, 2015) and uplifting of disadvantaged groups (Odek et al., 2009; Skovdal, 2010).

Microfinance is widely regarded as an empowerment tool for persons suffering from HIV/AIDS (Odek et al., 2009; Skovdal, 2010; Ssewamala et al., 2012). More recently it has been used to help disadvantaged groups such as persons with disability to earn a source of living (Beisland & Mersland, 2014).

2.5 Focus on entrepreneur

Early research in microfinance focused on the MFI, recent scholars have realized that the micro entrepreneur is crucial in determining whether the credit facility will be effective or not. It has led to increased emphasis on the kind of human capital that an individual possesses (Kamukama, 2013; Kamukama, Ahiauzu, & Ntayi, 2010) and how it affects enterprise creation (Larsen & Birch-Thomsen, 2015). MFIs also want to know if trainings are an effective way to contribute to the entrepreneurs skillset (Bjorvatn & Tungodden, 2009).

While over indebtedness has not been a major crisis in the African markets, commercialization of microfinance has pushed scholarly interest towards consumer protection (Goldsworthy, 2010; Zeija, 2013). However, we found that the research on the topic is limited.

Previously marginalized groups such as women and youth in business have made strides in being able to secure credit to uplift them.

3. Research Gaps

Our review of literature revealed three main research gaps.

First, while a number of academic articles focused on the borrower's ability to repay and effect of peer monitoring, we did not find articles that discussed business sustainability as a long term factor to continued success. Indeed literature seems to consider the micro entrepreneur as a "miracle worker"; starting a business that will inherently uplift them out of poverty should they religiously repay the loan as required.

Normally the loan amounts dictate that the recipients can only start a small subsistence business which does not offer much other than money to repay the loan. We noted that researchers have barely scratched the surface on how individuals who benefit from a micro loan grow their business by increasing material assets to finally graduate to a medium enterprise. Entrepreneur intentions and opportunity recognition seems to be the missing puzzle as why micro businesses fail.

Second, a number of recent studies have focused the microfinance portfolio of products. This could be a signal that credit should grow complementary to other services such as insurance and savings.

Finally, success of a microenterprise depends largely on the individual, hence research on microfinance would benefit from exploring entrepreneurs motives among different kinds of borrowers. It would also be interesting to observe how technology and mobile money have changed how microfinance operates within the region; for example has it helped MFIs expand their outreach to previously inaccessible areas?

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Chapter III: MICROFINANCE AND MFIs

Essay 1: **Over-indebtedness among the poor: Why MFIs need to redefine financial inclusion.**

Abstract
Financial sectors in Africa are characterized by a presence of both formal and informal players. Even with ongoing financial reforms, borrowers tend to maintain dual credit relationships since informal sources of finance are embedded in social structures. Without taking traditional lending channels into consideration, MFIs risk encouraging over-indebtedness among borrowers. Research shows that other than excessive credit supply, over indebtedness also occurs in markets where borrowers have low financial literacy. This study seeks to establish main causes of over indebtedness in East-Africa by using case data from Kenya. We deviate from using loan default as a measure of over indebtedness and instead use a proxy for vulnerability index since, as we argue, borrowers who are over indebted tend to experience psychological and physical hardships such as reduced meals way before they start defaulting on repayments. The study finds that a borrower's level of education and their demographic determines their financial vulnerability with people in rural areas found to be more vulnerable and more likely to use sources of credit such as borrowing from family, the SACCO, moneylenders or taking goods on credit from the shopkeeper.

Key words:

Financial-inclusion; over-indebtedness; East-Africa; informal-finance; microfinance

1. Introduction

One is said to be over indebted if their level of debt is higher than their repayment ability which is assessed by income, savings and assets (Graham, Ericksen, & Ericksen, 2014). Braucher (2006) offers two main grounds of over indebtedness; cultural and structural. The cultural, he argues, is individually driven and centers on consumer attitude towards debt while the structural focuses on a system of easy credit or one that

does not offer adequate financial products. Subsequent research on the topic tends to lean on either of these two perspectives.

Scholars who apportion the blame on the individual argue that borrowing excessively results from low financial literacy, financial indiscipline (Anderloni & Vandone, 2010) or 'herd behavior'- where borrowers tend to follow the behavior of other borrowers (Gonzalez, 2010). However, Gloukoviezoff (2007) distinguishes borrowers who may fall into debt as a result of circumstance from those who willingly pursue it. He notes that *active over-indebtedness, which is excess borrowing without any change in resources, differs from passive over-indebtedness, which is a result of an unforeseen change in the level of resources and/or expenditure due to an "accident" of life (unemployment, separation or illness).* More recently, school of thought directed towards investigating effects of too much debt on consumer welfare is gaining merit. As Schicks (2010) notes, debt not only affects one's financial status, it also impacts on their psychological and social wellbeing.

However since there is a general tendency for consumers to 'overestimate immediate benefits and undervalue future costs' as Anderloni & Vandone (2010) put it, credit markets are more focused on addressing the external source of financing, or structural causes as per our earlier classification. Firth (2014) finds that there are certain environments in which the risk of over-indebtedness is greater; a) those where many sources of finance are available, b) in places where there is a lack of credit bureaus, c) where the product is not suitable for clients and d) in urban markets where competition among lenders is higher. Lützenkirchen & Weistroffer (2012) also attribute over-indebtedness to a saturated market. They further note that in such a market, clients are able to obtain multiple loans from various lenders who are more concerned with competing against each other for clients. Hossain (2013) finds that inappropriate product design from financial institutions is a key contributor. He gives the example of agrarian economies that are dependent on harvests and argues that in such cases, if

timing of cash flows is not considered, a presence of informal sources of finance leads to multiple borrowing.

The problem of people not being able to manage their debt is a pretty recent one largely because the financial sector hasn't always been as liberalized as it is today. In the 1950s debt had a negative connotation and it was more common to find households limiting their purchases to what their savings could afford them. However, the rise of consumerism in the 70s and 80s coupled with liberalization of credit markets led to positive perception of consumer credit and soon levels of individual debt were rising faster than income (Kilborn, 2010). With easy availability of consumer credit such as credit cards, car loans and mortgages in developed economies, the problem of over indebtedness was clearly one of excessive supply. So how then did it take root in the poorest and most financially excluded regions in the world?

The poor are generally regarded as higher risk credit consumers. Not only do they lack financial collateral, but lending to many low value clients as opposed to few high value ones involves high monitoring and administrative costs. Furthermore the low value denominations they transact in fails to offer much investment opportunities to financial institutions (Leyshon & Thrift, 1995) . Over time, this perceived riskiness created discrimination of entire groups of people, sometimes even geographical regions such that poor regions remained cut off from formal finance. The term for this was financial exclusion.

Microfinance and microfinance institutions (MFIs) in general rose in this milieu, offering financial inclusion to marginalized poor. The belief was that the poor could transform their status if they had easy access to credit like everyone else. The microfinance movement gained momentum in the 1990s and even got pioneer Mohamed Yunus and his Grameen Bank awarded a Nobel Prize in 2006. Also notable during this period is that a number of prominent microfinance institutions, for example Banco Sol in Bolivia, converted into commercial banks. Scholars today refer to this as the 'commercialization of microfinance' (Lützenkirchen & Weistroffer, 2012).

Practitioners had realized that although small loans cost more to administer, the volumes and interest rates made them profitable (Rosenberg, Gonzalez, & Narain, 2009). Sadly by the close of the decade, the once idolized 'lending to the poor' would be accused of exploiting the same poor it was claiming to uplift.

Over indebtedness in microfinance: From unbanked to over-banked?

While multiple cases of suicide in India's Andhra Pradesh district during 2010 are probably the most infamous cases of the effect of over indebtedness in microfinance, the crisis had already occurred in other countries such as Bolivia in 1999, Bosnia in & Herzegovina in 2009, Morocco in 2008, Nicaragua in 2008 & 2009 and Pakistan in 2008 (Firth, 2014; Gonzalez, 2010; Hossain, 2013; Jessica Schicks, 2010). Until the crisis hit, few had imagined that 'too much credit' would be a talking point as far as microfinance clients were concerned. Indeed as Gloukoviezoff (2007) echoes in his article, the paradox was how an industry said to be catering to the financially excluded could be plagued with cases of too much finance. Furthermore since early research in microfinance was focused on credit risk, the psychological effect of debt on borrowers had received little regard.

The microfinance industry realized that a number of things had gone wrong. First many MFIs were blamed for 'commercializing' microfinance by limiting their scope of operation to urban markets where their overheads were low and returns high (Lützenkirchen & Weistroffer, 2012) . On closer investigation it was also noted that while the focus had been to lend to the poor, most of the time interest rates attached to microfinance were higher than bank rates and repayment periods shorter. But perhaps most jarring was the evidence that the poor had been able to access multiple loans from different MFIs. Furthermore, long term exclusion from formal finance had generated an indigenous financial system where individuals obtained *additional* short term credit (Anderloni & Vandone, 2010). For example Taylor (2012) notes that prior to the Andhra Pradesh crisis, it was common to find households borrowing from multiple

sources of credit such as MFIs, self-help groups as well as money lenders in a cycle that saw them offset old debts with new loans.

Other than shoulder part of the blame however, borrowers felt that they had been victims of 'greedy' lenders. Protests ensued, other members defaulted on their loans and the portfolio of bad loans went up. The new wave of borrower unrest brought about political interference and subsequent regulation governing MFIs (unlike banking, microfinance had been largely unregulated in many markets). In Nicaragua for example, the *no Pago* (no payment) movement was organized by a politically influenced group of borrowers (Chen, Rasmussen, & Reille, 2010) while in Pakistan, borrowers refused to pay their loans based on rumors of promised write-off. In India's Andhra Pradesh, where MFIs are blamed for over 200 suicides, the government temporarily closed as many as 50 MFIs and today still curtails lending (Chen et al., 2010; Graham et al., 2014; Hossain, 2013).

Mass default as a result over indebtedness has not been a key problem in African markets. As Lafourcade et al. (2006) find, although they report lower levels of profitability, African MFIs demonstrate the highest portfolio quality. This is not to imply that individuals are not weighed down by debt. While there were no serious cases of default, a number of borrowers tend to forgo necessities to meet their weekly repayments. As Schicks (2011) observes, default may not be an appropriate measure for over-indebtedness since it looks at the effect on the lenders (credit risk) and very little about the borrowers (psychological risks). She adds that clients who have defaulted on loans usually start experiencing the adverse effects of too much debt much earlier. For example in her study of micro borrowers in Ghana she noted that although they had not defaulted on repayments, many went without food in a struggle to repay their loans due to a high sense of obligation. Sacrifices such as working extra hours, depleting savings and foregoing the number of meals one had in the day are common for borrowers who experience reduced income. Others may resort to borrowing family and friends to meet loan deadlines, an implication of rotating debt (J Schicks, 2011).

It is important to understand the circumstances that drive borrowers into taking on too much debt so that appropriate action can be taken to prevent reoccurrence (Firth, 2014). This study aims to contribute to the research on over indebtedness in microfinance by putting forward the argument that the markets categorized as 'financially excluded' are in fact serviced by informal sources of finance that operate parallel to formal ones.

Financial inclusion when described from the perspective of developed economies could have a different intonation than when looked at from developing ones (Gloukoviezoff, 2007). For example the most common measure of inclusion is the presence of a bank account. However, while a bank account is of utmost importance in the developed world (for example in the U.S ones social security number is linked to a bank account), in developing economies it is common to survive without a bank account due to the nature of trade and source of income. In fact recent technological advancements in East-Africa have seen mobile money accounts (for example M-Pesa in Kenya) experiencing faster growth than traditional banking channels.

In the most recent surveys carried out on microfinance practitioners, over indebtedness ranked as the top risk facing the industry in 2012 and again in 2014 (Lascelles, Mendelson, & Rozas, 2014), proving that it is still a contentious issue. This study questions the sense in labeling developing financial markets as 'excluded' when in fact there is a large presence of informal credit available. We feel that the argument that MFIs have contributed to over-indebtedness in developing economies has not been fully explored.

As such we set out to find if over indebtedness in the region is as a result of availability of too much credit and lack of other financial products (structural) or as a result of consumer attitude towards debt (cultural). The study employs the use of case data from Financial Sector Deepening Kenya as a representative sample of the region.

The rest of the paper is organized as follows; section 2 will introduce the tenets of financial inclusion, section 3 discusses credit markets in East-Africa as the context of

the study, section 4 presents the methodology, section 5 the findings and section 6 concludes.

2. Literature review

Financial inclusion has been traditionally defined from a *geographical access* point of view or benchmarked against developed economies where approximately 78%-85% of total population holds a bank account (Gloukoviezoff, 2007). From this perspective, it is taken to mean 'formal banking'. However this measure may not be adequate for developing regions where traditional modes of lending have existed for centuries.

Leyshon & Thrift (1995) in their article *geographies of financial exclusion*, define financial exclusion as 'the process that serves to prevent certain social groups and individuals from gaining access to the financial system' (p.314). They find that the poor are most likely to be financially excluded due to the process of risk management. However other scholars have found that exclusion may not be linked to poverty. In their 1995 study, Baydas et al. (1995) set out to investigate if the low of use of formal finance in Egypt was indeed due to exclusion from banks or out of own preferences by the particular group. The authors found that individuals created financial products outside formal frameworks to suit their requirements. Koku (2015) uses the term *self-exclusion* to describe such individuals who may intentionally exclude themselves from formal finance either due to personal preference or if the products available are not suitable to their needs. Ghate (1992) is also of the opinion that it is the credit needs of the borrowers that ultimately determine the source of finance they seek out. For example if it is a matter of proximity, then the retail shop or an immediate family member will suffice. Credit availability may also run in line with occupation, gender and social lines (Tsai, 2004) such that women feel more comfortable borrowing from each other for immediate needs.

Due to continued growth of these informal markets, even where formal financial structures exist, scholars find that age-old assumptions that informal finance exploits the poor no longer holds true (Baydas et al., 1995; Taylor, 2012; Tsai, 2004). Early financial inclusion proponents were of the idea that growth of the formal financial sector would automatically lead to the decline of informal financial transactions(Ghate, 1992). Yet many times the choice of financing is embedded in social structures since credit markets tend to be segmented within political and social cultural contexts (Baydas et al., 1995; Tsai, 2004). A study by Klapper & Singer (2015) found that 28% of adults from Africa borrowed from friends and family compared to 5% who borrowed from formal institutions.

Firth (2014) argues that by overlooking information about the informal sources of finance available in a market, microfinance players may not have a clear picture about the extent of the risk. Guérin et al. (2009) also note that in fact microfinance does not substitute informal finance but instead compounds on it. They further add that an analysis of informal finance might help understand what clients are likely to do with credit; for example microfinance loans may be channeled into informal finance by moneylenders (Perry, 2002). Where the lenders compete for a similar market, both formal and informal lenders tend resort to the same tactics to collect their outstanding debts. Taylor (2012) finds that in rural India, MFIs tend to use similar shaming and auctioneering tactics as moneylenders. Furthermore placing additional sources of credit to existing financial resources also raises the risk of over-indebtedness among borrowers.

Some scholars argue that there is a need to promote linkages within the formal and informal financial markets (Aryeetey & Udry, 1997; Ghate, 1992) to reduce the information asymmetry associated with formal finance. As Guérin et al. (2009) point out, the main difference between formal and informal finance is the fact that the latter do not conform to legal frameworks and governments cannot monitor them. Formal financial institutions normally have to adhere to a certain set of legal regulations

enacted by law (for example the Banking Act, the Co-operatives Act or the more recent Microfinance Act enacted to govern Micro Finance Institutions).

2.1 Formal Finance

This form of finance is characterized by a regulatory framework that governs the operations of the institutions within and includes Commercial Banks, Microfinance Institutions and Co-operatives. Since transactions are traditionally account based, the common method to measure finance penetration is by number of accounts. Individuals who do not meet conditions necessarily to operate an account are then left out.

The financial sector in many parts of the world has seen an upward spike of commercial banks. Nevertheless, a large percentage of the global population does not operate bank accounts. While mode of operations has evolved to include internet and mobile accounts, banks are still rigid as far as legal requirements to be an account holder are concerned. Furthermore formal sector regulation such as banking and taxation laws raise the costs of operation for formal financial institutions consequently raising transaction costs (Ghate, 1992).

Commercial banks are now aggressively pursuing the low income segment due to the evidence that the poor can be reliable clients (Firth, 2014). This has led to heightened competition with Microfinance Institutions and Co-operatives. Competition is a good thing, especially where clients tend to benefit from a wide selection of innovative products. However when growth of client base is pursued too aggressively, lenders might find themselves compromising on lending standards. For example a number of lenders set high targets for their loan officers who in turn engage in 'predatory' lending; targeting individuals for loans when they don't necessarily need the money.

Most MFIs (particularly in developing nations) started as credit-led programs, usually government subsidized rural programs meant to catalyze development in these areas. Others developed as NGO initiatives which received aid from donor agencies.

Farming and village associations in Africa that started as an early form of savings mobilizations have today evolved into Micro banks or Savings and credit unions (now known as Co-operatives) to meet rising demand for financial services (Basu, Blavy, & Yülek, 2004). The rapid growth of the microfinance industry saw a number of MFIs convert to commercial banks to enable them to mobilize savings, improve customer operations, expand outreach and access commercial capital. Examples include Banco Sol in Bolivia and K-rep Bank in Kenya.

2.2 Informal Finance

In the absence of personal savings, family or friends is the next most used channel to obtain emergency credit. Informal finance is actually considered more accessible and easily available by borrowers even where formal institutions are available. One of the notable differences between formal and informal finance is that transactions in the latter rarely employ the use of legal documentation to enforce contracts as lending tends to be relationship based(Steel et al., 1997). Since informal finance operates 'within' social structures, its key strength is that the lender can easily obtain information on their client's creditworthiness (Turvey & Kong, 2010). The loan amounts are also flexible such that one can borrow as little as they wish with a quick turnaround time. Contrary to the popular image of the 'high interest' money lender, many informal sources will demand little if any interest since they do not incur overheads such as rent or staff salaries as banks do (Baydas et al., 1995).

Popular modes of informal finance include rotating savings and credit associations (ROSCAs), money lenders, pawn shops and community groups that cater for collective emergencies such as funerals and medical bills (Guérin et al., 2009). By volumes, informal loans tend to surpass formal ones especially among households where small loan amounts are required for a brief duration (Ghate, 1992).

Due to limited sources of finance, informal lenders maintain their liquidity by depending on collections from their informal savings clubs. More recently a trend

where moneylenders obtain loans from formal institutions such as banks and MFIs to supplement their liquidity has been observed. As Madestam (2014) found out, a formal banking sector complementary to informal sources in fact aided informal lenders to access liquidity. In her ethnographic research Perry (2002) also interviewed women who accessed formal loans for informal or moneylending, business. She found that since the roles that women occupied in society hindered them from carrying out complex businesses that would offer higher return, and with few investment alternatives, lending money to friends and neighbors for a quick return becomes a viable option (Perry, 2002). Baydas et al. (1995) also found that women in Egypt preferred to save their money with informal 'money keepers' despite there being a relatively good access to commercial banks. For some was due to Islamic teachings against paying or receiving interest.

There is less information asymmetry among a community of people as opposed to formal lenders which makes informal lending thrive (Turvey & Kong, 2010). Steel et al. (1997) find evidence that default rates on surveyed moneylenders were lower than formal finance. Even where defaults happened, the lenders were sure that the loan would be repaid within 3 months. Greif (1997) contends that informal financial systems tend to be self-enforcing because they operate within social structures that are embodied in personal trust and reputation. He however cautions that this is true more for collectivist societies where trust within social networks is of key importance for successful financial transactions. Turvey & Kong (2010) in fact found that other than informal credit occurring as a result of lack of formal credit, it was due to preference of informal bonds and its occurrence actually made the need for formal credit lower.

3. Context of the study

3.1 Credit markets in East-Africa

Even with the growth of formal finance, informal finance still dominates transactions in Africa. Klapper & Singer (2015) find that cost, distance and

documentation are commonly cited as the reasons adults in Africa do not have financial bank accounts.

The financial landscape in East-Africa has changed drastically since the 1980s. Early financial institutions were building societies or credit unions that operated along agrarian communities. Some of these were upgraded into co-operative societies or SACCOs while others became banks, most notable being Equity Bank in Kenya which grew from a Cooperative Building Society.

Savings and credit cooperatives (SACCOs) first emerged in East-Africa the late 1960s out of credit systems of farming cooperatives common in cash crop areas and grew at an unprecedented rate. For example it is estimated that in Kenya their number rose from 630 in 1978 to 4,500 in 2004 with over 3 million SACCO registered members. SACCOs are established under the Co-operative Societies Act and commonly operated as a workplace based savings and credit associations. They are an important form of financial intermediary as members are able to borrow equivalent to three times their own savings and use other member's savings as collateral (Facet, 2004; Fromell & Institutionen, 2012;). Financial sector deepening Kenya classifies deposit taking SACCOs as formal prudential since they are regulated by an independent statutory agency (see table 1 for reference).

By the 90s the financial sector had boomed due to rapid expansion of international banks and aggressive penetration by Microfinance Institutions (MFIs). Initially, MFIs operated as donor funded Non-Governmental Organizations (NGOs), fronting poverty eradication initiatives by aligning with health and sanitation causes. Over time and as the microfinance sector grew globally, MFIs focused on offering credit, emphasizing on group lending to militate against lack of collateral. Today MFIs have been able to mobile deposits by registering as deposit taking MFIs. Those that are unregulated are considered a semi-formal mode of financial inclusion. See Table 1 for a classification of financial institutions into broad categories.

Table 1: Classification of Financial Inclusion

Classification	Institutions
Formal prudential	Commercial Banks, Deposit taking MFIs, Insurance service providers, Deposit taking SACCOs
Formal non-prudential	Mobile financial services, postbank, National Health fund
Formal Registered	Unregulated SACCOs, Unregulated MFIs, Hire purchase companies
Informal	Groups e.g ROSCAs and CHAMAs, Shopkeepers, Employers, Moneylenders
Excluded	Own savings, Family & friends

Source FinAcess 2016

Despite the presence of formal and semi-formal financial players, a large percentage of the population in East-Africa still use informal sources of credit. Table 2 shows a comparative analysis on the status of the financial sector in East-Africa. Kenya and Tanzania show a strong usage of formal and semi-formal financial institutions, while Uganda has the highest percentage of the population using informal finance. Uganda also has the highest number of financially excluded individuals.

Rotating savings and credit associations (ROSCAs) is the most common form of informal finance around East-Africa. These kind of groupings which go by different names in the various cultures, usually consist of around 5 to 20 members (either work friends or neighbors), who contribute a specified amount every month. Each month one (or two) of the members receives the lump sum amount and this goes on until each member has had their turn to receive the money. For women engaged in subsistence trade, this form of savings is preferred to placing money in the bank. This is especially because the ROSCAs present a sort of social interaction among the women (van den Brink & Chavas, 1997).

ROSCAs today have evolved from being savings groups to investment groups. It is now common to find men participating in such self-help groups to raise money for joint investment in land or shares. This target market is so prevalent that today formal banks have a special *Self-help group loan* to target individuals saving in ROSCAs. It is

due to the strength of the informal linkages existing within communities as self-help groups (SHG) or ROSCAs that microfinance group-lending has been successful in Africa and Asia.

Table 2: Financial Inclusion in East-Africa

Status	Kenya	Uganda	Tanzania
Excluded	25%	30%	26%
Informal only	8%	42%	16%
Formal (prudential, non-prudential, registered)	67%	28%	58%

source: Finscope Tanzania 2013

Kenya's position as a global leader in technological innovations of mobile money has reduced the percentage of individuals who were said to be 'financially excluded'. Mobile money has relegated the need for formal bank branches as well as ATMs such that today having a bank account is no longer an accurate measure of financial inclusion. With the mobile money accounts able to facilitate savings, credit, and payment for services formal banking services no longer appeal to the majority.

Data from MIX Market (table 3), puts mobile money as the fastest growing financial segment in the region with all three countries reporting large numbers of mobile money agents. Kenya is leading the pack with one agent for every 683 people while in Uganda there's an agent for every 2,200 people and one for every 3,233 in Tanzania. The rate of penetration for MFIs is quite low in East-Africa, with Tanzania leading with 1,079 MFIs.

Table 3: comparison of MFI penetration rate across East-Africa

Indicator Name	Population	Number of MFIs	Number of commercial banks	Number of mobile money agents
Kenya	45,010,056	467	1,272	65,943
Uganda	37,873,253	406	344	17,867
Tanzania	53,470,420	1,079	478	16,540

Source: MIXMarket data 2016

3.2 Kenya; A case study

Currently regarded as East-Africa's biggest economy, Kenya has seen a rapid growth in financial sector reforms in the last two decades. A Microfinance Bill governing the microfinance sector was enacted in 2006 and fully enforced in 2008. It allowed MFIs to mobilize liquidity through deposit taking. The country also passed the Finance Act in 2008 to increase the minimum core capital for banks to Kshs.1 Billion by the year 2012.

More recently, in 2016 the Kenyan Parliament reviewed the Banking act of 1991 and moved to reintroduce capping interest rates for commercial banks rates at 4% above the central benchmark rate. While not popular with financial experts, the move was seen as a way to appease consumers many of whom complain that banks are making large profits at the expense of borrowers. With a large presence of both commercial banks and MFIs, it is also seen as a way to monitor credit supply into a market where borrowers already seem to be spoilt for choice.

Financial Access cycle surveys in 2006, 2009 and 2013 conducted by the by the financial sector deepening, show that Kenya reduce the number of excluded individuals from 43% to 25% within a 7 year period (see table 4). However while more than a third of the population used informal finance with only 12% using formal finance in 2006, the trend had changed by 2013 with 8% reporting to only using informal finance against 39% of those using formal sources.

Table 4: Access overlap Kenya

Status	**2006**	**2009**	**2013**
Excluded	43%	37%	25%
Informal only	32%	26%	8%
Formal and informal	14%	22%	28%
Formal only	12%	15%	39%
source: FinAcess 2016			

Perhaps the most important observation is that the number of respondents choosing to combine both formal and informal sources of finance has doubled. This presents a problem to MFIs and indeed the formal financial sector as a whole because

while credit bureaus have been successfully introduced, debt from informal sources is unlikely to be captured.

The microfinance umbrella involves inclusion of savings, insurance, along with credit. But today most MFIs have concentrated on offering credit largely because they (MFIs) need to be sustainable and generate a profit to repay investors. This study seeks to find if additional sources of credit from MFIs contributes to financial vulnerability of borrowers.

As introduced earlier, Braucher (2006) offers two main grounds of over indebtedness; cultural and structural. We use a sample of data from the financial sector in Kenya to test the predominant cause of over indebtedness in the region. Specifically we seek to answer the question is over indebtedness as a result of excessive supply of credit or due to borrower illiteracy on repercussions of debt?

4. Methodology

4.1 Description of data

The study uses data from FinAccess Household Surveys (FinAccess, 2016) measuring Kenya's financial inclusion. The surveys were conducted on August to October 2015. Financial sector deepening Kenya has carried out surveys every three years since 2006 in an attempt to observe the changing financial landscape.

4.2 Description of variables

Table 5 summarizes the variables that we use to determine the relationship between structural and cultural causes of over indebtedness. The following section offers a brief a brief description of each of the variables.

Table 5: summary of variables used in regression

Dependent variable	vulnerability index
Independent variables	
Structural	urban/rural overlap number of financial services source of credit savings and insurance products
cultural	financial literacy education
moderating variables	Age incomegroup source of livelihood wealth quantile

4.2.1 Dependent variable

Vulnerability index*:* while most studies use late payments or loan default as measure of over indebtedness, this study will use borrower vulnerability as a proxy. As Schicks (2011) points out, effects of too much debt start to take effect way before actual loan default. Individuals reduce the number of meals, take their children out of school and are unable to make rent payments and so on. Above 50% of the respondents are least vulnerable with only 6% being highly vulnerable.

The proxy comprises of visible effect of debt, such as those who may have had their goods auctioned to pay a loan.

Table 6: vulnerability index

vulnerability Index	**Freq**	**%**
Most vulnerable	564	6.5
vulnerable	3,079	35.6
least vulnerable	5,004	57.9
	8,647	100.0

4.2.2 Independent variables

We will test the relationship between structural and cultural causes of over indebtedness according to the classification offered by Braucher (2006) using the following variables.

A. Structural causes:

Urban/rural- lenders tend to be more concentrated in the urban markets due to low costs of penetration. However, previous studies have shown that a larger percentage of individuals seeking financing tend to live in the rural areas. Our data shows that 55% of the respondents are rural dwellers (see table 7). Since a larger percentage of Kenya's are found in the rural areas the sample is a true representative of population.

Table 7: Demographic

Urban Cluster	**Freq**	%
No	4,852	56.0
Yes	3,813	44.0
	8,665	100.0

Overlap of financial services used: A large percentage of respondents reported to using multiple sources of finance with only 1.2% reporting that they only used banks. Of the sample, 21% reported to not using financial products. Table 8 also shows that combining formal finance with informal finance was common (20%).

Table 8: Overlap of financial services

Overlap	**Freq**	%
Formal prudential only	104	1.2
Formal other only	1,409	16.3
Informal only	712	8.2
Formal prudential and formal other	1,346	15.5
Formal prudential and informal	79	0.9
Formal other and informal	1,348	15.6
Formal prudential, formal other & informal	1,786	20.6
Excluded	1,881	21.7
	8,665	100.0

We also include a variable for type of credit used, since we hope to find if indeed MFIs contribute to borrower vulnerability. Table 9 lists the dummy variables for the type of credit that will be used later in the regression.

Table 9: Popular sources of credit

Name of source	Description
Employer	salary advance obtained from employer
Mobile	short term credit advanced by M-Pesa mobile money service
SACCO	loan advanced by cooperative
MFI	loan advanced by Microfinance
Government	loan advanced through Government grants e.g Women fund, youth fund
CHAMA	loan advanced by ROSCA
Family	loan advanced by family or friends
Moneylender	loan advanced by moneylender
shopkeeper	obtain goods on credit from shopkeeper
hire purchase	pay for electronic goods or furniture through hire purchase stores
overdraft	revolving credit advanced by commercial bank
credit card	making purchases through credit card

In contrary to common perception, the poor may not be constantly looking to borrow or increase their loan size. Such assumption simply shows a lack of diverse products tailored to different needs. To this effect we seek to test whether borrowers who use savings or usage of insurance products are less vulnerable than those who use credit to meet their emergencies. Table 10 presents dummy variables for savings & insurance products in the market.

Table 10: Savings & Insurance products

Name of source	Description
emergencyfunds	savings retained in bank account
Carinsurance	motor vehicle insurance policy
privatehealth	private health insurance policy
lifeinsurance	life insurance policy
NHIF	government health policy paid through employer
Educationpolicy	education insurance policy
retirementpolicy	retirement insurance policy
NSSF	government retirements benefits paid through employer

B. Cultural causes

Financial literacy; some scholars suggest that over indebtedness is normally caused by individuals with low financial literacy. The sample shows that only 28% of the respondents were considered to have high financial literacy.

Table 11: Financial Literacy

Financial Literacy	**Freq**	%
Low	3,171	36.6
Medium	3,024	34.9
High	2,470	28.5
	8,665	100.0

Education: the level of education also determines what borrowers do with the money and ability to save. As shown in table 12 below, the largest number of respondents has basic primary education.

Table 12: Education

Education level of respondent	**Freq**	%
None	1,561	18.0
Primary	3,865	44.6
Secondary	2,416	27.9
Tertiary	823	9.5
	8,665	100.0

C. Moderating variables

Other variables such as age, source of livelihood, income group and wealth quintile will be used as moderating variables in the regression analysis. Tables 15 and 16 look at the source and level of income. As Kenya is primarily an agrarian economy, it is not surprising to find that a large number of respondents (30%) claim to be making a living through farming.

Table 13: Age

Agegroup	Freq	%
16-17yrs	457	5.3
18-25yrs	1,971	22.7
26-35yrs	2,529	29.2
36-45yrs	1,522	17.6
46-55yrs	876	10.1
>55yrs	1,310	15.1
	8,665	100.0

Table 14:Income group per month

Income group	Freq	%
Ksh0-100	63	0.7
Ksh101-1500	1256	14.7
Ksh1501-3000	1338	15.7
Ksh3001-7500	2110	24.7
Ksh7501-15000	1834	21.5
Ksh15001-30000	1175	13.8
Ksh30001-50000	381	4.5
Ksh50001-100000	277	3.2
Ksh100001-200000	59	0.7
Over 200000	36	0.4
	8,529	100.0

Table 15:source of livelihood

source	Freq	%
Agric	2639	30.5
employed	939	10.8
Own business	1690	19.5
Dependent	1827	21.1
other	95	1.1
Casual laborer	1475	17.0
	8,665	100.0

Table 16:Wealth Quantile

Description	Freq	%
Poorest	1931	22.3
Second Poorest	1618	18.7
Middle	1733	20.0
Second Wealthiest	1704	19.7
Wealthiest	1679	19.4
	8,665	100.0

In the section below we discuss the findings of the regression models established using the variables described above against the vulnerability index.

5. Findings

The study uses ordered logit model since the dependent variable is categorical and ordered into 3 outcomes. In the first model we examine the relationship between vulnerability and causes of over indebtedness. The second model will examine the relationship between vulnerability and the use of savings and insurance products.

5.1 Cultural causes vs structural causes of over indebtedness

The model incorporates variables for cultural causes and structural causes of over indebtedness against the dependent variable of vulnerability index. The regression also takes into account the various sources of credit in the market. The findings of the first model are presented in table 17.

When we examined the effect of the individual led factors to over indebtedness, the results once again were not consistent with previous research which argues that low financial literacy is directly linked to tendency to incur too much debt. For our sample, we found that type of employment and level of education was significant indicators of how vulnerable individuals were as opposed to their financial literacy. For this regression we also noticed that unlike the earlier results of structural effects, the age group and type of livelihood were also not significant factors.

The regression shows that overlapping sources of credit is not significant. This result is surprising as a common indicator for over indebtedness happens to be multiple credit use. However type of financial access and demographic is significant.

The results also show that the type of credit is significant to the borrowers' vulnerability; Loans from family members and obtaining goods on credit from the shopkeeper were both highly significant and SACCO loans and credit from the moneylender were also significant.

Despite the fact that MFIs are operating in an already saturated market, the study found that loans from MFIs were not seen to be a significant contributor to borrower vulnerability.

Table 17: regression analysis of causes of overindebtedness

		Whole sample		Reduced models			
				Structural		Cultural	
		coefficient	p-value	coefficient	p-value	coefficient	p-value
Agegroup		-0.02	0.1260			-0.02	0.4030
Incomegroup		0.06	0.0370 **				
Source of livelihood		-0.11	0.0000 ***			-0.03	0.1760
Wealth quantile		0.53	0.0000 ***	0.53	0.0000 ***	0.66	0.0000 ***
Urban		-0.26	0.0000 ***	-0.2683	0.0000 ***		
Overlap		-0.01	0.1740	-0.0146	0.1480		
Source of credit							
	employer	-0.07	0.5830				
	mobile	-0.06	0.6400				
	SACCO	0.33	0.0180 **				
	MFI	0.14	0.4730	0.1196	0.537		
	Government	0.11	0.6720				
	CHAMA	-0.18	0.1830				
	Family	-0.38	0.0000 ***	-0.3798	0.0000 ***		
	Moneylender	-0.72	0.0660 *	-0.7798	0.045 **		
	Shopkeeper	-0.45	0.0000 ***	-0.4452	0.0000 ***		
	Hirepurchase	-0.17	0.6470				
	Overdraft	-0.59	0.1030				
	Creditcard	-0.28	0.2940				
Education		0.33	0.0000 ***			0.2985	0.0000 ***
Financial literacy		-0.34	0.3560			-0.064	0.2580
Log Likelihood		-6682.3393		-6691.5360		-2776.6266	
Pseudo R2		0.1038		0.1025		0.1115	
N		8647		8647		3651	

Statistical significance: * p-value < 0.1 ; ** <0.05; ***< 0.01

Dependent variable: Vulnerability Index

5.2 Effect of using savings and insurance products

Due to the way in which their function and products are structured, MFIs try to force every saver to be a borrower, such that one who only saves but does not borrow is edged out of the MFI. Many clients pretend that they need microfinance (which is associated with microenterprise lending) while in real sense they require micro credit to meet with short term emergencies such as medical emergencies, school fees and meals.

The findings of the second model are presented in table 18. The results show that borrowers in permanent employment were more likely to have emergency savings in the bank. Furthermore while financial literacy was not significant in determining type of credit used, both education and financial literacy were significant in the use of savings and insurance products with borrowers more likely to prefer an education policy over health or life policy.

Table 18: regression analysis on use of savings & insurance products

	Whole sample		
	coefficient	p-value	
Agegroup	-0.01	0.6400	
Incomegroup	0.02	0.7450	
Source of livelihood			
permanent employment	0.35	0.0000	***
casual employment	0.01	0.6990	
Wealth quantile	0.59	0.0000	***
Urban	-0.03	0.7310	
Overlap	-0.01	0.4430	
Savings and Insurance products			
emergency funds	0.82	0.0000	***
carinsurance	0.62	0.3270	
privatehealth	-0.43	0.1940	
lifeisurance	-0.55	0.1850	
NHIF	0.22	0.1130	
educationpolicy	-1.07	0.0330	**
retirementpolicy	0.12	0.8200	
NSSF	-0.12	0.5480	
Education	0.28	0.0000	***
Financial literacy	-0.14	0.0150	**
Log Likelihood	-2715.9317		
Pseudo R2	0.1310		
N	3651		

Dependent variable: Vulnerability Index
Statistical significance: * p-value < 0.1 ; ** <0.05; ***< 0.01

6. Discussions and Conclusion

Citing a 2010 report done by CGAP on the crises in Nicaragua, Morocco and Bosnia, Graham et al. (2014) list the common denominators in an over indebted market as concentrated market competition and overstretched MFI controls coupled with an erosion of lending discipline. In many developing countries poverty is concentrated in the rural areas(Facet, 2004). However MFIs are reluctant to penetrate due to costs of entry. This view is shared by Chen et al. (2010) who also found that MFIs tended to cluster around urban centers instead of spreading to rural areas. This gives the idea that the borrowers might not be the 'excluded' or the extremely poor. Hermes & Lensink (2011) also allude to a sort of discrimination whereby to increase

their rates of success, MFIs lend in non-poorer areas since they prefer clients who have ongoing businesses and are able to repay loans.

The low MFI penetration rates in East-Africa suggest that MFIs are not moving their operations into new areas but instead lending to repeat borrowers. Furthermore when products are either too expensive, or ineffective, borrowers tend to revert to old ways of trusted informal sources of credit. For example after the state curtailed lending in Andhra Pradesh, a study by micro save found that in the absence of microfinance, borrowers returned to moneylenders (Firth, 2014).

The current study has shown that MFIs do not directly contributes to over indebtedness. However since it has been noted that vulnerable borrowers are more likely to borrower from friends, the SACCO or from the moneylender, MFIs need to apply caution since these modes of informal finance are not captured in the credit reference bureau (CRB). Without such information, a credit officer may not really know the extent of the risk that the borrower poses. Restricting supply of consumer credit is key towards curbing culture of consumer consumption (Braucher, 2006; Kilborn, 2010) .

This study also finds that while it's true that the formal financial sector seems to run parallel to an informal one, source of credit rather than overlap is a better predictor of borrowers' vulnerability. Taking goods on credit at the local shop has long been the easiest form of debt for poor households. It is no wonder then that commercial banks are tapping into this segment of retail shop to expand their reach through informal agents (for example Kenya's Co-operative Bank runs an agency banking known as *Co-op kwa Jirani* along existing retail businesses).

The study did not find that cultural factor of financial literacy was a determinant in the level of a borrower's vulnerability. However structural factors of demographic and access were.

We also presented the argument that microfinance needs to address a different need other than credit. For example health and education insurance seems to be a

category that the poor are excluded from due to lack of formal work contracts. Due to poor product offering, borrowers may use credit facilities to meet emergencies. For example, people who lack access to health or life insurance may seek out credit to cater for unexpected circumstances (Braucher, 2006). Our study found that both financial literacy and level of education were significant to using savings and insurance products. While other forms of insurance such as health and accident insurance were not significant for this sample, Education insurance was significant; perhaps indicating the level of emphasis that the poor might place in the education of their children.

Personal savings or borrowed money seems to be the common ways in which people react to emergencies.

With the rapid domination of mobile money in the East-African market, financial inclusion no longer implies having a bank account. Both formal and informal finance have benefited from the dynamism and flexibility of mobile operated accounts. It is in this landscape that microfinance practitioners will be challenged to explore new frontiers in an effort to reach the 25%, 30% and 26% of individuals said to still be excluded in Kenya, Uganda and Tanzania respectively.

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Chapter IV: MICROFINANCE AND GENDER

Essay 2: Gender and Opportunity Recognition: Does Social Capital rank higher than Human Capital among poor women?

Published in IJESB: reference: Mbaya, C.K. and Estapé-Dubreuil, G. (2016) 'Gender and opportunity recognition: does social capital rank higher than human capital among poor women?', Int. J. Entrepreneurship and Small Business, Vol. 27, No. 4, pp.542–559.

Abstract**:**
In many developing countries, it has been noted that women lack human capital in the form of education and work experience and consequently create social capital and networks to account for the deficit. This paper seeks to find if women are more inclined to utilize social capital to identify opportunities. The study is based on a comparison of male and female micro-entrepreneurs from Kenya. The results showed that while both forms of capital were equally important, men and women utilized different aspects of human and social capital to identify opportunities. Culture was noted to contribute to formation of social capital among women.

Key words: Gender, Opportunity Recognition, Human Capital, Social Capital, Culture, Kenya, Entrepreneurship

1. Introduction

An entrepreneur is more likely to identify an opportunity if he/she possesses both prior information and the cognitive skills to make sense of the information (Shane, 2000). And according to DeTienne and Chandler (2007) the ability to decipher information differs among the genders since the practice of learning and developing knowledge is distinctive among men and women.

Due to women's traditional roles, their cognitive processes especially regarding entrepreneurship have often been considered inferior. In fact Ahl (2006) observes that

due to women being discussed as having insufficient education or experience, less desire to start a business, being risk averse and having a psychological make-up that is less entrepreneurial, their businesses have often been viewed as being of less significance. Furthermore, attributes that are used to describe a successful entrepreneur such self-efficacy and risk taking are more male centered (Birley, 1989) since women are expected to take up more nurturing roles. Gender stereotypes therefore tend to reward traits such as assertiveness and independence in men while punish the same traits in women (Mueller, 2004). The outcome of this categorization is a lower emphasis on human capital skills among women.

Mueller (2004) also adds that gender stereotyping tends to be higher in less developed countries; an observation that suggests that economic development, to an extent, moderates gender differences. In nations that are dominantly patriarchal, the ability of women to participate freely in entrepreneurship activities is determined by the ethnic cultural atmosphere and their perceived roles in the community (Mungai and Ogot, 2012). Other than agriculture, self-employment in small enterprises is the most common form of women's participation in the labor force in less developed countries (Mitchell, 2004). Women in these countries are usually excluded from the labor market and choose to start a business as a result of being less educated or confined to roles that require them to work within the home (Langowitz and Minniti, 2007; Baughn et al., 2006). Those women that venture into business often find that the high growth industries such as manufacturing and production are difficult to penetrate into due to barriers created by social capital formed among men (Mayoux, 2001).

Group-based microfinance largely targets women, due to the assumption that social capital is one of the few resources that they have. We examine this argument by observing the extent that social capital and human capital aid in opportunity recognition among a sample of poor borrowers. We use the opportunity recognition framework proposed by Ardichvili et al., (2003) which identifies entrepreneur's personality traits, social networks and prior knowledge as complementary factors

affecting the process. By so doing we attempt to offer a new perspective on aspects that facilitate women entrepreneurship in developing economies. Opportunity recognition has been previously discussed by a number of scholars in various subjects but DeTienne & Chandler's 2007 study remains the only one that has specifically analyzed gender differences in opportunity recognition. We hope to advance these findings by introducing a comparison between social capital and human capital among the genders within a cultural context.

Our goal in this paper is twofold. First, we investigate if human capital is a better indicator of opportunity recognition in men than in women and second if social capital is a better indicator of opportunity recognition in women than in men. We note that in developing economies women have fewer opportunities to develop their human capital than men and hence use networks (social capital) as a substitute to identify opportunities. The rest of the paper is organized as follows. Section 2 presents the literature review, section 3 presents the hypotheses, section 4 introduces the context of the research, section 5 describes the data and research methodology, section 6 presents the findings and section 7 concludes.

2. Literature review

2.1 *Opportunity recognition in entrepreneurial ventures*

In examining the entrepreneurial process, a number of researchers have turned their focus on opportunity recognition, the means by which new ideas for successful ventures are identified (Baron and Ensley, 2006; Eckhardt and Shane, 2003; Langowitz and Minniti, 2007). Since the process has been linked to growth in enterprises there is a mounting interest in what makes one able to identify an opportunity.

The term 'opportunity' as pertains to business refers to a condition favorable for generation of income. Baron (2006) terms it as the perceived means of generating

profit that has not been exploited by others hereby suggesting that an opportunity should have a 'newness' or 'uniqueness' to it. Ardichvili et al., (2003) point out that an opportunity can arise as a result of unemployed resources, or undefined market need. A growing market presents a number of opportunities for the participants for example if a demand exists and other suppliers cannot meet it, this presents an opportunity to those who can (Timmons et al., 1987). An opportunity may also arise as a result of owner differences, for example an individual who has worked in a given industry has a better chance in the same industry due to understanding the opportunity costs in the sector.

Opportunity recognition is therefore associated with exploiting a favorable condition (in the market) by employing resources and overcoming risk to attain a set financial goal. The occurrence of opportunities is random. And opportunities are available to all players in the market. However, the successful entrepreneur sees possibilities where others see obstacles. Various reasons have been suggested as to why some people are able to spot opportunities why others aren't. Some scholars underline the innate ability and personality traits of the entrepreneur (e.g. Mitchell et. al, 2002; Baron, 2004; Shane et al., 2003; DeTienne and Chandler, 2007), others propose that the ability of individuals to extract benefits from their social structures gives them an edge (Ramos-Rodríguez et al., 2010; Davidsson and Honig, 2003) while others still propose that experience and prior knowledge (information) is a prerequisite to opportunity recognition (Shane, 2000). Vaghely and Julien (2010) also note that an opportunity is a combination of creativity, innovation and market information.

What might constitute an opportunity in one market may seem like a generic idea in another. Furthermore, the attractiveness of an opportunity diminishes as the information becomes readily available to a number of market players. This study therefore defines opportunity recognition in respect to sensitivity to market needs and ability to spot suboptimal deployment of resources (Ardichvili et al.,2003).

2.2 *Culture and opportunity recognition*

Opportunity recognition and the eventual decision to start a business normally does not occur in a vacuum but through a process of cultural and social linkages that involve human networks (Krueger & Brazeal, 1994). Studies are now trying to examine if the process of identifying opportunities is similar across cultures (e.g. McGrath et al., 1992; Mueller & Thomas, 2001).

Culture, described as the collective programming of the mind that distinguishes members of one human group from another (Mueller & Thomas 2001), acts as the underlying framework to economic activities in a country since it contributes to shaping entrepreneurial values and attitudes (Minniti & Nardone, 2007; Mueller, 2004). Krueger & Brazeal (1994) also add that since social norms are tied to our perceptions of what society thinks, the intensity of the entrepreneurial spirit is affected by surrounding culture. This, as pointed out by Mueller (2004), has made some societies appear more innovative than others. Some cultures might also be more aligned with an entrepreneurial orientation due to reinforcing certain personal characteristics (Mueller & Thomas, 2001). Other cultures may frown upon individual profit making activities and instead support communal activity such as agriculture or livestock keeping (Light & Dana, 2013). In fact Dana (1995) finds that the motives of the 'cultural entrepreneur' differ from other types since their behaviors are more dependent on societal norms and to values which they are conditioned to.

Due to lower entrepreneurial propensity among people in developing nations, there has been a misconception that traditional cultures and differing language is a barrier to economic development (Peredo et al., 2004). However, as noted in the previous paragraph, some cultures value entrepreneurial behavior while others do not (Dana, 1995). For example in their study of entrepreneurial intentions among the Aluttiq people of Alaska, Light & Dana (2013) found that commercial entrepreneurship was valued by the European and American immigrants while the Alutiiq valued the traditional economic life of hunting and fishing. Psychologist Dr. Geert Hofstede's groundbreaking research in the 70s attempted to understand cultural differences

between nations. Decades of research and thousands of interviews later, he identified four dimensions of culture which are now an internationally recognized standard for scoring countries; power distance, individualism, masculinity and uncertainty avoidance.

This study uses the masculine/feminine and individualism/collectivists dimensions as a cultural basis to test our hypothesis. We argue that a culture with high masculine dimension designates women to traditional gender roles thus leading to a lower utilization of human capital. Welter (2011) points out that in some cultures female entrepreneurship is considered as "breaking the norm" and consequently cultural barriers (traditions) are enacted to restrict it. We also argue that a collectivist culture leads to high formation of social capital. It has been noted that high levels of social capital in a group encourage information sharing, crucial for business growth. In the next section we discuss in detail the extent to which human and social capital contributes to opportunity recognition.

3. Hypothesis development

3.1 Human Capital and opportunity recognition

In their study of nascent entrepreneurs Davidsson & Honig (2003) find that human and social capital support entry into nascent entrepreneurship. Shane (2000) states that an entrepreneur only discovers an opportunity related to his or her prior knowledge. This, he says, is because prior knowledge triggers recognition of the value of new information. Smallbone & Welter (2006) also state that entrepreneurs fall back on previous successful behavior if faced with a similar situation. Arenius & De Clercq (2005) is of the view that opportunities are recognized by some and not others depending on their different access to resources. Dana (1995) notes that some psychological traits such as risk taking and need for achievement have been noted to push some individuals into entrepreneurship. Davidsson & Honig (2003) also give past empirical research that shows a positive relation between human capital variables of

education and prior experience to opportunity recognition. However, they also point out that social networks have been seen to supplement the effects of education and experience.

Human Capital has been described as knowledge and characteristics (innate or acquired) that contributes to an individual's productivity. In labor economics increase in human capital is usually attributed to an increase in education and training. Since these are measurable parameters, individuals with high human capital tend to attract higher wages. Education is the most easily observable and measurable component of human capital and is related to knowledge, skills, problem solving ability, discipline, motivation and self-confidence. Innate traits such as creativity and communication skills are enhanced through higher education. Arenius & Clercq (2005) found that people with a higher education are likely to perceive entrepreneurial opportunities.

According to Barringer et al., (2005) prior entrepreneurial experience is one of the most consistent predictors of future entrepreneurial performance. Entrepreneurs who have taken part in launching other ventures are at a distinct advantage to those who do not have such an experience since they are more likely to understand the process as well as avoid pitfalls common to new businesses. Corbett (2007) also notes that one's existing knowledge is crucial as it forms bases for interaction with new knowledge. And according to Ucbasaran et al., (2009) an individual that has been involved in multiple businesses may accumulate experience that can be used to identify subsequent opportunities. Furthermore their study also found that the nature of previous business ownership, whether it was a failure or success, also shaped future opportunity recognition.

While female entrepreneurship was traditionally neglected, today society and indeed the academic world recognize that women are "an untapped source of economic growth" (Ramadani et al., 2013). Despite the fact that their businesses create jobs not only for themselves but others, women venturing into business have been disadvantaged in human capital and financial capital (Baughn et al., 2006). As Birley

(1989) notes, "women who have not had any formal employment will miss out on the chance to observe a small business set up". She also adds that societies that do not trust women with money will not be keen on funding them. The opposite is true for men whose role in society favors them a high education and opportunities to run their own enterprises. We therefore expect men to easily identify opportunities using their acquired human capital. This observation leads to our first hypothesis;

> H01: Human Capital is a better predictor of opportunity recognition in men than in women

3.2 Social Capital and opportunity recognition

Welter (2011) notes that understanding an entrepreneur's social context helps us understand the form of capital (financial, emotional or cultural) available to them or that is likely to work against them. Unlike Human Capital, Social Capital does not exist within individuals but is created as a result of relations between groups of people. As such measuring this form of intangible capital requires definition of actions that are seen to facilitate it. The social capital theory looks at an individual's ability to benefit from potential resources available through his/her social networks (Davidsson and Honig, 2003; Liao and Welsch, 2005). It examines linkages between people because of the characteristics that they display (Farr-Wharton and Brunetto, 2007) and revolves around trustworthiness of the environment as well as benefits to be derived.

Social capital is an important channel for information sharing. An entrepreneur cannot possess all the information required to make a decision. These information gaps leads to emergence of opportunities and since individuals gain access to information through interaction with other people, the kind of networks that individuals are embedded in will determine timing and quality of information and consequently their ability to perceive new opportunities (Arenius and Clercq, 2005; Ardichvili et al., 2003;Vaghely and Julien, 2010).

In her study on how social capital affects economic performance, Dinda (2008)states that "persons with greater skill may raise the productivity of others with whom they interact...". Vaghely and Julien (2010) state that information has a greater impact if embedded into interconnected knowledge structures and that face-to-face interaction enable people to make sense of information that would have otherwise remained ambiguous. Ozgen and Baron (2007) investigate social source of opportunity related information and find that larger exposure to mentors and informal industry networks made entrepreneurs alert to new business opportunities.

From a sociological perspective, ethnic groups characterized by common traits such as culture, language and religion generates trust and social cohesion which favors entrepreneurial behavior (Vivarelli, 2013). Influence of peers and family could significantly affect how an individual views the idea to start a business and this has been seen to contribute to the entrepreneurial activities in different countries (Kwon and Arenius, 2010; Markman and Baron, 2003). Individuals that live in villages (small communities) where neighbors all know each other inherently build up social capital. This manifests in social control where membership requires compliance with the set norms. It is this control that makes group lending popular among poor individuals who live in close knit communities since repayments habits are enforced through peer pressure and fear of exclusion.

However a high presence of social capital does not always translate to increased levels of entrepreneurship. Indeed social capital only acts to enhance existing behavior. Light and Dana (2013) found that although the Aluttiq of Alaska had abundant social capital, this did not translate to commercial entrepreneurship. Instead traditional behaviors that were associated with manhood such as hunting thrived as a result of social capital. In this case the cultural capital led to negative social capital for individuals involved in entrepreneurship since entrepreneurial behavior was not valued and resource-rich networks which would normally provide necessary information crucial for enterprise growth were absent (Light and Dana, 2013).

Mayoux (2001) also echoes the notion of 'negative social capital' and claims that from a gender perspective women may be victims of networks structures reinforced by men and formalized as customary laws.

This study looks at social capital in terms of networks and argues that a rich cultural network enhances opportunity recognition through crucial information sharing. Furthermore we argue that women consider "social networks" as the most important source of information based on usefulness (Farr-Wharton and Brunetto, 2007). This leads us to our second hypothesis;

> Ho2: Social Capital is a better predictor of opportunity recognition in women than in men

4. Contextualization

Welter (2011) argues the need to contextualize entrepreneurship and notes that when making judgment about behaviors of other individuals, context is important in understanding why certain behavior is prevalent. In developing countries for example, entrepreneurs have a different set of barriers to enterprise. Entrepreneurs may not only be operating within cultural norms that set boundaries for their actions, but also in an economy which is at different stage of market development or experiencing unstable political conditions (Smallbone and Welter 2006). Due to globalization and shared world markets the aspect of 'development' continues to be measured in economic terms (Peredo et al., 2004). However this benchmark when applied to African states is biased since it ignores vital historical facts. First many countries in Africa are still grappling with the effects of colonialism where communities suffered geographic displacements. People that once relied on traditional farming systems for their livelihoods found themselves pushed to arid areas that and slowed down their earning ability and went against their cultural way of life. Second "quality of life" derived in economic terms, ignores the fact that for centuries indigenous populations were once self-reliant even in

the absence of organized trade (Peredo et al., 2004). In fact as earlier noted, some cultures discourage individual profit making behavior and emphasize instead on social activities that benefit the community (Dana, 1995).

Finally despite decades of "development efforts" from developed countries, the gap between the rich and the poor seems to be getting wider. Rapid population growth being experienced in urban cities of developing nations continues to put a strain on an already inefficient labor market. (Peredo et al., 2004; Bhensdadia and Dana 2004). This has led to questions as to whether deficiencies in the institutional contexts need to be addressed first before formulating economic solutions in developing states (Welter, 2011).

Despite the fact that less than 20% of Kenyan land is suitable for cultivation, agriculture contributes to about 25% of annual GDP. And like most of Kenya's other key industries such as tourism and horticulture, it is based in rural areas (Dana, 1993). But while agricultural exports such as tea, coffee and horticulture have been a key factor in stimulating economic development, about 24% of Kenya's 46 million persons currently report to living in the cities or around urban areas compared to 15% in 1993 (estimated at 25 million at the time)(Dana, 1993). Rural areas are characterized with lack of supporting infrastructure and low wage earnings prompting an ever growing problem of rural-urban migration that has contributed to a 40% rate of unemployment in Kenya.

Traditionally, members of Kenya's 42 tribes lived on farming or herding. Few tribes engaged in trade and enterprise; notably the Kamba tribe whose location allowed them to act as middlemen and the Coastal tribes who traded with the Arab and Portuguese ships on the East African coast. Large scale commerce was confined to the British and Indians who came to Kenya during the conquest of Africa in the late 19th century. Today rampant unemployment has pushed many individuals into trade. Most of these become necessity entrepreneurs since they lack alternatives for work (Kobia and Sikalieh, 2010). However as Smallbone and Welter (2006) note, individual

learning ability and market opportunities could lead a 'necessity business' into a successful enterprise. It is with this in mind that the Kenyan government has put in place numerous efforts to facilitate entrepreneurship. Some of these include reduced bureaucracy in during business registration, the introduction of Women and Youth enterprise funds and the revision of the microfinance act which now allows MFIs to take deposits.

The microfinance industry has been instrumental in spurring Kenya's SME sector. It largely grew out of a need to access credit without traditional forms of collateral. Credit groups in Kenya are typically formed by very poor individuals in the community who use this form of organized group to obtain micro finance loans. As these individuals cannot afford collateral, they join with other individuals in their community and agree to be co-guarantors. This method of social collateral works and is largely accepted by lenders since members know each other through personal networks or living in close proximity and are able to monitor each other's repayment and exert peer pressure in the case of a default. As the group meets regularly to discuss financial and entrepreneurial intentions, social capital is formed and individuals are able to use these networks to obtain information about prospective opportunities in the market place and exchange experiences about business.

To test our hypothesis, we use male and female micro entrepreneurs. We examine two of Hofstede's cultural dimensions; individualism/collectivism, masculinity/femininity and relate them to social capital dynamics found within micro credit groups. Hofstede's dimensions of culture have been used by a number of researchers to try and explain cultural patterns and human activities.

The Individualism dimension of culture as discussed by Hofstede refers to an aspect of society where everyone is expected to look after themselves and immediate family while collectivism refers to societies in which people are integrated into groups which protect them in exchange for loyalty (Mueller & Thomas, 2001). The authors also note that in individualistic cultures, social values emphasize personal initiative and

achievement. Cultures that encourage individual initiative have been noted to have higher entrepreneurship propensity (Hofstede and Bond, 1984) since aspects such as personal financial security and self-efficacy are reinforced not penalized (Mueller and Thomas, 2001). According to the country comparison on the Hofstede center (http://geert-hofstede.com/kenya.html), Kenya has a low score of 25 which means that it's more of a collectivistic society. It shows that there is strong group cohesion and people take responsibility for other members of the group. In such societies, offence leads to loss of face and conflicts are resolved at community levels. This scenario had contributed to the success of group lending in Kenya which is based on group cohesion and peer pressure.

Hofstede's Masculinity/Femininity culture dimension refers to how much society sticks with and values traditional male and female roles. Societies that are described as masculine emphasize ambition, wealth acquisition and differentiation of gender roles while cultures described as feminine emphasize on caring nurturing and sexual equality (Hofstede & Bond, 1984). A high score indicates a country where men are expected to be tough and assertive while women are generally expected to have 'soft' professions. Kenyan culture measures high on this dimension with a score of 60 out of 100 (http://geert-hofstede.com/kenya.html), and therefore considered a 'masculine society'.

And while the general bias of women in Kenya is that they take up 'male characteristics' to succeed in business, it is common to find that some women from particular ethnic groups are able to identify and grow successful businesses. In their study comparing entrepreneurs from four different ethnic groups in Kenya, Mungai and Ogot (2012) found that cultural influences and community perception towards entrepreneurship plays a larger role than gender.

Kenya is both a collectivist and masculine society and therefore meets our goals of testing the effect of both social capital and human capital in men and women.

5. Methodology

Data was collected in the months of July- August 2013 from male and female clients of 4 microfinance institutions within Nairobi region. The researchers identified 12 groups comprising of 5-11 individuals, whose members had been active borrowers. The interviews were conducted on individual members during the weekly group meetings so as to observe the aspect of cohesiveness among the group. The questionnaires were structured to collect both quantitative and qualitative data, which was coded into categories that had been designed to answer various research questions.

We were able to collect answers from 82 respondents, 52 of them were women. The usable sample consisted of 73 individuals, 46 women and 27 men. The reduced number was as a result of dropping individuals from the survey who reported to being employed. The final size of the sample does not allow for general conclusions but we think that it is large enough to provide a useful exploratory analysis

Some descriptive statistics would be useful to characterize our sample. The average age of group members was 39 years and average life of a credit group was 42 months. The level of education was not very high. We did not find any individuals that had attained a university degree. This is representative of microfinance clients in Kenya who embark on business due to low prospects of higher education mainly due to poverty. Most respondents reported that their main source of income was business. Some respondents reported that they were employed but in the process of starting a business or involved in farming.

5.1 Independent variables

To measure human capital we use the variables of *education* and *prior business experience* discussed in the previous section. The education variable was ranked on a Likert scale of 1-5. We coded 1 for an educational level below primary, 2 for primary education, 3 for secondary education, 4 for those having a technical diploma and 5 for a university degree. From the literature, we expect to find that (male) individuals that have higher levels of education are able to identify better opportunities. Prior business

experience is measured through the number of previous business the respondents declare to have started before the one he/she is actually using as source of income

Social capital within the group was measured using seven variables. *Group life* measures the duration (in months) that the group has been in existence. Studies have shown that the longer individuals are in a group, the stronger the social capital aspects of bonding and trust. Therefore we expect this variable to positively affect the opportunity recognition ability of the members of the group. The variable of *quantity of members in group* is used to examine if social capital is affected by additional members. If so this result would enable us to propose an optimal group size for group lending. The variable *duration of member in group* is used to check if social capital increases with time, as we expect it to be.

The groups are required by their respective MFIs to meet for purposes of loan monitoring. However some members of the groups feel that these meetings interfere with their business time. The variables *frequency of meetings* and *importance of meetings* will be used to examine the effect of meetings on opportunity recognition. The effect of the first one is not clear, because of the possible perceived negative effects of the meetings precluding other positive networking possibilities. However, we expect that members assigning high levels of importance to their regular meetings would also be keen to derive positive values from them, and therefore improving their opportunity recognition ability.

Group lending requires that members of the group guarantee each other and a defaulting member would easily get all other group members loans suspended. As such members have to vet each other's loan applications. The higher the number of loans that a member has received in proportion to the total loans issued to the group the more trustworthy the person is considered. The variable *percentage of loans per member* will test this aspect. Finally, we consider the *perception* that a member attributes to the importance of receiving *business advice* from fellow group members. The last three variables, describing opinions of the respondents, were measured using a

Likert scale of 1 to 5, taking 1 as the lower/most negative value and 5 as the higher/most positive value.

Table 1 gives a summary of the independent variables used in the study, including those describing the human and social capital variables and also the control variables included in some of the results (age and gender of the respondents). For each variable, a brief description and the main descriptive statistics are displayed. Table 1 also summarizes the hypotheses concerning the expected relationship of each one of the variables with the opportunity recognition ability. The positive or negative signs displayed in the table correspond to the hypothesis regarding women entrepreneurs

Table 1: Independent Variable used to test hypothesis

			Hypothesis	Mean	Std.Dev
Human Capital	**Edu**	Education (1 to 5; 1 below primary; 5 university degree)	-	0.66	0.478
	NBusStart	Number of businesses started	-	0.99	1.208
Social Capital	**GroupLife**	Group life (in months)	+	42.77	32.023
	QuantG	Quantity of members in group	+/-	8.11	2.913
	DuratGroup	Duration of member in group	+	33.15	26.631
	FreqMeet	Frequency of meetings	+/-	3.29	1.23
	ImpMeet	Importance of meetings	+	4.15	0.877
	PercentLoans	Percentage of group-loans going to the particular member	+	0.14	0.0075
	PercepBAdv	Perception of business advice	+/-	3.41	1.128
Control Variable	**Age**	Age		39.49	9.486
	Gender	dummy variable (1= female)		0.63	0.486

5.2 *Dependent variable*

Measuring opportunity recognition is not universally feasible since markets have different types of opportunities depending on technology as well as information available. In the case of the credit group members we are considering in this paper, we propose to measure the aspect of opportunity recognition using a construct of four different and complementary variables; type of business, business income per month, age of current business and percentage of savings.

For this category of borrowers the *type of business* was seen as an indicator of opportunity recognition since despite the fact that all group members have relatively

similar financial status, some members are able to start niche businesses which consequently have a higher turnover. For this study we classified businesses such as vegetable kiosks, hand-carts and making or selling second hand clothes as necessity businesses. In a different social class of borrowers these businesses might be opportunity businesses depending on market selection. For this study we identified the running of a retail shop, supply of building materials, taxi, rental units and sale of petroleum products as opportunity businesses. *Business income per month* is used since it is a financial indicator of the viability of an opportunity. *Age of current business* is also used as a part of the construct of opportunity recognition since it tests the stability of the business.

An entrepreneur who is able to save some money will most likely be making a good profit on their business and hence *percentage of savings* is used as a variable within this construct. A pre-established Likert scale was designed to ask our respondents about their savings. The scale starts in 1 (none/not sure), and continues with "less than 20% "(2), "between 20% and 35%" (3); "between 35% and 50%" (4) and "above 50%" (5).

Table 2 summarizes the main descriptive statistics of these four variables. It also includes the bivariate correlation table. Note that the low values on the table indicate a very low risk of multicollinearity. We use principal component analysis to explore the values taken by these four variables in our sample, and used the factor loadings of the extracted first latent component (the only one with eigenvalue superior to 1) to form our "opportunity recognition" variable. The resultant factor loadings are also summarized in Table 2.

Table 2: Dependent Variable factor loadings used to test hypothesis

Varibles	Description	Mean	Std.Dev	Correlation Table			Factor Loadings
				Typbus	**Income**	**AgeBus**	
Typbus	type of business dummy variable 1=opportunity 0=necessity business	0.55	0.5	1			0.291
Income	monthly income from the business (in kenya shillings)	32281	28822	0.2906	1		0.997
AgeBus	age of the current business (in months)	84.38	54.66	-0.0727	0.1742	1	0.175
PercentSav	variable coding the amount an individual is able to save from his/her business	1.27	0.96	0.0589	0.2451	0.146	0.246

5.3 Methodology of analysis

We construct two regression analyses using opportunity recognition as the dependent variable to test our two hypotheses. The empirical models for the hypotheses are as follows:

$$\text{Opportunity Recognition} = \alpha + \beta_1 \text{ Age} + \beta_2 \text{ Gender} + \beta_3 \text{ Human Capital} + \varepsilon$$

[Equation 1]

$$\text{Opportunity Recognition} = \gamma + \delta_1 \text{ Age} + \delta_2 \text{ Gender} + \delta_3 \text{ Social Capital} + \varepsilon$$

[Equation 2]

Coefficients β_1 and β_2 (resp. δ_1 and δ_2) measure the impact of age and gender on opportunity recognition. The next vector coefficient (β_3 in equation 1, δ_3 in equation 2) measures the effect of human capital elements of education and prior business experience in the first equation and social capital variables in the second equation. The corresponding coefficients determine if and how much each of the variables tested contributes to opportunity recognition.

6. Results

6.1 Regression analysis of Human Capital

Table 3 shows the results of the regressions that measure effect of human capital on opportunity recognition in both male and female respondents.

Hypothesis 1 states that Human Capital is a better predictor of opportunity recognition in men than in women. The results of the regression prove that both men and women utilize human capital to identify opportunities. For men, effects of education were positively related to the type of opportunities that they identified. This result is consistent with what Arenius and Clercq, (2005), found about effect of education on opportunity recognition.

The regression also shows that age and prior business experience positively contributes to a woman's ability to identify and opportunity. The positive coefficient on the age variable shows that the older a woman is the better her chances in business. Due to a woman's role in the family, this result could be interpreted that women who have already raised their families have more time on their hands to search for better opportunities and are not limited to working around the home. Women who had also started businesses in the past were also able to utilize their past experiences for ongoing businesses. A study by Ramadani et al., (2013) of women entrepreneurs from Macedonia also found that women who had started prior businesses were able to use their management skills on the new business. We could argue that since women have a different learning process to that of men, on the job learning may have substituted the effect of formal education.

Table 3: Regression analysis of Human Capital on standardized regression coefficient of opportunity recognitio

	Women			Men		
	coefficient	p-value		coefficient	p-value	
Age	729.156	2.53E-05	***	404.237	0.127479	
Education	-8807.285	0.179155		37317.982	0.008328	***
Number of Businesses started	6378.999	0.025801	**	-636.626	0.904487	
R^2	0.680			0.680		
Adjusted R2	0.658			0.575		
N	46			27		

Statistical significance: * p-value < 0.1 ; ** <0.05; ***< 0.01

Dependent Variable: Opportunity Recognition

6.2 Regression analysis of Social Capital

Table 4 shows the results of the regression that measure effect of social capital on opportunity recognition for both male and female respondents. First we performed a general regression to observe the variables that were significant for the entire sample. Note that two of the variables that were constructed to measure social capital were relevant for the whole sample; the duration an individual has been with a group and the perception of business advice. These results are encouraging. The first one shows that social capital is accumulated over time and that the longer a member is within the group the better their chances to derive benefits from the network. Perception of business advice was also related to opportunity recognition. If members perceived their networks as beneficial to their development then they were more open to receiving mentorship from more successful members.

We then performed regressions for each gender so as to obtain differentiated results. Hypothesis 2 states that Social Capital is a better predictor of opportunity recognition in women than in men. Taking into account the results for the women respondents (central model in table 4), we note that the positive relationship between the time an individual has been in a group and the ability to derive benefits from the network in the form of improving the ability of opportunity recognition is also a statistically significant element for women. We further note that women tend to derive benefits from their social networks if the frequency of meetings is high. This result is in

line with a study by Farr-Wharton and Brunetto (2007) in which women rated “social networks” as the most important source of information based on usefulness. Often these networks are a source of emotional support and frequent encounters lead to increased levels of trust.

The results of the last regression, performed on the male respondents of our sample, on the other hand showed that number of group members affected negatively their social capital with more members reducing their perceived network benefits. A result that indicates that to an extent, men preferred to be in control of who joined the group. Men also fared better within mature groups. Their perception of business advice within the group was also consistent for the reduced regression. It could be argued that since men predominantly utilize education to identify opportunities, they are more selective about the kind of information or mentoring that is available within the group. They attach value to social networks depending on the value of the information they stand to gain.

Table 4: Regression analysis of Social Capital on standardized regression coefficient of opportunity recognition

	Whole Sample		Reduced Models			
			Women		Men	
	coefficient	p-value	coefficient	p-value	coefficient	p-value
Group Life	5.468	0.970212			544.414	0.010549 **
Number of members in the group	-1764.281	0.149493			-3844.570	0.046293 **
Duration in group (months)	413.783	0.032786 **	441.215	0.002517 ***		
Number of group meetings in a month	4530.034	0.143467	5659.512	1.48E-05 ***		
Importance of meetings	-173.615	0.962718				
Percentage of allocated loans	-4281.226	0.921476				
Perception of business advice	5651.533	0.038368 **			11916.095	0.004753 ***
Gender	-182.636	0.979714				
R^2	0.662		0.691		0.666	
Adjusted R2	0.620		0.677		0.624	
N	73		46		27	

Statistical significance: * p-value < 0.1 ; ** <0.05; ***< 0.01

Dependent Variable: Opportunity Recognition

7. Discussion and Conclusions

The study used a cultural construct to analyze whether human capital or social capital is a better indicator of opportunity recognition in women. We hypothesized that women in developing countries, who have traditionally been restricted from developing their human capital elements of education and business experience, will be more predisposed to using social capital to identify business opportunities.

We argued that since some cultures value entrepreneurial behavior while others do not (Dana, 1995), a cultural context is key to understand prevalent behavior and the societal norms behind it. The study was rooted in Kenya, a developing country whose infantile labor sector has pushed many unemployed individuals into business. Some of these individuals, especially those who have not been traditionally oriented in entrepreneurial backgrounds, engage in subsistence trade which contributes to low productivity entrepreneurship. Women engaging in business have also been found to be involved in low-income sectors due to cultural restrictions that require them to work around the home.

Kenya is considered a masculine society, with a score of 60 on the Masculinity/Femininity culture dimension. We expected to find that women are more tuned to use information found in social networks to identify business opportunities. However the results of our study show that those women who have started previous businesses are able to use this learning process to substitute for their lack of formal education. This leads us to the conclusion that poor women do utilize human capital elements to identify opportunities, just different ones from men. Since age was also found to be a significant factor, we conclude that women who are older and who have tried their hand at a number of businesses are more able to identify a viable opportunity than their younger more educated counterparts.

The study also examined the effect of social capital on productivity among the genders. We sought to identify factors that contributed to social capital within the group as well as perceived value of the networks. Culturally Kenya is a collectivist

society and scores 25 on the Individualism/ Collectivism culture dimension so we expected to find a high level of group cohesion among the members. We found that the duration that a member was in the group and the perception of business advice were most significant factors for both genders. However when we considered men and women separately we found that men preferred mature groups with less members. We note that men might feel out of control if the group is too large since their purpose for being in the group is “strictly business”. However women generally tend to favor groups where they can “share” their problems and therefore tend to perceive more benefits in a group that meets more frequently.

The fact that women utilize both human and social capital to identify opportunities is an encouraging result. Human capital and social capital have often been considered complementary factors in entrepreneurship. For example Bhagavatula et al., (2010) finds that human capital is important when an individual needs to sift the proper information available in through social networks. Furthermore social networks provided by community based relationships are seen to amplify effects of education and experience (Honig, 1998; Morrison et al., 2003).

This study deviated from common argument by attempting to identify which form of capital is more relevant to women in developing economies and found that men and women utilize different parameters of human and social capital to identify opportunities. Women seem derive benefits from networks that have frequent interactions while men are keen to observe the value of information found in these networks. This result is in tandem with some findings in literature. DeTienne & Chandler (2007) in their investigation of gender differences in opportunity identification, found that although women use a different process to identify opportunities, neither gender had a more superior process to the other. Langowitz & Minniti, (2007) also note that, it is in fact self-confidence in one’s own entrepreneurial skills and knowing other entrepreneurs that contributes to entrepreneurial propensity in women.

This study is relevant to agencies that fund women in enterprise. It proves that despite the lesser opportunities for education, women are able to use their past business experience to identify future opportunities in the market. Furthermore the findings show that MFIs could achieve more success in group-lending by encouraging lending among more mature groups. By grounding our study in a cultural context, we hope to generate discussions and future research on entrepreneurial challenges in different settings and lead to relevant formulation of long term solutions.

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Chapter V: CONCLUSIONS

5.1 SUMMARY

This study defined financial inclusion as the delivery of financial services to those who would otherwise not have afforded them and found that in developing economies, the 'excluded' are served by MFIs offering the microfinance product. This study set out to answer the following research questions;

1. what are the themes arising from two decades of research in each of the three countries and what are the gaps in literature from the region?
2. How do existing modes of financial inclusion in East-Africa affect microfinance? Is microfinance necessary in light of on-going over indebtedness crisis?
3. How has microfinance helped marginalized individuals such poor women create sustainable enterprises?

To meet the above objectives, I used theoretical review to answer question one and quantitative methods to answer questions 2 and 3. I divided this research into 3.

Microfinance continues to feature in development agendas of many developing economies. In East-Africa this mode of financial inclusion has very low penetration rates and even less impact especially in a region where technological advancements of mobile money have redefined financial inclusion. Scholars continue to study the evolving dynamics that have been created by mobile money, more so now that data on the region is more easily available.

In our first chapter we reviewed published articles that have contributed to the literature on microfinance in the region. We found that microfinance is still viewed as a social emancipation tool and this hinders its workings as a mode of economic development. Nevertheless, research showed women were the key beneficiaries of the loans largely due to decades of exclusion resulting from their traditional roles. Furthermore, there is growing interest on how microfinance impacts the borrowers.

The second part of the study consisted of two essays; the first essay in chapter two used a database from the FinAccess survey, financial inclusion data on households in Kenya, to observe causes of over indebtedness in the region. The article presented literature on formal and informal finance and argued that formal finance rarely replaced informal finance, but in fact compounded on it.

I also discuss the effect of indigenous or informal finance on MFIs credit risk and propose that the financial sector needs to re-evaluate the definition of financial inclusion, since by ignoring indigenous sources of finance MFIs may not have the proper risk assessment of the market. By highlighting the prevalence of multiple sources of credit, I also hope to generate discussion on linkages between formal and indigenous finance. The study introduces two ordered logit models. The first attempts to observe the relationship between borrower vulnerability and multiple sources of credit while the second examines the relationship of vulnerability and the use of savings and insurance products.

Chapter 3 presents the second essay which looks at how women use networks to gain valuable information from their businesses. The study is modelled on the social capital framework that has been key in growth of microfinance lending in developing economies. Using a data that I collected from Kenyan groups in July-August 2013, I observe the group dynamics within members borrowing using social capital as shared collateral. By interviewing the entire group of borrowers within the setting of their credit meetings, I was able to observe and record elements of group behavior that had previously not been tested, namely the ability of micro borrowers to affect the business outcomes of fellow borrowers. The study found that women were able to tap into their networks to substitute for lack of education in identifying opportunities for their businesses.

5.2 CONCLUSIONS AND CONTRIBUTIONS OF THE DISSERTATION

The main objective of this dissertation was to analyze microfinance as a mode of financial inclusion within the context of social capital. This section presents significant findings for the hypotheses raised in chapter 1.

5.2.1 What are the research themes on Microfinance in East-Africa?

Our literature review in chapter 1 shows that microfinance and indeed financial inclusion is a well-researched topic in East-Africa. Nevertheless, it has mainly been discussed as a social emancipation tool. In countries such as Uganda for example, a number of studies done were specific to aiding borrowers with HIV/Aids. New themes on characteristics of borrowers show a shift to viewing the micro entrepreneur as being influenced by other factors rather than credit alone.

5.2.2 Do MFIs contribute to over indebtedness?

Following the over-indebtedness crisis in the 2000s, microfinance faced a backlash and constant calls for evidence that it was actually helping the poor. Lack of evidence was largely due to the difficulty in obtaining data on poor borrowers. With this in mind the World Bank has been facilitating data collection in developing economies. Using data from financial household survey in Kenya, we weighed various sources of credit for vulnerable individuals.

First, we note from the discussions that despite the large presence of MFIs, the rate of microfinance penetration ranges below 3%. It was therefore not surprising to find that loans from MFIs were not a significant aspect for poor people.

In the discussion about the dual channels of formal and informal finance in the region and what implication this has on borrower's credit risk, the results of this article showed a higher likelihood of vulnerable individuals using informal credit before formal finance. We propose that since informal finance is firmly entrenched in social

structures, formal financial institutions can tap into informal networks and establish linkages between the two. Scholars have argued that for very poor borrowers, microfinance loans usually get used to meet urgent or immediate consumption needs. This study contributes to that discussion by offering a snapshot on the effect of savings and insurance products on the borrowers.

5.2.3 Do microfinance beneficiaries start nascent business?

Why is it that many beneficiaries of micro credit start subsistence businesses? Can microcredit facilitate growth entrepreneurship? To answer these questions, the second essay offers a unique perspective on poor women entrepreneurs and how they are able to tap into their social networks to overcome deficits in human capital. It is a known fact that poor micro entrepreneurs tend to be less educated than the general public. It was worth noting that despite the shortfall in business experience and education, being part of a network where members had nascent businesses was a positive contributor to opportunity recognition. This study contributes to gender studies on women in enterprise as well as on the literature on effect of social capital. Understanding the element of peer influence can help lenders identify critical factors during group formation. Peer influence has only been studied with respect to the moral hazard problem; this study has offered a new perspective on group lending

5.3 IMPLICATIONS FOR POLICY AND PRACTICE

First, the dissertation contributes to literature on financial inclusion and microfinance from a developing economies point of view. With the ongoing discussions on the effect of commercialization of MFIs, this study will offer a new perspective financial inclusion. I hope that the evidence that informal credit is being increasingly used, will lead the MFIs to redefine their scope of operation.

Second, the study is relevant to government agencies responsible for regulating MFIs in the region. These bodies should encourage practitioners in the field to offer a

wide range of products to the low income earners so as to avoid situations of too much credit. Furthermore the high level of usage of informal finance should also alert the government about the need for innovative ways to record borrowers' credit history.

Third, for a monetary union to be effective, the financial sector will need to be more or less standardized among the East-African countries. I hope that this study offers an insight into the financial trends in the region, and especially the effect that mobile banking has had on financial inclusion.

Finally, this dissertation opened with an argument about how the definition of financial inclusion needs to be modified to incorporate new channels of inclusion such as informal and mobile money. For microfinance to be relevant in Africa in the coming decades, MFIs will be challenged to view financial exclusion differently.

At the point of conducting this study, homogeneous financial data on the three East-African countries was not available; this is an opportunity for further research and especially to organizations such as World Bank who conduct ongoing surveys.