THE DETERMINANTS OF CREDIT DEMAND FOR MICRO ENTERPRISES

A CASE STUDY OF SOUTHERN HIGHLANDS OF TANZANIA

BY

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ABSTRACT

Existing literature suggests that determinants of demand for credit have not been well understood and measured. This study was conducted to assess influence of micro enterprises owners' characteristics on credit demand. The study was also designed to identify lending conditions of semiformal and formal sources of credit in the study area. The study assessed whether the availability of credit sources has influence on micro entrepreneurs' choice for credit. Data were collected from a sample of 183 micro entrepreneurs in Iringa, Mbeya and Sumbawanga districts. Multistage and simple random sampling techniques were used to select respondents. Data analysis employed both descriptive and quantitative methods, where as regression analysis entailed the use of Probit and Tobit models. The study revealed that micro entrepreneur's characteristics substantially influenced the decision to apply for credit and hence the actual amount demanded. The credit demand was found to be high in all the three districts. The most important reason for demanding credit was to expand enterprises. Regression results indicate that marital status and micro entrepreneurs' business experience had significant positive influence on the demand for credit at $P<0.01$. With respect to the actual demand for credit both marital status and business experience had positive effect at $P<0.01$ and $P<0.05$, respectively. While age of the micro entrepreneur had significantly negative influence on the demand for credit at $P<0.01$. In terms of the actual demand for credit, age had positive sign and significant effect at $P<0.01$. Furthermore, education of the micro entrepreneur had positive influence on the decision to apply for credit although not significant at $P<0.05$. However, education level had significant and positive effect on the actual demand for credit. Assets owned by the micro entrepreneurs had significant positive effect on the actual demand for credit at $P<0.01$ but no significant effect on the decision to apply for credit at $P<0.05$. Since a majority of the micro entrepreneurs have no assets or

are poor clients operating small businesses, there is a need to streamline lending procedures in various sources of credit to enable the majority of micro entrepreneurs to acquire credit. This includes lengthening of the repayment periods and substituting the use of physical collateral with social collateral. Also micro entrepreneurs should be educated on how to manage their enterprises and on the importance of being credit – worthy. The study further recommends simplification of the registration and licensing procedures to make businesses eligible for formal credit.

DECLARATION

I, Momole Kasambala, do hereby declare to the Senate of Sokoine University of Agriculture that this dissertation is my own original work and that it has never been submitted for a degree award to any other University.

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The above declaration is confirmed

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DEDICATION

This work is dedicated to the almighty God the giver and to my ever loved, charming, decent, prudent and humble dear daughter Brigither Appolonia Antipacy who passed away early February, of my final year of this study. May the Almighty God rest her soul in eternal peace, AMEN.

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%	Percent
ARCM	Asia Resource Centre for Microfinance
BKK	Badan Kredit Kecamatan
BoT	Bank of Tanzania
BRAC	Bangladesh Rural Advance Commitee
CEAL	Centre for Economic Analysis of Law
CIREQ	Centre for Interuniversity Research in Quantitative Economics
CRDB	Cooperative and Rural Development Bank
Df	Degrees of freedom
EQI	Environmental Quality International
FACET	Financial Assistance, Consultancy Entrepreneurship Training
FINCA	Foundation for International Community Assistance
GDP	Gross Domestic Product
ICA	Internal Cooperative Alliance
IFAD	International Fund for Agricultural Development
LPD	Lembaga Percreditan Desa
LRI	Likelihood Ratio Index
Max	Maximum
MEs	Micro Enterprises
Min	Minimum
NA	Not available
N	Number of observation
NBC	National Bank of Commerce
NGO	Non Government Organization

NMB	National Micro Finance Bank
NSGRP	National Strategy for Growth and Reduction of Poverty
OLS	Ordinary Least Square
PRIDE	Promotion of Rural Initiatives and Development Enterprises
RAAWO	Rukwa Association for Advancement of Women
ROSCAs	Rotating and Savings Credit Association
SACCOS	Saving and Credit Cooperatives
SBA	Sumbawanga
SCCULT	Savings and Credit Cooperative Union League of Tanzania.
SELFINA	SERO Lease and Finance Limited – Tanzania
SIDO	Small Industries Development Organization
SIDP	Sustainable Industrial Development Policy
Sig	Significance
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for Social Science
Std	Standard
TShs	Tanzanian Shillings
URT	United Republic of Tanzania
USA	United States of America
USAID	United States Agency for International Development
USD	United States Dollar
UWAMU	*Ushirika wa Wafanyabiashara wa Akiba na Mikopo Uyole*
WASMEP	*WAWATA* (Christian Women of Tanzania) Small and Micro Enterprises Project

CHAPTER ONE

INTRODUCTION

1.1 Background

Macro economic indicators show that the Tanzanian economy has been growing over time. The GDP grew by 5.7%, 6.2% and 6.7% in 2001, 2002 and 2004, respectively. This growth was mainly attributed to increased investment in mining, manufacturing, agriculture, tourism, education, banking and finance and improvements in road infrastructures (URT, 2005). However, the growth had very little impact on poverty alleviation because Tanzania is still amongst the world's poorest countries (BoT, 2003). Similarly, the growth did not enhance efficiency in the provision of credit to entrepreneurs. The importance of credit services can best be understood by examining their potential contribution to economic development.

Tanzania Development Vision 2025 among other things aims at transforming the predominantly agricultural economy to a semi-industrialized one. Micro, small and medium enterprises have significant role to contribute toward attaining this goal. The objective of micro, small and medium enterprises policy is to foster job creation and income generation by promoting investment in new micro, and medium enterprises. Moreover, the policy concentrates on improving the performance and competitiveness of the existing ones and to increase their participation and contribution to the Tanzanian economy. According to URT (2002b) these micro, small and medium-enterprises contributed about one third of the GDP.

However, the process of formulating and implementing agricultural policies in most developing countries has often failed to account for economic, social and institutional

factors that influence the use of and demand for credit. Understanding these factors could enhance efficiency in the design and implementation of credit programmes.

Existing literature shows that credit assumes a significant role in promoting economic development. The importance of credit stems from the fact that it creates employment opportunities and enables these opportunities to be exploited. Temu (1988) argues that credit has the potential to act as a force to the development of agricultural sector. Similarly Mpuga (2004) reveals that access to credit increases propensity for expanding business enterprises.

However, in most developing countries, small-scale producers usually find it difficult to obtain loans from formal lenders (Mpuga, 2004; Okurut *et al.*, 2004; Temu, 1994; Zeller, 1994). It is argued that small loans are risky and costly due to misallocation of funds into consumption purposes and non-income generating activities. Furthermore, most small-scale producers have no collateral items; as a result they fail to secure credit from formal lenders (Godquin, 2002; Wenner and Proenza, 2000; Zeller, 1994).

The need to extend credit to entrepreneurs cannot be ignored. Cross-country studies in Tanzania, Ghana, Malawi and Nigeria have indicated that creditworthy entrepreneurs whose needs exceed the capacity of informal lenders have often failed to secure formal loans (Steel and Webster, 1992). Surveys have identified financial gaps representing demand for credit by viable micro enterprises that cannot satisfy the information and collateral requirements of banks but demand larger loan, which informal lenders can not provide. Nevertheless, efforts to fill the gaps in the financial system have always been futile and only two percent of the people in developing countries have access to formal credit (Zeller, 2001). Thus, improving access to formal credit would help poor people to

expand their businesses beyond limits imposed by informal and self-finance (Aryeetey *et al.*, 1997). This study aims at identifying determinants of credit demand, this understanding could assist to enhance the welfare of the poor through improved credit services.

1.2 Problem Statement and Justification

Determinants of demand for credit have not been well-understood and measured. According to the study conducted in Uganda (Mpuga, 2004), analysis by source of credit shows that informal financial institutions are relatively more important to rural people than those in the urban areas. The study reveals that only 2.3% and 21.4% of rural individuals obtained credit from commercial banks and NGOs/cooperatives compared to 12.3% and 31.2% for urban dwellers, respectively. It was also observed that the average amount of credit applied for was about USD 78.4 but those who applied, on average, received only about USD 40.

Godquin (2002), Mpuga (2004, Okurut *et al.,* (2004) and Vaessen (2001) found that individual characteristics have a role in determining the demand for credit. According to Mpuga (2004); an additional year of education increases the demand for credit by about 0.3% and increases the chances that the application will be successful by about 17%. However, Chiduo (2001) noted that, there was no significant difference in income generated with and without credit. In contrast Chiduo's findings are not consistent with Mbeiyererwa (2000), who found that credit schemes that are tailored to poverty alleviation are specifically targeting the poor and shows successful progress in terms of generating income.

Furthermore Adams (1984) and Mwachang'a (2000) reported that, the targeted and highly subsidized credit schemes, which were based on the supply-leading approach, were thought to be among the principal causes of the financial crisis in Africa. One of the reasons for the poor performance of these forms of credit was that they were not adapted to the demand for service.

It is also notable that previous government policy and most of the existing literature on provision of financial services focused on the providers of these services (or the supply side), with little attempt to explore the household demand for credit (the demand side). Therefore, this study attempts to fill this gap in the literature and to identify the determinants of demand for credit in Tanzania. In-depth knowledge about these factors has the potential to enhance efficiency in the design and implementation of credit schemes in Tanzania.

This study is therefore relies on the demand side approach on provision of financial services; this approach is different from the supply led approach therefore the later concentrate on the individual characteristics. These characteristics are assumed to vary among the micro entrepreneurs and thereof impose changes in the actual credit demand. According to this study the credit demand has been defined as the ability of the individual to apply for credit, and therefore those who applied are the one who actually demand credit.

Using the concept of demand function, which explains the relationship between quantity demanded of a commodity and factors that affect it, at any one time the quantity of a commodity that a consumer will effectively demand depends on several factors such as

price of the commodity, income of the consumer, taste and preferences of consumers, season of the year, religion and culture, sex, level of education, marital status, age, number of consumers and geographical location. The influence of these factors on the quantity demanded depends on the type of goods/service referred. Taking an example of credit as a service demanded, applying the theories of demand and supply the equilibrium point is difficult to reach simply because the demand for credit is generally high in developing countries such as Tanzania.

Now in conceptualizing this study a theoretical concept of a change in demand is also applied. A change in demand implies an increase or decrease in demand due to changes in other factors other than the price of a commodity. Relating this into practice these factors are the micro entrepreneurs characteristics such as age, sex, marital status, education, wealth status, number of years in business, self reasoning (measured by ability to understand the credit conditions and distance to credit source (representing its accessibility). The very specific factors which can determine actual demand for credit are the one of critical focus of this study. This becomes the basis that led the authors to test the hypotheses stated in Section 1.4; micro entrepreneurs' characteristics have no influence on the demand for credit.

1.3 Objectives of the Study

1.3.1 General objective

The main objective of this study is to examine the determinants of credit demand for the micro enterprises.

1.3.2 Specific objectives

(i) To assess the influence of micro enterprises owners' (micro entrepreneurs') characteristics on credit demand in the study areas.

(ii) To assess whether the availability of credit has influence on the micro entrepreneurs' demand for credit.

(iii) To identify the conditions of credit acquisition in semiformal and formal sources of credit in the study area.

1.4 Hypotheses

Hypothesis 1: Availability of credit has no influence on the demand for credit.

Hypothesis 2: Micro entrepreneurs' characteristics have no influence on the demand for credit.

1.5 Research Questions

(i) Is the demand for credit influenced by availability of credit? This research question answers hypothesis 1.

(ii) Which among the characteristics of micro entrepreneurs have influence on the demand for credit? This research question answers hypothesis 2.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter reviews literature related to financial services. Aspects covered in this review include determinants of the demand for credit, importance of credit to micro enterprises, government policy and its influence on access to credit, sources and characteristics of credit sources, gender balance in acquiring and using credit and approaches used to estimate demand for credit.

2.2 The Meaning of Credit

Credit means money/goods/services lent to borrowers with an interest. It involves a process of raising funds by means of loans and advances from any source, retaining and utilizing it for specific time and repaying the principal and interest to the lender (Berthold, 1996; FACET, 2000; Safra and Goulk, 1997). Non-government organization (NGOs) define credit as the supply of money or inputs (can be tangible or intangibles like a particular service) by donor agencies to a project of interest, which is vested with powers to extend the money or inputs to target borrowers in the form of loans. The NGOs' motive is to enhance the wellbeing of clients and to improve its liquidity position to satisfy additional demands for credit, which is normally achieved through interest charges (Berthold, 1996). Usually the lender decides and judges each loan on the basis of the borrower characteristics, capacity to repay i.e. potential for generating income, and ownership of collateral items (Selejio, 2002).

2.3 Theoretical Linkage between Finance and Economic Growth

The role of the financial sector in economic growth has remained moderately uncertain. Levine (1997) and CIREQ (2002) suggest that the financial sector leads and enhances

growth in the economy. The rationale behind this argument is that financial intermediation facilitates the accumulation of monetary assets, enhances efficient in resource allocation and the productivity of factor inputs. The enhanced factor growth occurs within a process by which potential enterprises requiring financing are screened, financed and monitored **(**Lashley, 2003; URT, 1998; Woodruff and Zenteno, 2001). Therefore, fiscal deepening in the form of smoothly functioning of credit markets is a prerequisite for economic development (Kayunze and Twamala, 2001). However, some economists argue that economic growth and financial development are jointly determined while others contend that the financial sector hurts growth (Woller and Woodworth, 2001). Mahajan (1998) and Mosley and Hulme (1998) show that credit may have negative impact to deprived people. In poor and very poor communities credit diversion is a cumbersome problem which in turn affects the recipient. These very poor people often spent the borrowed money to finance family consumption and fail to repay thereby forcing lenders to penalize them.

The opinion that credit is not helpful for poor people is held by the majority of financial institutions, and is commonly known as the "Ohio School**"** of thought on credit for economic development. The name has been adopted to honour a group of economists (include Dale W. Adams, Carlos Cuevas, Gordon Donald, Claudio Gonzalez-Vega and J. D. von Pischke) at the Ohio State University who gave it its intellectual underpinning (Hulme and Mosley, 1996 cited by Kayunze *et al.,* 2002).

One of the major arguments of the Ohio School of Thought is: "*...debt is not an effective tool for helping most poor people improve their economic status-be they are operators of small farms or micro entrepreneurs, or poor women*." Moreover, they insist that any development finance institution that is unable to make profit should be closed (Hulme and

Mosley, 1996 cited by Kayunze *et al.,* 2002). However, the school has been criticized for being ambiguous (Kayunze *et al.,* 2002). Otero and Rhyne, cited by Buckley (1997), argue that: "…micro enterprise finance has the potential to do in finance what the green revolution has done in agriculture."

Another school of thought led by famous economist such as Bagehot, Hicks, Fry, Hamilton, Kuznets and Schumpter strongly contends that the financial sector reins and promotes growth in the economy. Bagehot (1873) and Hicks (1969) cited by Mpuga, 2004 argue that financial sector encourages savings, their arguments stem from the fact that well functioning banks spur technological innovation by identifying and funding reputable entrepreneurs.

The Keynesian theory like the Irving Fisher's Quantity theory (classical or monetarist theory) views money as a store of wealth. According to Keynesian theory, demand for money is influenced by certain motives, one of these is transactions. Transactions motive arises from the fact that people need money to finance current transactions. Individuals and firms hold money to bridge the gap between the receipt and expenditures of income. Therefore money is needed to fulfill the business or trade transactions (Birungi and Mutenyo, 1998).

In general the Keynesian views seem to be applicable to an economy with much unemployment while the monetarist applies best to an economy producing near capacity levels (Nyange, 2004). According to monetarist a perfect market will adjust when there is either excess demand or supply (Birungi and Mutenyo, 1998). However the assumptions of perfect market are unrealistic in the real world (Ambilikile, 2003) because credit market may be characterized by many buyers (those who need credit) and few sellers (credit

providers). Gurley and Shaw, (1967) have stressed that imperfect credit market is an obstacle to rapid economic growth.

2.4 The Facet of Credit Markets

A number of authors (Kashuliza, 1986 and Temu, 1994) have documented the historical background of credit in Tanzania. The basic micro-finance practitioners have been outlined as commercial banks, Government and non-governmental financial organizations and savings and credit cooperative societies (SACCOS). These institutions are free to develop micro-finance services on the basis of their own internal objectives e.g. profit, poverty reduction and self-help in accordance with the legal procedures. However, the basic assumption under this mode of operation is that these credit institutions will learn best practices and to apply sound financial principles in delivering their services to the needy groups (URT, 2000).

2.5 The Importance of Credit in Micro-enterprises

Credit contributes considerably to economic development (Fernando, 2004; Khandker, 2005). To a large extent credit offers the opportunity to manage households' and enterprises' resources more efficiently, safeguard the resources against risks, and generate additional funds for future investment. Many analysts argue that lack of credit is among the factors that limit micro-enterprise development and render poverty alleviation strategies ineffective (Siamwala *et al.*, 1993; World Vision, 2002; URT, 2002b; URT, 1998).

The need to understand the significance of credit services is even more important because of the increasing importance of micro enterprises in economic development (Woodruff and Zenteno, 2001; Chiduo, 2001; Mpuga, 2004). Credit is primarily a facilitator of the

underlying economic opportunities that lead to broad increase of economic prosperity (Chintowa, 1991; Kashuliza *et al.* 1998; Luoga, 2005; Mwachang'a, 2000; Temu, 1988). Overall, success in micro enterprises depends on availability of working capital and the entrepreneurs' knowledge and business skills. Credit permit borrowers to acquire large assets sooner than would otherwise do. Therefore, credit can be a valuable means of bringing productive resources like labour, land and management into productive use and intensifying the productivity of those resources already employed.

2.6 Micro Enterprise Defined

Different countries use various measures to define micro-enterprises, and there is no universally accepted definition of micro enterprises. The frequently used yardsticks are total number of employees, total investment and sales turnover. USAID (2006) defined micro enterprises as very small production or service units, involving little amount of investment and operational capital. Labie (2006) and O'Riordan *et al.,* (1997) defined micro enterprises as those enterprises that utilize family labor, usually with extended working hours using low level of technology. The micro enterprises segment for those grounds has been considered tantamount to the informal sector. The informal sector in this case means unofficial sector employing less/no paper work and its operations are generally simple and informal.

In the context of Tanzania, micro enterprises have been defined as those employing up to 4 people, in most cases family members, or employing capital amounting to Tshs. One million (URT, 1998). However URT (2002b) defines the micro enterprise as an enterprise whose capital investment cost is lower than Tshs. five million. On the other hand URT

(2000) defined small and micro enterprises as those enterprises that lack access to financial services from mainstream financial institutions.[1]

2.7 The Importance of Micro-enterprise

Literature shows that micro-enterprises have significant contribution to the overall development of the Tanzanian economy (Gatsby Trust, 2003a, b; McIntyre and Dallago, 2003). It is estimated that about one third of the GDP originates from the micro and small enterprises sector. These micro enterprises play a crucial role in employment creation; it employs about 20% of the labour force (URT, 2002b). Still they have great potential for further employment, income generation, and may help to bring equity in income distribution. Thus micro-enterprises are regarded as important engine for improving the livelihood of the people (Levitsky, 2000; URT, 2000; URT, 2002b).

Furthermore, micro enterprises are better positioned to be adopted by customers in localized markets due to their lower overheads and fixed costs (URT, 2002b). However, it is reported that government policies and political interventions may become obstacles against smooth and successful operation of small-scale business (Mishili *et al.*, 2003). It is also argued that a strong and productive industrial structure can only be achieved where micro, small and medium enterprises and large enterprises not only co-exist bust also function in a symbiotic relationship (URT, 2002b). In recognition of the importance of this sector and its potential, the development policy has been designed to revitalize the sector to enable it to contribute to the objective of the National Development Vision (URT, 2002b).

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[1] This study adopts the URT (1998) definition.

2.8 Government Development Policies in Tanzania

There are different government policies that are already in place aiming at promoting fast growth of the economy through the development of the micro enterprises sector. These include National Micro-finance Policy, Cooperative Development Policy, and Small and Medium Enterprise (SME) Development Policy. The major objective of these policies is creation of an enabling environment, building of a robust private sector and articulation of strategies that will create a sustainable growth.

The core task of the SME Development Policy is to stimulate development and growth of enterprises through improved infrastructure, enhanced financial services and creation of conducive legal and institutional framework so as to achieve competitiveness (URT, 2002b). While the aim of the Micro-Finance Policy is recognized to be the establishment of a benchmark for the evolution of an efficient and effective micro financial system that serves the low-income segment of the society and enables them to contribute to economic development (URT, 2000). The policy also allows for the provision of financial services to all types of legal economic activities in rural and urban areas.

The Cooperative Development Policy aims at promoting small producer group initiatives with the view of transforming them to viable cooperatives (Kashuliza, 2005; URT, 2002a). Cooperatives have been viewed as vital ingredient in overcoming problems in agricultural and capital markets because they reduce transaction costs (Kilima *et al.,* 1999). Currently a number of new cooperative societies, especially SACCOS are being registered. The registered SACCOS are supervised by the Registrar of Cooperative Societies under the Cooperative societies Act (CSA No. 20 of 2003) and other relevant regulations issued by the Bank of Tanzania (URT, 2004).

In the National Strategy for Growth and Reduction of Poverty of Tanzania, the Government has decided to promote private sector development including micro enterprises (URT, 2005). The Sustainable Industrial Development Policy (SIDP 1996 – 2020) uses the micro enterprises as instruments of achieving its objectives (URT, 2002b). The SIDP places specific emphasis on promotion of micro enterprises as well as small and medium industries through supporting existing and new institutions by simplifying taxation, licensing and registration procedures and improving access to financial services.

2.9 Accessibility to Credit Facilities

Gordon and Craig (2001) indicate that poor access to credit is one of the major factors that limit business development in Sub Saharan Africa. Also they point out that without start up funds, or with only little cash available, households find themselves limited to small number of activities. According to URT (2002b) an assessment of the micro enterprises sector in Tanzania has shown that the country is facing constraints that need to be addressed. Several other analysts comment that most of the banks do not finance micro enterprises (Gordon and Craig, 2001; Kashuliza and Kydd, 1996; Okurut, 2000; Okurut *et al.,* 2004; Osuntogun 1978; Temu, *et al.,* 2001 and Zeller *et al.,* 1996). Failure to extend credit to micro-enterprises is arguably associated with factors such as lack of physical collateral, inexperience of bank staff in issues related to micro-finance, limited awareness of the available credit facilities, high cost of screening and administering small loans, inabilities of borrowers to prepare and present applications that meet bank's requirements and poor record keeping.

On the other hand Zeller (1998) outlined that many semi-formal credit institutions use group-lending techniques that among others reduce transaction costs by replacing multiple small loans to individuals with large loans to a group. This mode of financing is regarded

as a cost effective weapon to fight poverty and serves as a catalyst in the overall development process. It has been noted that group based credit can capitalize on the fact that group members have better information about the applicant's creditworthiness and efforts than the bank's agent (Gordon and Craig, 2001; World Vision, 2002; Zeller, 1994). The group normally obtains a loan from a credit provider and the group members decide the allocation of the loan amount among themselves.

The form of measures taken to penalize defaulting groups varies greatly, but most often involve the risk of loss of future access to credit. Each group member may therefore have an incentive to ensure that other members do not default, and will seek information to judge upon the peers' creditworthiness (Zeller, 1994). Thus, groups do not screen loans instead they actually screen membership which amounts to determining whether an individual can be trusted to regularly meet his/her obligations to the group. The substitution of physical for social collateral through group liability can therefore contribute to increased participation of the poor in credit markets. Moreover group lending minimizes the risk of default and increases loan security. In Tanzania PRIDE Tanzania Limited and FINCA are the examples of such lending institutions.

Furthermore it is argued that poor access to credit is largely attributed to high costs of credit from specialized informal moneylenders and is a consequence of financial sector liberalization (ICA, 2001; Satta, 2000; Temu *et al*., 2001). The high cost of this category of informal loans affects the micro enterprise activities by limiting their capacity to survive and the consequence is increased default (i.e. the chance that business failing to survive won't repay their credit). The lack of access to credit has forced the micro enterprise sector to operate under low market niches and has contributed to their failure to

improve supervision or raise the production of goods/quality of their services (Okurut *et al.*, 2004; Woodruff and Zenteno, 2001).

After financial liberalization in Tanzania a number of financial institutions and organisations such as SELFINA have been established. These institutions are generally not well-equipped in terms of facilities, personnel and operational funds, and therefore are unable to discharge their mandated responsibilities (URT, 2002b). These factors limit the ability of the financial institutions to expand their operations and to satisfy the ever-increasing demand for credit.

2.10 Credit Demand and its Determinants

In this study the credit demand has been defined as the ability of the individual to apply for credit, and therefore those who applied are the one who actually demand credit. Maumbe (1993), Mpuga (2004), Mohieldin and Wright (2000), Mwachang'a (2000), Swain (2001) and Wenner and Proenza (2000) found that demand for credit depends on factors such as individual/household characteristics and conditions attached to credit such as the interest rate (own price), availability of credit sources and the policy environment. At higher interest rate the demand for credit is lower, *ceteris peribus*. This inverse relationship is justified by the fact that return from an activity must be large enough to enable the investor to retain profit after repaying the loan and the interest rate. In addition there are other charges like registration and application fees, which may affect the demand for credit. Among the individual characteristics identified include age, sex, assets owned by the individual as a proxy for wealth, occupation, education and marital status.

Several analysts have shown that demand for credit is influenced by age of the individual (Godquin, 2002; Mpuga, 2004; Okurut *et al.*, 2004 and Zeller, 1994). Their analysis

shows that the young and energetic individuals with a desire to bring in higher incomes may tend to borrow more frequent for investment in order to accumulate wealth. While old may be less willing to borrow, they are likely to rely more on their past savings and accumulated wealth. Literature survey also suggests that wealthier individuals are more likely to demand for credit because they might be more willing to invest in capital-intensive enterprises (Crook, 2001; Cox and Japelli, 1993; Gropp *et al*., 1997; Mpuga, 2004; Swain, 2001).

With respect to education, existing literature reveals that educated people might be more willing to apply for credit (Godquin, 2002; Gonzalez-vega *et al.,* 1999; Gropp *et al*., 1997; Mpuga, 2004; Okurut *et al.,* 2004). Thus educated individuals are more likely to have higher incomes and savings and to possess assets that can be used as collateral and therefore may qualify for credit services than the less educated ones. On the other hand marital status has also been found to influence the demand for credit. Individuals who are married are more likely to demand for credit services than those who are separated, widow or unmarried (Mpuga, 2004). This tendency is mainly attributed to their increased social responsibilities.

2.10.1 Overview of Credit Demand in Developing Countries

Generally the demand for credit in least income countries is almost unlimited (Aryeetey *et al.,* 1997; Fernando, 2004; Kashuliza, 1986; Okurut *et al.,* 2004; World vision, 2002). Research findings from least developed countries reveal a huge demand for banking services (Wenner and Proenza, 2000; World vision, 2002). These findings also indicate that failure to meet this credit demand limits the ability of micro enterprises to grow to small and medium enterprises. Kamuzola (2000) and Fernando (2004) commented that

there is a need to improve the level of participation of the poor to the existing credit markets.

Demand for credit remains largely unsatisfied as both formal and informal segments of the credit market continues to serve their narrow market niches (Aryeetey *et al.,* 1997; Zeller, 1994; Wenner and Proenza, 2000). Despite the fact that informal and formal credit markets are intervened, neither the formal sector nor informal sector appears to be able to provide sufficient funds to meet credit demands (Feder *et al.,* 1993**;** Fernando, 2004; Mohieldin and Wright, 2000; Swaminathan, 1993).

Yet households that are constrained in the formal credit sector (whose demands for current production credit cannot be met) cannot expect to have their unmet demands satisfied in the informal credit sector. Likewise, households that are constrained in the informal credit sector cannot expect to have their entire unmet credit demands satisfied in the formal credit sector (Aryeetey *et al*., 1997; Feder *et al.,* 1993; Steel and Webster 1992). The importance of collateral and what constitutes surety also appear to differ markedly between these sectors (Fernando, 2004; Mohieldin and Wright, 2000). However, experience shows that most of the farm families are predominantly relying on the informal source of credit (Adugna and Heldhues, 2002 and Zeller, 1994).

Other findings reveal the difficulties, which households face in accessing credit for their enterprises from either the formal or informal sources. Mpuga (2004) for example, noted that only about 5% of all the households in Uganda received services of the micro-finance institutions. Furthermore research findings in Kenya, Malawi and Ghana, show that over 50% of all enterprises were started largely with personal funds (Buckley, 1997).

2.10.2 Gender Balance

The main argument in the 'gender balance' debate is the inclusion of disadvantaged people or groups, especially those involving women, into the mainstream of economic activity by facilitating their effective participation in domestic and foreign trade (URT, 2002b). Mpuga (2004) argued that in most African societies, men and women engage in different economic activities with different implications on the demand for credit services. Studies have shown that women, tend to be more committed borrowers and payers of loans (World Vision, 2002). However, Horn *et al*., (2000) found that women in northern Mozambique generally chose not to borrow from family members to avoid problems that might arise in case they default.

Women in developing economies have unique role in production processes but are severely constrained to get access to key production assets, including capital, education and skills. Regardless of women's full engagement in economic activities loans have been often granted to men who are more likely to own collateral (Okurut, 2000). In most African societies women do not own land, which tend to worsen their access to formal credit. Therefore women's demand for credit services may be quite different from men. In Tanzania some of the financial institutions offering credit to women such as FINCA and SERO Lease Company have been promoted in many places, but these institutions have not been able to meet women's demand for credit.

2.11 Sources of Credit for Micro-enterprises

There are several sources of credit for micro-enterprises. These can be grouped into formal, semi-formal and informal sources. Many informal and semi-formal credit sources are increasingly becoming important for a wide range of micro enterprises. Zeller (1994) identified that borrowing from both sources was rather frequent. However, Siamwala *et*

*al., (*1993) argue that borrowers do not have equal access to all credit sources, especially in the formal sector where ownership of collateral items is a prerequisite. Therefore, most micro entrepreneurs have relied on semi-formal and informal sources. It is argued that whenever a demand for short-term credit among micro entrepreneurs emerge, an informal lender is likely to emerge to meet that demand.

On the other hand Schreiner (2001) observed some cases where micro finance organizations increased earnings, and became financially self-sufficient and switched their role from offering small loans for poor to financing big projects for rich people. This means that sustainability of credit institutions should never imply to leave the goal of servicing the poor.

2.11.1 Informal credit sources

Informal credit sources can be defined as financial activities that are not regulated by central bank (Aryeetey *et al.*, 1997). These activities fall under the traditional ways of money lending. Literature survey indicates that informal sector is the most predominant source available to the majority of poor people (Feder *et al.*, 1993; Gordon, 2000**;** Kashuliza and Kidd, 1996; Mpuga, 2004; Mwachang'a, 2000). The informal sector is highly heterogeneous with respect to the type of borrowers and lenders (Mohieldin and Wright, 2000). This heterogeneity of borrowers and lenders create a conducive atmosphere for financial intermediation.

Friends, relatives, specialized moneylenders, traders, neighbours and commission agents are some of the sources of informal credit. Friends and relatives have been found to be the prominent sources of informal credit both in rural and urban areas. Traders and moneylenders are dominant sources of informal credit in commercialised areas. However,

the financial services offered by informal sector are generally perceived as part-time activities (Aryeetey *et al.*, 1997; Mwachang'a, 2000). For instance private individuals e.g. traders, friends and relatives despite their other income generating activities they also lend money, in most cases out of their own equity (Hoff and Stiglitz, 1993).

Most surveys on micro enterprises in Africa indicate that their start-up are primarily funded by informal sources (Fernando, 2004). Mdamo (1991), cited by O'Riordan *et al.* (1997), found that about 66% of initial investment capital for micro enterprises were own savings, borrowing and assistance from friends and relatives. Research conducted in Nigeria revealed that the informal source of credit flourished well where large proportions of these loans were either from relatives or individual who shared a long history of previous credit transactions (Udry, 1993).

It is reported that informal lenders generally require security, but they are much more flexible than formal sector (Aryeetey *et al.,* 1997). The security includes personal guarantees and arrangements with the applicant's employer, as well as property (fixed or movable). Security has been found to be an important condition to access credit from informal sources such as shop owners, who provide larger loans even exceeding amount from formal sources (Guirkinger, 2005; Kashuliza and Kidd, 1996). Other findings reveal that informal loans are by and large without security (Fedel *et al.,* 1993; Guirkinger, 2005; Sangwan, 2000); however debt forgiveness never occurs (Guirkinger, 2005). According to Mpuga (2004) a large percent of the household obtained credit without mortgaging anything while only 20% were required to mortgage their land, 5% future harvest, 2% buildings and 6.7% other forms of collateral.

A considerable number of the informal loans have been reported that they do not carry any conditions, and loan default, has been viewed as a gift from the lender to the borrower. Furthermore, it has also been observed that the only condition most likely in these arrangements is that the borrower may also provide a gift or a loan in the future when the current lender will be in need. The economics underlying these loan transactions are more of a reciprocal gift economy than a pure credit market (Klijn, 2006).

In Tanzania there are many informal financial services for saving and borrowing, which include ROSCAs (informal self-help groups that provide short-term informal credit) (Nikos, 1997). ROSCAs compose of group of individuals who understand each other, and have less or no admittance to formal credit and who agree to contribute periodically a fixed amount of money to a group.

The transaction costs of ROSCAs are generally very low and overhead costs are virtually non-existent. The close social bonds of members and reciprocal dependence are a powerful control mechanism of risks. ROSCAs can bring borrowers and savers together, with early recipients of the pot being borrowers, and late ones saver (FACET, 2000). The ROSCAS are spread around the world and have different names; In Tanzania they are called *upatu*, in Kenya *merry go around*, in Gambia and Ghana *ususu*, in Cameroon *djanggi*, in Bolivia *pasanaku* (Birgegaard, 1993) and *pandero* in Latin America (FACET, 2000). However, Schirmeister and Nadler (1996) concluded that ROSCA's weaknesses are based on its mode of operation.

While credit unions have the capacity to provide larger loans than many informal lenders, in practice their average loan size has been found to be relatively small. Moreover their inability to mobilize sufficient savings tended to limit their capital base, forcing them to

ration loans (Siamwala *et al.,* 1990). It is further reported that the inability of informal

lenders to meet the demand of borrowers creates a financial gap. This credit gap constrains

small enterprises to grow (Aryeetey *et al.,* 1997; Mpuga, 2004; URT, 1998).

With respect to repayment trend in the informal sector, a higher loan repayment rate close

to 100% has been reported (Kashuliza and kidd, 1996). The threat of confiscating

collateral or social sanctions by the peers is often sufficient to induce repayment (Zeller,

1994). Moreover it is reported that there is little evidence to suggest any substantial

attempt by African informal sources of credit to monitor the use of loans by their clients.

For instance, in Tanzania, loan monitoring in the informal sector has been found to be

rare-only 17% of traders and 20% of ROSCAs reported any visit to clients (Aryeetey *et*

al., 1997). Similar evidence from Ghana suggests that half of the credit unions never

monitored any loans (Atieno, 2001).

2.11.2 Semi- formal sector

Semi-formal finance is used to refer to the middle part of the continuum between the

formal and informal finance. Such arrangement may be partially regulated by government

agencies through licensing of supervision, and they may have some linkages with the

formal financial system (Kashuliza and Kidd, 1996). The semi-formal source does not

follow the banking regulations and they are not like the traditional indigenous credit

providers.

There are several successful examples of semi-formal institutions such as Badan Kredit

Kecamatan (BKK), Lembaga Perkreditan Desa (LPD) based in Indonesia and Bangladesh

Rural Advance Committee (BRAC) in Bangladesh, (ARCM, 2004 and Selvavinayagam,

1995). Disregarding their internal differences, all semi-formal financial institutions in

Tanzania are based on savings. Membership is voluntary, and are established for specific purposes. Moreover these organizations have revolving funds with initial capital input from donors. The revolving fund ensures sustainability in order to meet the credit demands. The mode of operation is more personalized where each member is registered.

In Tanzania, the semi-formal financial sources involve non-government organizations like PRIDE, FINCA, WASMEP, SCCULT, SACCOS and RAAWO and also government projects with credit components such as SIDO.

Despite the fact that semi-formal financial institutions are responding more to the needs of poor people in general and women in particular, they still face serious problems, for example limited area coverage, low growing capacity, difficulties in developing sustainable credit institutions and finding a stable institutional framework for their activities (Hague, 1992 cited by Birgegaard, 1993).

Literature survey reveals that credits in the semiformal sector are often associated with group lending, where peer pressure effectively substitute for collateral. In some respects, it is argued that micro finance institutions tend to imitate the strength of the informal sector such as using local information to ensure repayment (Gordon and Craig, 2001).

2.11.3 Formal source

The formal sector corresponds to financial institutions regulated by the government and the central bank including commercial and community banks that are regulated by the superintendent of banks (Guirkinger, 2005; Zeller, 1994). The formal sector is the cheapest source of credit that rations the credit demand, where as the informal sector does

not ration the credit and satisfies any spillover demand at varying interest rates (Kochar, 1991 sited by Kochar, 1997)).

Formal credit markets in both developed and developing countries tend to favour large firms in credit allocation. This can be attributed to availability of valuable information and stable business premises. Such phenomenon is especially pronounced in developing countries where large enterprises receive the lion share of credit from the formal sector, and small enterprises obtain most of their credit from the informal sector (Kashuliza and Kidd, 1996; Yan Tang, 1995). It is argued that those who obtain formal sector loans have high, steady incomes and assets that can serve as collateral. Swaminathan (1993) noted that ownership of assets, particularly land, raises the chances of a household obtaining bank credit.

Empirical findings reveal that banks screen loans through stringent collateral requirements. Collateral pledged in exchange for loans serves three important functions; first, mitigating the problem of adverse selection by enabling the lender to screen out borrowers most likely to default; second, adding an incentive for the borrower to repay, thereby reducing the moral hazard; and third, offsetting the cost to the lender of a loan in case of default (Udry, 1993). Many small borrowers believed that their loan applications were rejected due to lack of collateral (Siamwala *et al.*, 1993 and Zeller *et al.*, 1996). Other studies confirm that collateral requirements are the determinants of the lender's decision to ration credit demand (Mohieldin and Wright, 2000; Swaminathan, 1993). This lending policy always discriminates small-scale enterprises. Thus Small-scale producers find themselves inaccessible to formal credit (Mohieldin and Wright, 2000; Temu, 1994).

Gonzalez-vega *et al.,* (1999) outline the difficulties faced by micro-entrepreneurs in search of credit for their enterprises. These include the risky related with lending micro credit; micro-enterprises have been found to be susceptible to market failures, a high degree of concentration of the loan portfolios, high cost of administering small loans, high mortality rate and economically unstable business due to their low capital base. These situations make bank hesitant to deal with micro enterprises (Aryeetey *et al.,* 1997; USAID, 2006; YanTang, 1995). However, in some continents such as Asia (the Middle East) and Latin America the formal sector has been found to satisfy a large proportion of financial services (Gonzales-vega, 1986; Kim, 1984 and Quinones, 1985 cited by Mittendorf, 1987).

In Tanzania the formal financial sources are more prominent in urban centers (URT, 1998; URT, 2000). However the demand for credit from these sources is unmet for most of the micro entrepreneurs. High concentration of the loan portfolios in these sources limits the majority to get credit. Moreover the opportunity cost of time and sometimes bribes inhibits its access to the majority of the micro entrepreneur. Yet it is reported that the transaction cost of formal loans to the borrower may exceed the interest on the loan (Biergegaard, 1993; Nikos, 1997).

2.12 Risk of Credit Default

The cost of the risk of default is defined as those expenses for the risk of loan default incurred by the lending institutions. The risk of default depends on, among other things the borrower's credit history and the characteristics of the project he/she wishes to invest in (Aleem, 1993). Studies indicate that successful risk management depends more on lending methodologies that emphasize screening or pre selection of certain categories of borrowers than on intensive monitoring (Aryeetey *et al.,* 1997).

To reduce default risk in the absence of tangible collateral, informal loans tend to be small and short term. Majority of credit programs targeting small business have been affected by serious default rates (Feder *et al.,* 1993). However delinquency and default rates of informal lenders are generally low relative to bank. In Tanzania defaults rates of 2.5% and 4% have been found for ROSCAs and traders, respectively (Aryeetey *et al.,* 1997). In Nigeria a default rate of 20% has been observed from esusu collectors (Udry, 1993). On the other hand high default rates ranging from 50% to as high as 80% in micro credit institutions have been reported in Africa, Asia and Middle East (Kashuliza, 1986; Osuntogun, 1978; Sanderatne, 1983).

In contrast Guirkinger (2005) found that the probability of default is quite similar across the informal and formal credit sectors. Thus many organizations involved in issuing cheap credit have been affected by default problems (Adams, 1984; Sharma and Zeller, 1997). Small borrowers have been viewed as riskier than large ones for reasons often related to the difficulty of obtaining accurate information about them: geographical remoteness, illiteracy, and unreliable incomes (Aleem, 1993; Chiduo, 2001; Zeller *et al*, 1996).

Informal lenders, on the other hand, often use collateral substitutes. In most situations verbal warnings and third party guarantees have been used. There are also some lenders who do nothing but hope the borrower pays and those who threaten the borrower (Atieno, 2001). This risk mitigating mechanisms implies an establishment of trustful, endurable, and long-term relationships between the credit providers and their clients has the potential to minimize the chances of loan defaults.

It is further reported that, it is easier for a landlord-lender to make productive use of pledged farmland indefinitely than for a bank to seize it. Informal lenders are more likely to use threats of harm to property or person than to use the legal system (Yan Tang, 1995).

2.13 Interest Rate

Interest is the price paid for the use of someone's money. It involves several types of costing methods. The commonly used method is the amortized loan mostly used in short to medium and long-term loans. In this method interest is paid in outstanding loan balance. In many developing countries there is a vast gap between the interest rates charged in the formal, semi formal and informal credit markets (Siamwala *et al.,* 1993 and Zeller, 1994).

The variation of interest rates among lenders and borrower categories is attributed to differences in the likelihood of default. USAID (2006) and CEAL (2002) observed informal interest variation between rich and poor borrowers due to differences in the risk of loan default, lender's transaction costs per unit of money lent, and monopoly profits. However Fedel *et al.* (1993), Kashuliza and Kidd (1996) and Zeller (1994) noted that most of the informal loans bear no interest rate. It is argued that the 'interest free' service provided was an indication of the non-profit and mutual aid character of the informal credit transactions.

According to Kashuliza and Kidd (1996), Siamwala *et al.* (1993) and World Vision (2002) there are only a few lenders who charge high interest rate ranging from 60% to 100%. Literature survey reveals that the main reason for the high charge is the high opportunity cost of funds to the informal lender. While loans from specialized informal moneylenders are more expensive than other informal loans, they are the ones that are open to the general public. This is simply because they do not require borrowers to satisfy specific

social obligations, such as membership in groups. Hence the observed high interest rate represents, to a certain extent, a risk payment for the lender giving up the 'sanctioning authority' that is inherent in other informal arrangements that involve group membership. As a consequence specialised informal credit is more expensive if the borrower complies with the normal repayment of the loans, but cheaper in case of default (Guirkinger, 2005).

It is also known that informal moneylenders have a limited capital base because they rarely borrow from the formal sector to improve their liquidity positions (Felber, 2003). A survey by Aleem (1993) revealed that half of the funds used by an informal lender came from his own savings, 30% from institutional sources and the remainder from other informal lenders as well as clients who used him as a safe deposit (at zero interest).

In a study conducted in India, Rao and Dadhekar (1988) concluded that although the total monetary and non-monetary transaction costs of the formal sector are lower than the interest cost of the informal and semiformal sectors, borrowers are attracted to the latter because of its simple lending procedures. However, funds available for loans in the informal sector are inadequate, and there is evidence that this sector has its own barriers to entry, which may signify some form of market failure.

However with regard to semi-formal credit the cost of servicing a geographically diverse group with very small amounts of credit contribute to raise interest rate (World vision, 2002). As a result formal sector is regarded as the cheapest source of credit (Aleem, 1993; Chiduo, 2001; Mpuga, 2004; Okurut *et al.*, 2004; Zeller *et al*, 1996).

2.14 Method and Approaches used to Estimate Credit Demand

Several studies on credit programmes adapted econometric approaches. Some of these studies dealt with the projection of credit demand or quantifying relationships between credit and other variables. For instance, descriptive studies on credit have been used in assessing the impact of credit through comparisons of farm inputs, production and productivity with and without credit or between borrowers and non-borrowers (Kashuliza, 1986). However, this approach is deficient in establishing the actual demand for the credit, credit worthiness and possible repayment patterns, since it ignores several variables, which interact, and influence the behaviour and practice in the business environment.

In studying factors determining loan demand, loan repayments and accessibility, most researcher prefer to use linear regression analysis, partly due to its convenience in estimation using ordinary least squares techniques and its simplicity in interpreting coefficients (Kashuliza, 1986; Maumbe, 1993). However, some problems related to regression analysis have been reported. The problems stem from measurement errors and violation of the OLS assumptions (Mwachang'a, 2000).

It is reported that the use of OLS regression with the censored data included as 0's leads to inconsistent estimates, mainly because it under estimates the intercept and over estimate the slope. Moreover using OLS to estimate the regression after truncating the sample to exclude cases with a censored dependent variable changes the problem of censoring into the problem of truncated sample, the OLS will therefore over estimate the intercept and under estimate the slope (Long, 1997). The use of Tobit model also called censored regression model has been reported to overcome the stated problem of data censoring. The Tobit model uses all the information, including information about the censoring, and

provide consistent estimate of the parameters. Details regarding the Tobit model and reasons supporting its adoption are provided below:

2.15 The Tobit Model

Green (2000) show that the Tobit model accounts for qualitative difference between binary observations and continuous observations and is an ideal model to use when data are censored because the distribution that applies to sample data is a mixture of discrete and continuous distributions. This distribution is defined by a new variable y transformed from the original one, $y*$ by:

$$y = 0 \text{ if } y* \leq 0$$
$$y = y* \text{ if } y* > 0.$$

The distribution implied when the Tobit model is adopted is given by the following equations:

$$\text{If} \quad y* \sim N\left[\mu, \sigma^2\right] \text{ is } \Pr ob(y = 0) = \text{Prob}(y* \leq 0) = \Phi\left(-\mu/\sigma\right) = 1 - \Phi\left(-\mu/\sigma\right); \quad \text{and} \quad \text{if}$$

$$y* > 0$$

then y has the density of $y*$. In this case the transformed variable is the Tobit model for left-censored normal data. Predicted values of the observed variable $\left(y_i\right)$ can be computed based on the mean:

$$E(y_i) = \Phi(\frac{x_i \grave{\beta}}{\sigma})(x_i \grave{\beta} + \sigma \lambda_i)$$

where:

$$\lambda_i = \frac{\phi\left(\chi_i \grave{\beta}/\sigma\right)}{\Phi\left(\chi_i \grave{\beta}/\sigma\right)} \text{ and,}$$

Φ represents the normal probability density and cumulative distribution function.

The Tobit model is an extension of the Probit model (Gujarati 1995). The Tobit model (also known as limited dependent variable models), described by Tobin (1958), is regression model for left censored data. The presence of zero observed values of the regressand, while regressors contain all values of the observations indicates that the data is left censored.

2.16 The Probit and Logit Model

Literature also suggests that the Probit model might also be useful to identify households' characteristics that differentiate borrowers from non-borrowers (Mpuga, 2004; Okurut *et al.,* 2004; Vaessen, 2001; Zeller, 2004). The Probit model has an S-shaped cumulative normal distribution curve bounded in the interval zero-one. The model can be simply specified as:

$$y^* = \beta'x + \varepsilon$$

where $\varepsilon \sim N(0,1)$ and ε_i and ε_j $\forall(i \neq j)$ are independent. The observable binary variable y relates to y^* in the following way:

$$y = 1 \text{ if } y^* > 0,$$
$$y = 0 \text{ if } y^* \leq 0$$

Given the above specification and description, it must be true that;

$$E(y) = \Pr ob(y = 1) = \Pr ob(y > 0) = \Pr ob(-\varepsilon < \beta'x)) = \Psi(\beta'x)$$

where the function $\Psi(\ )$ represents the standard normal distribution. Thus,

$$\text{Prob}(y=1) = \int_{-\infty}^{\beta'x} \phi(t)\, dt$$

where $\phi(t)$ represents the density function of $t \sim \text{N}(0,1)$.

The parameters β are always estimated using the maximum likelihood method using the log-likelihood function (Garson, 2007).

An alternative S-shaped curve that might be used is the logistic curve corresponding to the Logit model (Garson, 2007; Long, 1997). This model is very popular because of its mathematical convenience and is given by:

$$\text{Prob}(y=1) = \frac{e^{\beta'x}}{1 + e^{\beta'x}}$$

The logistic function is commonly used because it represents a close approximation to the cumulative normal and is easier to work with. In dichotomous situations, however, both functions are very close although the logistic function has slightly heavier tails than the cumulative normal. In summary the Logit model has a nonlinear function, estimated with Maximum Likelihood and is practical for explaining a binary dependent variable. Despite the fact that its Likelihood function does not have a direct analytical solution, the Logit specification has a negative semi definite Hessian matrix and a unique global maximum is guaranteed.

The empirical model used in this study follows the Probit specification. Probit models are useful where the dependent variable is qualitative and it overcomes the problem of bounding the probabilities of the dependent variable to either one or zero. The model

solves the problem of predicted probabilities of less than zero or greater than one observed in linear probability model.

Given the nature of the dependent variable (the demand for credit) that was due to the existence of borrower and non-borrower. This study used the Tobit model to estimate the relationship between the amount of credit demanded by the micro entrepreneurs and some explanatory variables. Credit demand was estimated on the basis of the observed micro entrepreneur and credit provider characteristics. The sample included the 0's to differentiate borrowers from non-borrowers. The proposed modelling approach has been extensively used to estimate the demand for credit (Mpuga, 2004; Swain, 2001).

Probit models provide quantitative evidence on the determinant of the demand for credit. In this context the demand for credit is defined by the probability whether an individual applied for credit or not and the level of credit demand is defined as the amount, in shillings, of credit demanded by the individual.

The study assumes that the credit market is heterogeneous; with various market participants particularly formal, semi formal and informal credit providers, operating differently and using different lending policies and procedures. The ultimate effect is the segmentation of the clients among the prevailing sources of credit. These credit markets facilitate the transfer of funds from the savers to the productive sectors in need of such funds in any given economic system.

2.17 Conclusion from the Literature Review

The chapter has presented the literature findings in the context of credit demand for micro enterprises activities. The findings shows that a large proportion of micro entrepreneurs

lack working capital. The sources of credit so far identified are formal, semiformal and informal. Several economic analysts found that the demand for credit is almost unlimited, with a substantial number of micro entrepreneurs accessible to the informal sector. The findings further reveal that poor capital base of the informal source create a financial gap. The literature survey also shows that this gap cannot be filled by the formal or in semi-formal sources. The gap in credit demand is attributable to the segmentation of credit markets, which cannot act as a substitute for each other. This has been found to constrain micro enterprises that have greater potential for expansion. A number of studies have indicated that if adequately financed micro enterprises can contribute towards poverty alleviation.

CHAPTER THREE

METHODOLOGY

3.1 Overview

This chapter has five sections. The first section presents the conceptual framework of the study. The second section describes the study area. Section three covers the sampling techniques used. Data collection is described in section four. The last section presents the analytical techniques used to analyze data.

3.2 Conceptual Framework

The conceptual framework (Fig.1) employed in this study stems from the idea that, the lending procedures and policies vary across credit sources and the fact that lenders operate independently and potential borrowers are not well-informed about the operations of various financial institutions. The variations in lending practices are mainly attributed to the differences in characteristics of the credit recipients and those of the credit providers. Borrowers' characteristics such as age, gender, marital status, wealth status, education, economic activities and household size are hypothesized to have strong influence on the demand for credit. Lending procedures and policies employed by the credit providers include the use of assets to secure loans, credit worthiness of the recipients, mode of repayment, volume of the business, business licensing, application and registration fees and capital base of the lender. These lending conditions are assumed to be the major concerns for the borrowers' choice of credit sources.

The conceptual frame suggests that for these credit sources to reach the majority they have to be coordinated to smooth an information and capital flow from the providers to lenders and between the providers. There is a need to smoothen information and capital flow

because high dependency on credit and low capacity for individuals to make any meaningful saving for investment have been the major problem for the poor clients (Themba *et al.,* 1999). Therefore credit services from either the formal, semi formal or informal sources have the potential to increase production in both off-farm and on-farm micro enterprises. The investment in these micro enterprises is expected to lead into economic development; this means the improvement in livelihood of the people.
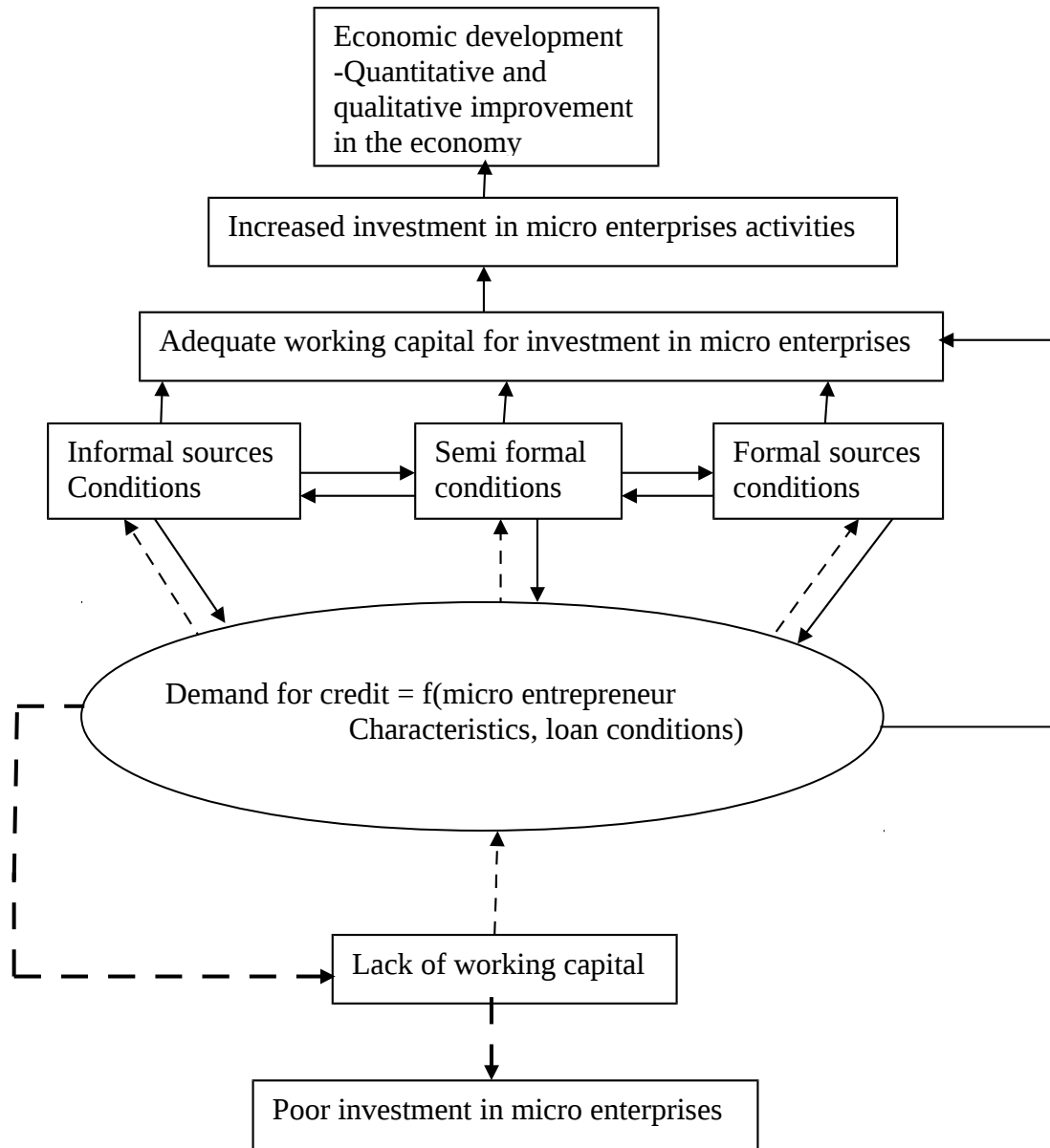
Figure 1: Conceptual Framework

3.3 Study Area

The study was conducted in the southern highland of Tanzania, specifically in Iringa, Mbeya and SBA districts, which are in Iringa, Mbeya and Rukwa Regions, respectively (Fig. 2). These districts were selected for the study because of the considerable number of formal, semi formal and informal financial institutions, which include PRIDE, FINCA, SELFINA, SIDO, NMB, CRDB Bank Ltd., and various SACCOS.

Mbeya district (Fig. 3) lies between 8° 6' and 9° 2' S and Longitudes 3° 2'E. The district shares border with Mbozi district to the west, Mbalari district to the East, Rungwe district to the south and Chunya to the North. The region has a bimodal rainfall pattern ranging form 1000 to 2500 mm per year, which falls between October and May.

On the other hand Iringa district (Fig. 4) lies along latitude 7° to 8°south of the equator, and longitudes 34° to 45° East of Greenwich meridian. The district is bordered by Dodoma region in the North, Morogoro region in the East, Mufindi district to the south and Mbeya region to the west. The rainfall ranges from as low as 900 mm in the lowland to as high as 1600 mm in the highland zone.

SBA (Fig. 5) is one of the three districts of Rukwa region located in the distant south western of Tanzania between lake Tanganyika and lake Rukwa. The district shares border with Zambia to the south and it is about 60Km from Zambian border. The district is bordered by lake Tanganyika in the southwest, and Nkansi district in the northwest. To the east the district is bordered by Mbozi district in Mbeya region. The climate of the district is predominantly semi-arid although sub-humid conditions exist in the southwest. Rainfall is limited between November and April.
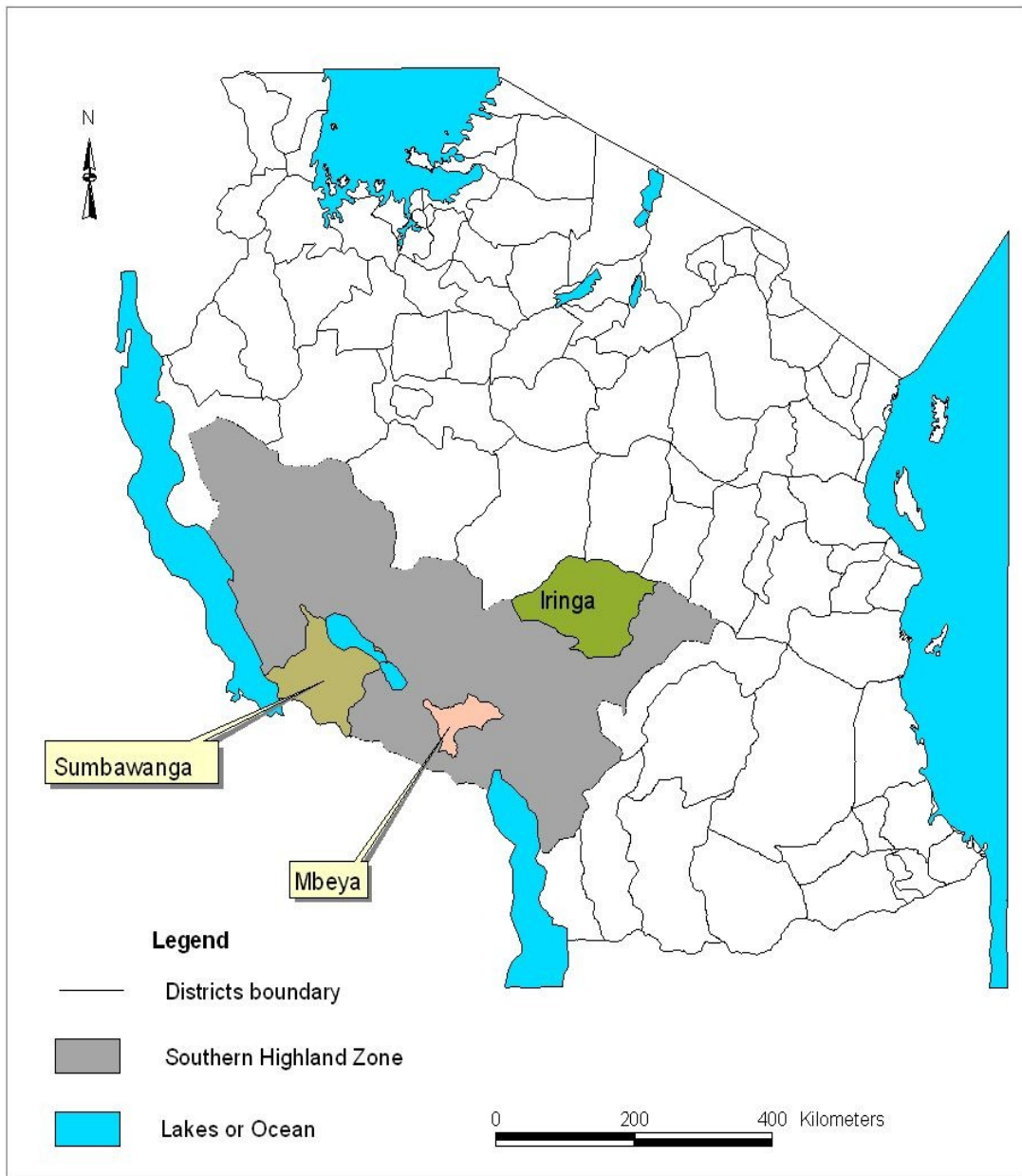
Figure 2: Map of Tanzania showing the southern highland zone
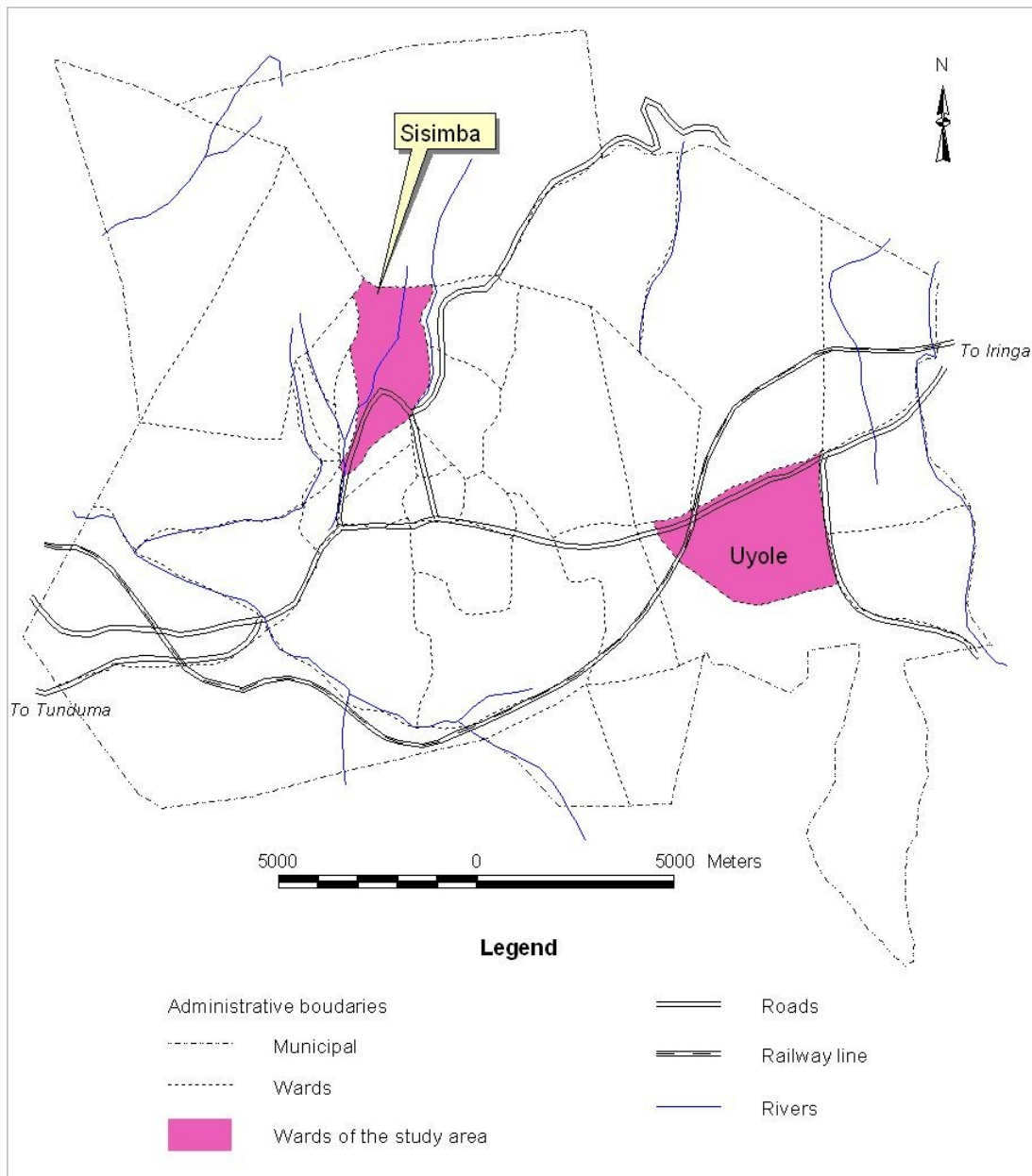
Figure 3: Map of Mbeya Urban district showing the wards under study
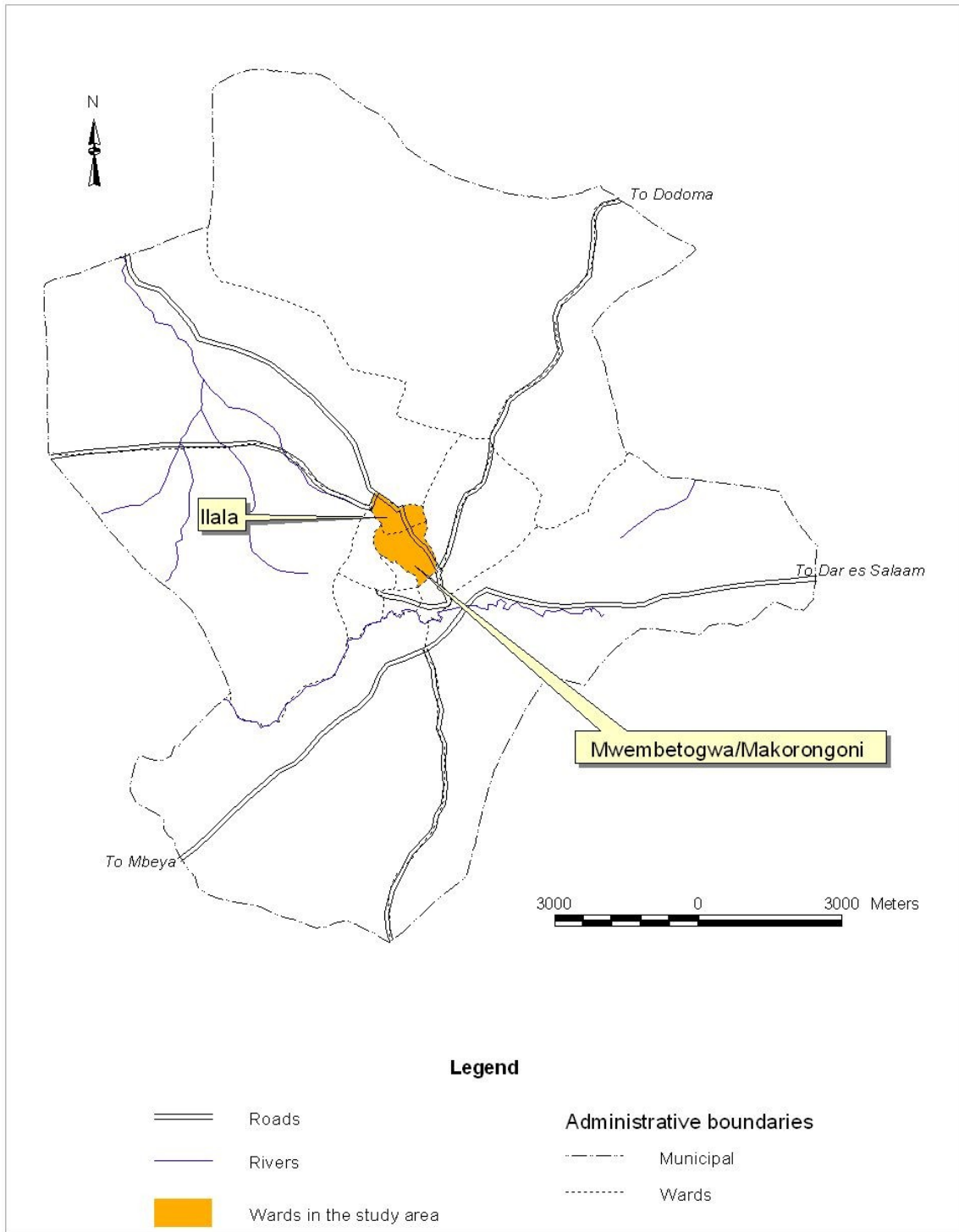
Figure 4: Map of Iringa Urban district showing the wards under study
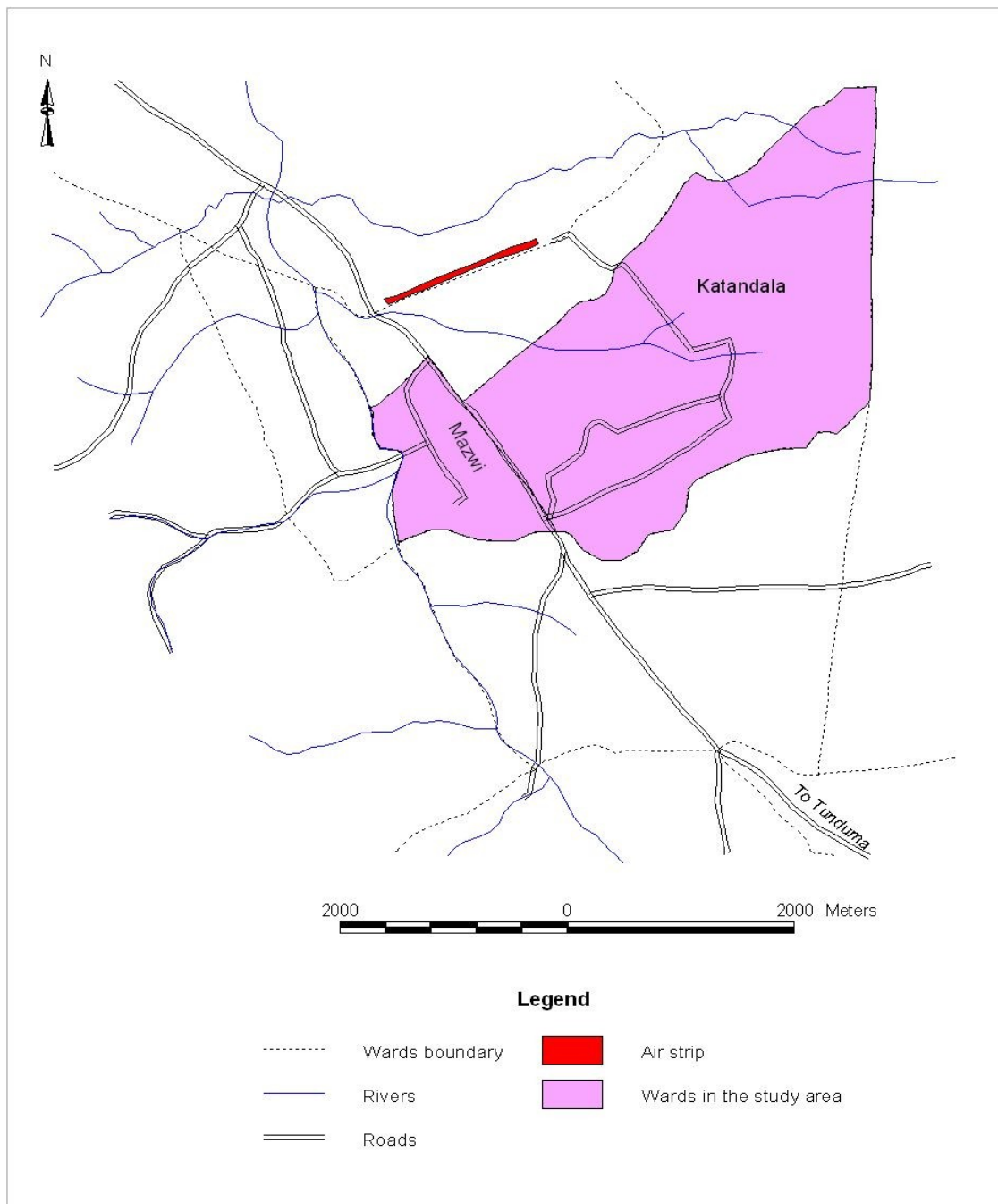
Figure 5: Map of Sumbawanga Urban district showing the wards under study

3.4 Sampling Techniques

One district was selected form each region of the southern highlands. The districts were purposely selected based on the number of credit providers and the extent of micro enterprises activities. The second stage involved a random selection of two wards from each of the selected districts, making a total of six wards. Selection of respondents was the last stage. At this stage a list of micro entrepreneurs who applied and those who did not apply for credit constituted a sampling frame. The list was obtained from credit sources. A sample size of 63 micro entrepreneurs was drawn from Mbeya district, out of 63, 46 applied for credit and 17 micro entrepreneurs did not applied for credit. While in Iringa and SBA districts 60 micro entrepreneurs were sampled from each district. About fourteen respondents in Iringa did not apply for credit while 46 micro entrepreneurs applied for credit. In SBA 54 out of 60 micro entrepreneurs applied for credit and only 6 respondents did not apply for credit. In total 183 respondents were selected for interview.

3.5 Data Collection

3.5.1 Primary data

A structured questionnaire was used to collect data from the micro entrepreneurs (Appendix I). The questionnaire was focused to obtain information on quantitative data on micro-enterprises as per URT (1998) classification. The questionnaire was pre-coded and had seven sections. The first section was designed to capture general information on the characteristics of the respondents. Section two of the questionnaire was meant to collect information on micro enterprises, including information on households' economic activities, distance to credit sources, ownership of enterprises, and reasons for starting micro enterprises. Section three of the questionnaire was designed to acquire information on enterprises capital. Section four of the questionnaire was meant to solicit information

on demand for credit services including information on the expected uses of credit, kind of collateral and preference for credit sources. The fifth section contained questions focused on credit diversion. Section six contained questions related to credit terms and benefits derived from credit-use while the last section was designed to gather information on specific sources of credit.

The respondents were the micro entrepreneurs, with and without credit from the formal, semi formal and informal sources. Furthermore the data included information on social economic and demographic variables and credit transactions. On the other hand the micro finance institution questionnaire (Appendix II) was focused to obtain general information on credit sources available to the micro entrepreneurs. The information included the core objectives of these institutions, the types of credit offered, major problems related to credit services, and lending procedures and policies.

3.5.2 Secondary data collection

The secondary data collected provided information to supplement primary data and enriched the understanding of credit demand for the various sources of credit. Secondary data was extracted from reports, electronic sources and other documentary materials that were relevant to this study. Secondary information included past trend of credit demand and operations of the various credit providers such as FINCA.

3.5.3 Questionnaire administration

The structured questionnaire was administered to sampled micro entrepreneurs by the author. The interview was conducted for three months between early September and November in 2005.

3.5.4 Research design

The research design was a cross sectional design done at a single point in time. This design is used because the data were collected once in the sampled area. A cross sectional design was adopted to get quantitative information. According to Babbie (1973), this method is suitable for a descriptive study as well as for the determination of relations between and among variables. The design is systematic, economical and provided relevant information to address research objectives because it employs well-thought instrument for data collection (Kothari, 1990). A well-planned cross sectional design minimizes bias and maximizes the reliability of the data collected and analyzed.

3.6 Data Analysis

Statistical Package for Social Science (SPSS) was used to analyze descriptive statistics. Such statistics include means, frequencies, and percentages and measures of dispersion such as range and standard deviation. The associations between variables were examined by cross tabulations. The study used cross tabulation, which employed chi- square test to investigate whether distribution of categorical variables differ from one another. The chi – square test was also used in order to compare the tallies/counts of categorical responses between two independent groups. The chi square test is a useful test of independence, usually test how the categorical variables are related. On the other hand, LIMDEP was used to estimate Probit and Tobit models.

3.6.1 Regression analysis for credit demand

3.6.1.1 The Probit model

The Probit model was used to determine the characteristics of the micro entrepreneurs who demanded for credit in comparison to those who did not using the maximum likelihood estimation procedure. The model was specified as:

$$D_{it} = \alpha_0 + \alpha_1 \log AG_{it} + \alpha_2 ED_{it} + \alpha_3 MT_{it} + \alpha_4 AS_{it} + \alpha_5 \log EXP_{it} + \alpha_6 AC$$
$$+ \alpha_7 GD_{it} + \varepsilon_{it}$$

(1)

Where D_{it} is a dummy variable taking, 1 if the individual took credit and 0 otherwise. AG_{it}, ED_{it} and MT_{it} are the age, education and marital status of an individual i at time t, and EXP_{it} is the micro enterprises experience in years. AS_{it} is the household assets and AC_{it} is a dummy for availability of credit services which takes one if influenced by sources of credit available and zero otherwise, GD_{it} is the sex of the micro entrepreneur and ε_{it} is the error term.

3.6.1.2 The Tobit model

However, while the probit models give potential information on the demand for credit, it generally treats all borrowers the same way regardless of the amount borrowed and other characteristics that are specific to individual borrowers. To get more realistic information about the relationship between credit demand and micro entrepreneurs' characteristics the following Tobit model was specified and estimated;

$$\log Y_{it} = \alpha_0 + \alpha_1 \log AG_{it} + \alpha_2 ED_{it} + \alpha_3 MT_{it} + \alpha_4 AS_{it} + \alpha_5 \log E$$
$$+ \alpha_7 TC_{it} + \mu_{it}$$

(2)

Where Y_{it} represents the amount of credit demanded, TC_{it} is a dummy for the terms of credit[2], it takes the values of one if the terms were understood by borrowers and zero otherwise, and the rest of the variables are as defined previously, μ_{it} is the error term. The

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[2] The terms of credit in this contest includes the variation of interest rate, mode of repayment and collateral requirements.

coefficients $\alpha_1 \ldots \ldots \alpha_{10}$ provides an appropriate adjustment to obtain estimates of the effects of variation in the explanatory variables on Y_{it} for those who demanded credit and also indicates the proportion of the total effect due to induced changes in behavior of those who demanded for credit.

The Tobit model allows the estimation of parameters without specifying a distribution for unobserved effects (Galiano and Kurnert, 2005). The Tobit model was chosen because of the zero values in the decision to apply for credit (demand for credit) services. Normally the presence of zero values violates the constant variances assumption on normal distribution for the ordinary least square method. The model is designed to deal with the biases introduced by censoring (Maddala, 1983). In working with Tobit model without specifying a censoring value (upper and lower limit), the Tobit model assumes that the lower limit is the minimum observed value and the upper limit is the maximum observed value in the data (Altman and Bland, 1996).

In this study dependent variable (amount of credit demanded) was transformed into logarithm form because the log form proved to be the best fit of the data (see also Lewis, 2004 and Mpuga, 2004).

3.6.2 Prior expectation about the signs of parameters

The specification of econometric model ought to go well with the economic theory. However, the interpretation of casual relationships between the variables can be beefed up with economic theory and/ or logical judgment. The anticipated relation between the dependent and the independent variables are described next.

A coefficient attached to age of the micro entrepreneur (AG) was expected to have negative sign. This is because the demand for credit services is expected to decrease as people become old. This implies the young and energetic individuals, with an ambition to earn higher income, are expected to be more active in micro enterprises activities and therefore tend to borrow more for investment while the old may be less willing to borrow. The old are likely to rely more on their past savings and accumulated wealth.

With respect to marital status of the micro entrepreneur (MT), demand for credit services is expected to be different between married and unmarried individuals. This implies individuals who are married are more likely to demand for credit compared to the unmarried one, due to the solidity of their family and associated responsibilities. The coefficient of this variable was expected to have positive sign.

An asset owned by the micro entrepreneur (AS) was expected to have positive sign. This is because individuals with assets can use their assets as collateral to acquire loans, implying that they are more likely to demand for loans more frequently and in larger amount as compared to those without assets.

A coefficient attached to availability of credit services (AC) was expected to have positive sign. This implies that the micro entrepreneurs who have wide choices of credit sources are expected to demand for credit services more frequently than those micro entrepreneurs who have limited choices of credit providers. These individuals are also expected to borrow smaller amounts than those with access to sources of credit.

Experience of the micro entrepreneur (EXP) was expected to have positive sign. The main reason is that experienced entrepreneurs are well established in their business, have stable cash flow and with a well-established business premises. Thus they are more likely to demand for credit services.

Education of the micro entrepreneur (ED) was hypothesized to have positive sign, with the expectation that demand for credit increase with education. This means micro entrepreneur with higher level of education are expected to have better information about the role of credit, realize the benefits, and understand the procedures of getting a loan. There fore, those micro enterprises owners who have education are more likely to demand for credit than those without education, simply because education enlightens the mind of the individual to weigh things, think logically and make rational decisions.

Terms of credit (TC) were hypothesized to have positive influence in terms of the amount of credit demanded by the micro entrepreneurs. This was because lenders employ varied strategies as a precaution against risk of credit defaults. This entails the high degree of concentration of the loan portfolios, which includes the collection of adequate information on volume of the business that will dictate the mode of repayment. Therefore understanding and fulfilling these terms is expected to increase access to larger loan amount.

Sex of the micro entrepreneur (GD) was hypothesized to have negative influences in terms of the decision to apply for credit. Existence of credit sources which served females only may affect the participation of males. Moreover the credit history was expected to vary between males and females, being poor in males. With respect to amount demanded it is

assumed to have positive sign because males are the one who posses valuable assets and

therefore can access larger loan size particularly in the formal credit sector.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Overview

This chapter presents results and discussions. It is divided into six main sections where the first section discusses the micro entrepreneurs' characteristics in the study area and the second section provides a brief discussion about micro enterprises. Section three presents a detailed discussion on the demand for credit in the surveyed districts, where as section four provides information related to credit diversion. Section five presents the regression results for the Tobit and Probit models discussed in section three, while the sixth section discusses the lending conditions and procedures for the semi-formal and formal financial institutions identified in the study area.

4.1 Micro Entrepreneurs' General Characteristics

4.1.1 Sampled micro entrepreneurs per district

Micro entrepreneurs were interviewed from three districts located in Iringa, Rukwa and Mbeya regions. Figure 6 indicates the composition of respondents.
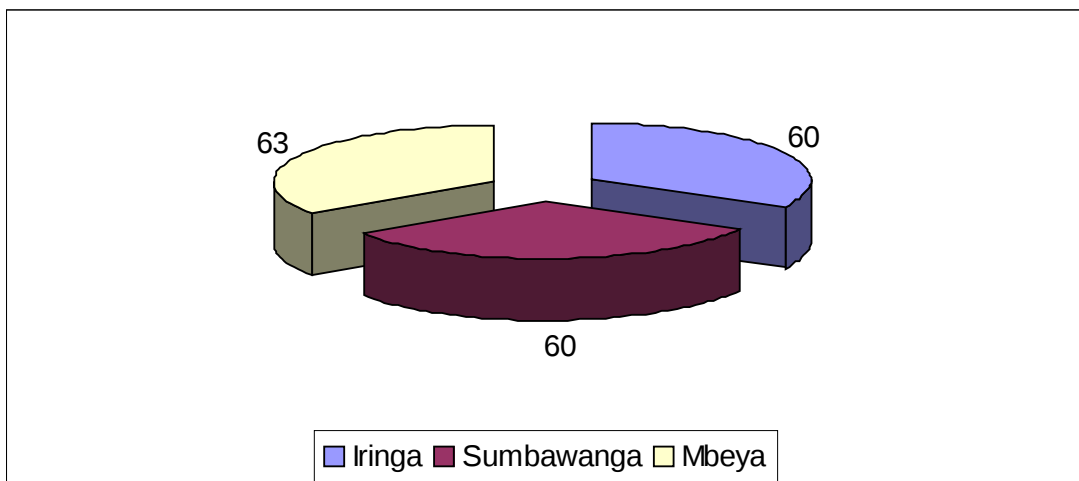
Figure 6: Number of micro entrepreneurs per district

4.1.2 Sex of the micro entrepreneurs

The results (Table 1) show that there were more female (63.9%) than male (36.1%) micro entrepreneurs in the study area. District-wise, Iringa had the largest proportion of female (75%) followed by Mbeya urban (61.9%) and SBA urban (55%). The large number of female respondents is accounted by the fact that, women have less capital and they are relatively more risk averse than men[3]. Moreover over presentation of women is also attributed to the fact that some businesses were considered to be gender specific such as food vending. The importance of female participation in micro enterprises has been recognized (Gonzalez-vega *et al.,* 1999). However, empirical evidence from enterprises in Africa indicates that women operate low return enterprises, which are also less risky, often located at, or near, their homes (Gachira, 1998; Griffith *et al*., 1999). The enterprises have to be at home or nearby to allow women to perform their household roles.

The results presented above are consistent with Chiduo (2001) and Selejio (2002) who found that over 50% of the micro entrepreneurs in Dar es salaam, Zanzibar and Morogoro were females, respectively.

However, the results show no significant variations at (P<0.05) with respect to the sex of the micro entrepreneurs, implying that the number of males and females involved in micro enterprises in the study area is almost the same.

The chi-square indicated under each table has been used to establish significance to the extent that; the relationship is strong, the sample size is large and the number of values of the two associated variables is large. This chi-square value has been also used to test the hypothesis of no association of columns and rows in tabular data. A chi-square probability of 0.05 or less is commonly interpreted as justification for rejecting the null hypothesis

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[3] Most women could afford to raise sufficient capital to invest in micro enterprises but not SMEs. Also Micro enterprises are relatively less risky than SMEs or other big enterprises

that row variables are unrelated (that is, only randomly related) to the column variable (Garson, 2007). The chi-square is not interpretable directly but must be compared to a table of the chi-square distribution. The column of this are alternative significance levels (0.001, 0.01, 0.05, etc.), the rows are degrees of freedom (DF). A chi-square table, which in effect is built into statistical software packages, gives a critical value. Computer printout shows the significance level directly and hence its interpretation bases on these significance levels.

Table 1: Sex of the micro entrepreneur

Gender	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Male	15	25.0	24	38.1	27	45.0	66	36.1
Female	45	75.0	39	61.9	33	55.0	117	63.9
Total	60	100.0	63	100.0	60	100.0	183	100

Chi-square = 5.376   Df = 2   significance = 0.068

4.1.3 Marital status

Percentage wise 66.1% of the micro entrepreneurs were married, 15.3% widowed, and 11.5% and 7.1% single and divorced, respectively. Survey findings (Table 2) revealed that a large proportion of micro entrepreneurs were married. The proportions of married micro entrepreneurs were 68.3%, 46% and 85% in Iringa, Mbeya and SBA, respectively. This indicates that most of the micro entrepreneurs had stable families, and consequently, financial institutions were likely to view them as more reliable, and they were also more likely to demand financial services than unmarried clients.

Furthermore, the findings show that Mbeya district had more widows and divorced micro entrepreneurs. The same findings have been reported by Elias (2003) who, in addition also found a high percentage of divorcees and widows in Mbeya municipality.

The results also reveal significant variation at (P<0.01) in terms of marital status in the districts, this implies that the distribution of single, married, divorced and widow differ from one district to another in the study area.

Table 2: Micro entrepreneur's marital status by district

Marital Status	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Single	6	10.0	12	19.0	3	5.0	21	11.5
Married	41	68.3	29	46.0	51	85.0	121	66.1
Divorced	4	6.7	6	9.5	3	5.0	13	7.1
Widow	9	15.0	16	25.4	3	5.0	28	15.3
Total	60	100.0	63	100.0	60	100.0	183	100.0

Chi-square = 21.849   Df = 6   significance = 0.001

4.1.4 Education level of the micro entrepreneur

The majority of the sample micro entrepreneurs (Table 3) in all districts (69.9%) had gone through primary level of education. 16.9% and 2.2% proceeded to secondary and college education, respectively while only a few had no formal education. About, 1.6% of the respondent had attended adult education. This indicates that most of the micro entrepreneurs in the study area can read and write, and therefore can participates in the training given by financial institutes to enable them to be credible borrowers and hence become participants in various economic activities. However, the results show no significant variations at (P<0.05) in terms of education level among the micro entrepreneurs in the sampled districts, implying that the education level of the respondents in the study area is almost the same.

Table 3: Education level of the micro entrepreneur

Education	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
No formal	4	6.7	8	12.7	5	8.3	17	9.3
Adult	2	3.3	1	1.6			3	1.6
Primary	39	65.0	45	71.4	44	73.3	128	69.9
Secondary	15	25.0	7	11.1	9	15.0	31	16.9

| College | | | 2 | 3.2 | 2 | 3.3 | 4 | 2.2 |
| Total | 60 | 100.0 | 63 | 100.0 | 60 | 100.0 | 183 | 100.0 |

Chi-square = 9.307   Df = 8   significance = 0.317

4.1.5 Age of the micro entrepreneur

The results from survey (Table 4) show that the majority of micro entrepreneurs in the study area were relatively young (below 47 years). Based on the results there is a significant variation between districts in terms of ages of micro entrepreneurs. More than half of the micro entrepreneurs in SBA and Iringa districts were between 18–37 years old. This implies that micro enterprises in these districts have absorbed a large number of productive work forces. Smith (2000) argues that it is generally the younger household members who migrate in search of income earning opportunities. There fore the young may tend to borrow more frequent for investment while the old may be less active and therefore less liable to save or to borrow. Therefore this willingness to invest tends to encourage the participation of the youth in enterprises. These results are similar to those of Mead and Liendholm (1998) in Sub Saharan countries, who found that most of the small and micro entrepreneurs were relative young people.

Table 4: Respondents' age

Age group	Iringa		Mbeya		SBA		Total	
(Years)	N	%	N	%	N	%	N	%
18-27	11	18.3	11	17.5	11	18.3	33	18.0
28-37	33	55.0	16	25.4	30	50.0	79	43.2
38-47	3	5.0	17	27.0	13	21.7	33	18.0
48-57	10	16.7	13	20.6	4	6.7	27	14.8
58-67	3	5.0	6	9.5	2	3.3	11	6.0
Total	60	100.0	63	100.0	60	100.0	183	100.0

Chi-square = 22.507   Df = 8   significance = 0.004

4.1.6 Assets owned by the micro entrepreneur

With respect to households' assets, the survey findings (Table 5) revealed that many micro entrepreneurs (61.7%) had no valuable assets[4]. The little money available to the poor does not allow them to invest in valuable assets (Ssali, 1998). The results show no significant variations between districts when assets owned by the micro entrepreneurs are considered. Lack of assets is one of the micro entrepreneur common problems. This problem tends to exclude most micro enterprise actors from the formal banking system. Bennet and Cuevas (1996) underscore that it is only when people have economic security that access to credit can help them to move out of poverty by improving the productivity of enterprises or creating new sources of livelihood.

Table 5: Assets owned by the micro entrepreneur

Assets owned	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Land	14	23.3	5	7.9	11	18.3	30	16.4
Home belonging	9	15.0	20	31.7	11	18.3	40	21.9
No assets	37	61.7	38	60.3	38	63.3	113	61.7
Total	60	100.0	63	100.0	60	100.0	183	100.0

Chi-square = 9.144   Df = 4   significance = 0.058

4.1.7 Micro entrepreneurs' dwelling characteristics

Among the interviewed micro entrepreneurs (Table 6), 51.9% had their own house and 42.6% lived in rented houses. Those living in own houses were more likely to be successful in loan application particularly in the formal credit sector. Most financial institutions consider ability to repay prior to advancing credit, and ownership of houses is among the indicators that are commonly used to ration credit. In the formal financial sector security and properties like buildings are given more weight. In general, households in the surveyed districts were not different with respect to the ownership of houses/buildings at $P < 0.05$.

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[4] In this study valuable asset has been referred to titled land, home furniture and farm machinery implements

However, informal discussion with respondents indicated that most of them had no titles for the houses they owned (squatters) therefore their houses could not act as collateral to secure credit from formal credit.

Table 6: Micro entrepreneurs' dwelling characteristics

Dwelling	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Own house	32	53.5	33	52.4	30	50.0	95	51.9
Rented house	23	38.3	29	46.0	26	43.3	78	42.6
Family house	5	8.3	1	1.6	4	6.7	10	5.5
Total	60	100.0	63	100.0	60	100.0	183	100.0

Chi-square = 3.302   Df = 4   significance = 0.509

4.1.8 Formal employment of the micro entrepreneur

Survey results (Table 7) show that more than two third of respondents had no formal employment. The proportion of employed micro entrepreneurs in Iringa, Mbeya and SBA districts were 21.7%, 4.8% and 8.3%, respectively. The findings indicate that most of the respondents probably depended on micro enterprises to generate their income for employment. The results show significant variation in terms of employment among the three districts at ($P<0.01$).

The results are similar with those of Magill and Mayer (2005) and Mead and Liendholm (1998), who found that most of the small and micro entrepreneurs had no formal employment in the public and private sectors. Therefore, the provision of micro finance services to these people should be emphasized for them to acquire working capital for their enterprises.

Table 7: Formal employment of the micro entrepreneur

	Iringa	Mbeya	SBA	Total

Formal employment	N	%	N	%	N	%	N	%
Yes	13	21.7	3	4.8	5	8.3	21	11.5
No	47	78.3	60	95.2	55	91.7	162	88.5
Total	60	100.0	63	100.0	60	100.0	183	100

Chi-square = 9.513   Df = 2   significance = 0.009

4.1.9 Household size

This study assumed that data came from population where the distribution is normal. Therefore F test was then used to test whether household sizes differed across the surveyed districts. The survey results (Table 8) indicate that the average number of individuals per household was 4.8, 4.5 and 4.2 for Mbeya, SBA and Iringa districts, respectively. Urban households were normally smaller in size compared to rural households. The household sizes were almost similar in all the three districts, since the difference in mean household size was not significant at P<0.05. The average household sizes in the districts of 4.5, 4.2 and 4.8 for SBA, Iringa and Mbeya were close to the national household size of 4.9 persons/household in Tanzania based on the 2002 population census (URT, 2003). Reardon (1997) observed that household size was one of the factor which affected the ability of a household to supply labor to the non-farm activities (such as micro enterprises), which has implication on the micro entrepreneurs ability to operate enterprises. However, this depends on the labor force participation rate of the household members i.e. ratio of the working age and labor force participation of the working group in a household.

Table 8: Average household size per district

Districts	Mean	N	Minimum	Maximum	Std. Error
Mbeya	4.8	63	1.00	11	0.24773
SBA	4.5	60	1.00	10	0.27665
Iringa	4.2	60	2.00	8	0.21272
Total	4.5	183	1.00	11	0.14307

F-value = 1.465　　　　　　　Significance = 0.234

4.1.10 Experience in Micro enterprises

The results indicate that most (63.9%) of micro enterprises had been in operation for a period of less than five years. The group of micro enterprises with 5 – 10 years constituted 20.8% forming the second largest enterprises' group (Table 9). The results also show that few enterprises (15.3%) were more than ten years. The proportion of enterprises that had the age history of less than five years was higher compared to other groups probably due to the recent promotion of micro finance institutions by both the government and private market, which has enabled more micro entrepreneurs to engage in micro enterprises activities in the study area.

It may therefore be concluded that most micro enterprises had started small and became more progressive when they got access to credit and gained experience. Buckley (1997) observed that such micro enterprises start with a very small capital and owners' experience grows as the enterprise grows. Results also show that age history of micro enterprises varied significantly across districts at P<0.01.

Table 9: Experience in micro enterprises

Experience in MEs	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
<5 years	45	75.0	39	61.9	33	55.0	117	63.9
5-10 years	13	21.7	9	14.3	16	26.7	38	20.8
>10 years	2	3.3	15	23.8	11	18.3	28	15.3
Total	60	100.0	63	100.0	60	100.0	183	100.0

Chi-square = 13.2　　　　Df = 4　　　　　Significance = 0.01

4.1.11 Distance to credit source

In order to test whether the population mean are the same in the study area, the F test was used. The results (Table 10) show that the F – value of 9.764 was significant at P<0.01, providing sufficient evidence that the means of the distances from credit providers differs in the study area. The average distance to credit sources was about 0.9 kilometers and ranged from 0.4 to 7 kilometers. The mean distance to credit sources were 1.2, 0.9 and 0.6 for Mbeya, SBA and Iringa districts, respectively. This may probably be due to the variation in choice and availability of alternatives sources of credit in the study area.

Table 10: Distance to credit source in kilometres

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Districts	Mean	N	Minimum	Maximum	Std. Error
Mbeya	1.2302	63	0.50	4.00	0.10234
SBA	0.8950	60	0.50	7.00	0.11754
Iringa	0.6500	60	0.40	2.00	0.04295
Total	0.9301	183	0.40	7.00	0.05663

F-value = 9.764   Significance = 0.000

4.2 Micro enterprise description

4.2.1 Main economic activities

Most of the micro entrepreneurs in the study area dealt with food stalls, shoes, clothes and food vending (Table 11). Ranking of these activities revealed that food stalls constituted 48.1% while selling of shoes and clothes, and food vending constituted 19.1% and 9.3%, respectively. Foods stalls dealt with basic human needs; as a means of winning an assured market which has a large number of customers and was less risky. The high concentration of micro enterprises activities into food stores has also been observed in other countries (USAID, 2006).

Cosmetics, stationary and telephone services constituted 11% of reported activities. Poultry keeping and selling accounted for 4.9%, hair saloons accounted for 4.4%, sculptors and timber selling together accounted for 3.3% of the activities. These small percentages observed are probably due to the nature of the economic activities undertaken which are targeting a particular small set of the market segment. Most of these goods/services have more elastic demand simply because their consumption varies with the level of income of consumers. The activities were not significantly different between the three districts indicating that the economic activities undertaken were almost similar.

Table 11: Main economic activities

Economic activities	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Food stall	24	40.0	32	50.8	32	53.3	88	48.1
Cosmetics shop	2	3.3	3	4.8	5	8.3	10	5.5
Poultry keeping/selling	6	10.0	2	3.2	1	1.6	9	4.9
Shoes and clothes sellers	8	13.3	15	23.8	12	20.0	35	19.1
Hair saloons	5	8.3	1	1.6	2	3.3	8	4.4
Food vendors	10	16.7	3	4.8	4	6.7	17	9.3
Stationary &Tel services	2	3.3	6	9.5	2	3.3	10	5.5
Sculptors and timber sellers	3	5.0	1	1.6	2	3.3	6	3.3
Total	60	100.0	63	100.0	60	100.0	183	100.0

Chi-square = 22.102   Df = 14   Significance = 0.077

4.2.2 Ownership of micro enterprises

The results indicate that 91.8% of the micro enterprises were owned by individuals (Table 12). This ownership dominates other forms of ownership in all the three districts, namely Mbeya (33.9%), Iringa (27.3%) and SBA (30.6%). Only a few group-owned enterprises were reported by 7.1% of the respondents, especially in Iringa district (4.9%). Only two enterprises (1.1%) were owned by family members.

Although the credit providers encouraged beneficiaries to apply for group loans and undertake their businesses jointly, the micro entrepreneurs were hesitant to have joint business activities. This might be due to lack of trust among the group members. However, this has also been a common phenomenon in both private and public sectors in least income countries (Ghani, 1995). According to IFAD (2004), sole proprietor micro enterprises are more likely to last than those run by groups because decision making in group enterprises takes longer time. The results show significant variation in terms of ownership of micro enterprises between the three districts.

Table 12: Ownership of micro enterprises

Ownership	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Individual	50	83.3	62	98.4	56	93.3	168	91.8
Group	9	15.0	1	1.6	3	5.0	13	7.1

Family	1	1.7	NA	NA	1	1.7	2	1.1
Total	60	100.0	63	100.0	60	100.0	183	100.0

Chi-square = 10.1732   Df = 4   Significance = 0.038   NA = Not Available

4.2.3 Reasons for starting micro enterprises

The result (Table 13) shows that most of the micro enterprises (84.2%) were started as a source of employment for the operator since it was the only source which generated income for their livelihood as they were not employed in government or non-government organization. Only 13.1% of micro enterprises were started to supplements income of the micro entrepreneurs, especially for employed micro entrepreneurs. The survey findings suggest that lack of formal employment in both private and public sectors, forced many urban dwellers to engage in micro enterprises activities as an alternative form of employment. Cheng (2005); Gonzalez-vega *et al.* (1999) and O'Riordan *et al.* (1997), also found that micro enterprises were the major source of livelihood and employment in many least income countries. The problem of unemployment has been found to be associated with the structural adjustments programmes and limited absorptive capacity of the agricultural sector. The structural adjustments programmes resulted into unemployment; this was because when the state owned enterprises were privatized many employees were laid off to enhance labour efficiency. The 2005 World Development Report suggests that creating sustainable jobs and opportunities for micro entrepreneurs are the key pathways out of poverty for poor people (World Bank, 2004). The results indicate no significant variation in terms of the reasons for starting micro enterprises across the sampled districts, probably due to similar social-economic environment.

Table 13: Respondents' reasons for starting micro enterprises

Reasons	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Solely employment	53	88.3	54	85.7	47	78.3	154	84.2
Supplement income	6	10.0	9	14.3	9	15.0	24	13.1
Interest in business	1	1.7	NA	NA	4	6.7	5	2.7
Total	60	100.0	63	100.0	60	100.0	183	100.0

Chi-square = 6.427   Df = 4   Significance = 0.169

4.2.4 Business start up capital

The survey results (Table 14) show that the majority (54.6%) of enterprises were started

with initial capital of less than 100 000Tshs. This enlights the role of micro enterprise

finance to low-income people whose savings are too small to invest in micro enterprises.

The shortage of working capital has been a major constraints to undertake micro enterprise

(see also Cheng, 2005). Micro finance is expected to raise micro entrepreneurs' income

which may facilitate business growth. The enterprises started with initial capital of

between 100 000 and 200 000 Tshs, constituted 17.5% of all businesses and was the

second largest group of enterprises. It can further be observed from the results that only

9.3% of micro enterprises were started with an initial capital of more 500 000 Tshs.

The mean startup capital for the sample was 202 968.25, 199 841.67 and 208 866.67 Tshs

for Mbeya, SBA and Iringa, respectively (Table 15). The start up capital was not

significantly different between the districts at P<0.05, indicating that the mean start up

capital was the same in the three districts.

Table 14: Amount of capital for starting up micro enterprises

Amount of initial capital	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
100 000 and below	26	43.3	38	60.3	36	60.0	100	54.6
I00 000 – 200 000	15	25.0	9	14.3	8	13.3	32	17.5
200 000 – 300 000	9	15.0	6	9.5	3	5.0	18	9.8
300 000 – 400 000	4	6.7	1	1.6	2	3.3	7	3.8
400 000 – 500 000	3	5	1	1.6	5	8.3	9	4.9
Above – 500 000	3	5	8	12.7	6	10.0	17	9.3
Total	60	100.0	63	100.0	60	100.0	183	100.0

Chi-square =15.032   Df = 10   Significance = 0.131

Table 15: Average capital used to start up the enterprise in Tshs

Districts	Mean	N	Min	Max	Std. Error
Mbeya	202 968.2540	63	5000.00	1 500 000.00	36 901.2602
SBA	199 841.6667	60	4000.00	1 000 000.00	33 913.9978
Iringa	208 866.6667	60	15 000.00	1 000 000.00	28 800.1438
Total	203 877.0492	183	4000.00	1 500 000.00	19 240.0080

F-value = 0.018   Significance = 0.982

4.2.5 Source of initial capital for starting micro enterprises

The survey results (Table 16) show that 54.1% of micro entrepreneurs used their own savings to start micro enterprise activities. The other substantial source of initial capital was credit (20.8%). Study findings have shown that the major source of credit was informal source. The main reason for choosing this alternative source was because it was cheap and easy to access, simply because no interest rate was charged. The relative contribution of these sources has been indicated in table 4.17.

About 16.9% of all respondents started their micro enterprise activities using both own saving and credit. Grants, which are treated as money given to respondents by donors were reported by 8.2% of the respondents. The relative importances of these sources of capital

were not significantly different between the districts. These findings are similar with that of Bukley (1997) in Ghana, Kenya and Malawi, Kayunze (1998) and Mishili *et al.*, (2003) in Tanzania, USAID (2006) in Georgia and Woodruff (2001) in Mexico where it is reported that over 50% of micro enterprises were started largely with self-generated or own savings and assistance from family, friends and relatives.

Table 16: Respondents' source of capital for starting micro enterprises

Sources of capital	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Own capital	28	46.7	34	54.0	37	61.7	99	54.1
Grants	6	10.0	4	6.3	5	8.3	15	8.2
Credit	13	21.7	17	27.0	8	13.3	38	20.8
Own capital and credit	13	21.7	8	12.7	10	16.7	31	16.9
Total	60	100.0	63	100.0	60	100.0	183	100.0

Chi-square = 6.006   Df = 6   Significance = 0.423

4.2.6 Specific source of credit for starting micro enterprises

The results (Table 17) revealed that the major source of credit for initial investment (startup capital) was the informal source accounting for 49.3% of all the respondents, who started micro enterprises by using credit. Only 13% obtain credit from formal finance institutions and 23.1% were from Iringa district. Only two people were able to secure credit from both semi formal and formal institutions. Lack of access to formal credit sources has been attributed to lack of recognition and inability of micro entrepreneurs to meet the lending conditions such as possession of collateral (EQI, 2004; USAID, 2006; Wenner and Proenza, 2000).

However, the establishment of semi formal financial institutions, which employ group lending as a security for loan, enabled 36.2% of the micro entrepreneurs to start their businesses in the surveyed districts. Large proportions of semiformal credit recipients were observed in Mbeya (44%) and Iringa districts (42.3). The results show significant

variation between districts at P<0.05 indicating that the sources of credit for initial start up

capital varied significantly across the districts.

Table 17: Specific source of credit for starting micro enterprises

Source of capital	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Formal	6	23.1	3	12.0	NA	NA	9	13.0
Informal	9	34.6	11	44.0	14	77.8	34	49.3
Semi-formal	11	42.3	11	44.0	3	5.5	25	36.2
Both semi and formal	NA	NA	NA	NA	1	16.7	1	1.4
Total	26	100.0	25	100.0	18	100.0	69	100.0

Chi-square = 14.035   Df = 6   Significance = 0.029

4.2.7 Reasons for choosing specific source of credit for micro enterprises

The results represented in table 18 show that there were no significant differences

regarding the reasons for choosing specific sources for starting micro enterprises between

the three districts at P<0.05. The findings indicate that 52.1% of the 69 respondents chose

credit source by considering the cost of capital (interest rate) and accessibility.

On the other hand, 30.4% of the respondents chose the credit source based on its

availability regardless of the interest charged, because there were no alternative sources of

credit. Further more 17.4 % could not make informed decisions about where to borrow

simply because they had no information on other sources of credit.

Table 18: Reasons for choosing specific source of credit

Reasons	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Lack of information	5	19.2	2	8.0	5	27.8	12	17.4
Cheap source	12	46.2	14	56.0	10	56.6	36	52.1
Lack of alternatives	9	34.6	9	36.0	3	16.6	21	30.4
Total	26	100.0	25	100.0	18	100.0	69	100.0

Chi-square = 9.113   Df = 6   Significance = 0.167

4.3 Demand for credit

4.3.1 Actual credit demand by the micro entrepreneur

Among the interviewed micro entrepreneurs (Table 19), 79.8% applied for a credit and 20.2% did not. The demand for credit has been found to be high in all the three districts. Cheng (2005), Chiduo (2001), Kashuliza (1998), Mezzera (2002) and USAID, (2006) found that the demand for micro finance was high in least income countries. The results shows significant differences at $P<0.05$, implying that demand for credit was different in the surveyed districts.

Table 19: Micro entrepreneur' Demand for Credit

Applied for credit	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Yes	46	76.7	46	73.0	54	90.0	146	79.8
No	14	23.3	17	27.0	6	10.0	37	20.2
Total	60	100.0	63	100.0	60	100.0	183	100

Chi-square = 6.033   Df = 2   Significance = 0. 049

4.3.2 Sources of credit applied in the past two years

The survey results (Table 20) show that 41.1% of all respondents applied for credit from the informal source. Another substantial source of credit was semiformal (35.6), a few people (17.8%) applied in the formal sector. Five people (3.4%) applied both in the formal and informal sector. The trend of borrowing from informal and formal sources has also been reported in Mongolia (Cheng, 2005). The smallest group (2.1%) applied both in the informal and semiformal sector. These results show many borrowers relied on the informal sector as a source of finance for micro enterprises, followed by the semiformal sources (see also USAID, 2006; Woodruff and Zenteno, 2001 and EQI, 2004). This reliance was probably due to the stringent requirements for loan securities in formal sector or other

similar conditions in the semi-formal sector such as group security as valuable collateral versus physical collateral which acted as barrier for some entrepreneurs to get access to credit. The lack of physical collateral inhibited most of micro entrepreneurs in the formal sector.

The findings of this study suggest that the informal credit market is an imperfect substitute for other forms of credit in the study area. This is because it cannot satisfy the credit demand of semiformal credit due to low capital base and at the same time its customers can not get access to formal sources because they do not have valuable collateral. The survey results were significantly different at $P<0.01$ indicating that the micro entrepreneurs' demand for credit from a particular source varied across the three districts. The predominance source accessible to the majority in Mbeya (45.6%) and Iringa (52.2%) districts was the semiformal source, while in SBA, the major source was the informal sector (59.3%). This was due to the fact that the major semi formal credit sources (i.e. PRIDE and FINCA) were only available in Iringa and Mbeya districts and not in SBA district probably due to its remoteness.

Table 20: Sources of credit applied in the past two years

Source of credit applied	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Formal	11	23.9	5	10.9	10	18.5	26	17.8
Informal	10	21.7	18	39.1	32	59.3	60	41.1
Semi-formal	24	52.2	21	45.6	7	13	52	35.6
Both semi formal and informal	1	2.2	NA	NA	2	3.7	3	2.1
Formal and informal	NA	NA	2	4.3	3	5.5	5	3.4
Total	46	100.0	46	100.0	54	100.0	146	100.0

Chi-square = 27.485   Df = 8   Significance = 0. 001

4.3.3 Informal sources of credit

Further analysis of the informal sources by districts (Table 21) revealed that the major sources of informal credit were relatives and friends (54.3%) with SBA district having the largest percentage. Cheng (2005), Mpuga (2004), Mwachang'a (2000), USAID (2006) and Woodruff (2001), also found that relatives and friends were the major informal lenders. ROSCAs were the second major sources of informal loans (21.4%) and more prevalent in SBA district (28.9) than in Iringa (18.2%) and Mbeya (9.5%). ROSCAs were important part of the informal financial sector which played a key role in financial intermediation, particularly for those who did not have access to the formal financial sector. The participation in ROSCAs has also been reported in Egypt by Mohieldin and Wright (2000).

On the other hand, specialized moneylenders were more prominent in Mbeya district (28.6%). The over presentation of the informal financial institutions in the study area could be attributed to several factors such as the ability to issue loan promptly, less stringent requirements for collateral items, which in most cases is social collateral and flexible repayment schedules. The findings were significant at P<0.05 implying that informal sources of credit varied significantly in the three districts.

Table 21: Informal sources of credit

Source of informal credit applied	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Relative and friends	4	36.4	12	57.1	22	57.9	38	54.3
ROSCAs	2	18.2	2	9.5	11	28.9	15	21.4
Specialized moneylenders	1	9.1	6	28.6	3	7.9	10	14.3
Shop owners/ traders	NA	NA	1	4.8	1	2.6	2	2.9
Neighbors	4	36.4	NA	NA	1	2.6	5	7.1
Total	11	100.0	21	100.0	38	100.0	70	100.0

Chi-square = 23.833   Df = 8   Significance = 0. 002

4.3.4 Semiformal sources of credit

Analysis of semiformal sources by district (Table 22) has shown that the predominant source of semiformal source was PRIDE Tanzania Ltd. (55.4%), which accounted for 76.9% of clients in Iringa districts and 52.4% in Mbeya district. The survey results further indicate that the SACCOS and SIDO were more prominent in SBA (55.6%) and (44.4), respectively. Other sources were FINCA and WASMEP.

The semiformal credit sources presented an opportunity to extend savings and credit to the economically active and yet deprived population. These institutions were less rigid in their operations; for example, they did not necessary demand physical collateral against loans but rather relied on group trust. This flexibility enabled the micro entrepreneurs who did not have collaterals to secure loans and invest. The results show that there was a significant difference in terms of semi formal sources available to the micro entrepreneurs between the three districts at P<0.01.

Table 22: Semi formal sources of credit

Source of credit	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
PRIDE	20	76.9	11	52.4	NA	NA	31	55.4
SACCOS	1	3.8	4	19.0	5	55.6	10	17.6
SIDO	NA	NA	NA	NA	4	44.4	4	7.1

FINCA	5	19.2	1	4.8	NA	NA	6	10.7
WASMEP	NA	NA	5	23.8	NA	NA	5	8.9
Total	26	100.0	21	100.0	9	100.0	56	100.0

Chi-square =52.105   Df = 10   Significance = 0. 000

4.3.5 Formal sources of credit

Analysis of formal sources by district (Table 23) indicates the leading formal source was NMB (96.7%) with 29 beneficiaries. The remaining 3.3% obtained credit from Stanbic bank in Mbeya district. All the clients of the formal sector in SBA district were from NMB. However, the results indicate that the provision of formal loan was rare, only a few clients (30) managed to acquire formal loans, and is consistent with the existing evidence (EQI, 2004; Woodruff, 2001). From the results, it is clear that there is no significant difference at P<0.05 in terms of the sources of formal sources available to the micro entrepreneurs between the districts.

Table 23: Formal sources of credit

Source of formal credit applied	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
NMB bank	10	100.0	7	87.5	12	100.0	29	96.7
Stanbic bank	NA	NA	1	12.5	NA	NA	1	3.3
Total	10	100.0	8	100.0	12	100.0	30	100.0

Chi-square = 2.845   Df = 2   Significance = 0.241

4.3.6 Credit rationing

The study (Table 24) shows that the majority of respondents (73.3%) received the amount of credit they had requested. However, some borrowers complained that they did not receive the amount as requested (26.7%). The results were significantly different at P<0.05 implying that credit rationing across the districts varied considerably. The main reasons for rationing the credit were poor capital base (40%); lack of credit history (37.5); low value of assets (15%) and poor track record in servicing previous loans (7.5%). Location-wise, the percentage of respondents who received the amount of credit as they had applied were, 84.8, 57.4 and 80.4 in Mbeya, SBA and Iringa, respectively. Credit rationing has also been reported by Cheng (2005), Mpuga (2004), Okurut *et al. (*2004) and Zeller (1994). Literature survey indicates that credit rationing has been used in order to improve repayment (Sharma and Zeller, 1997).

Table 24: Extent of credit rationing and reasons for rationing

Received the amount demanded	Iringa		Mbeya		SBA		Total		Sig and Df		χ^2 value
	N	%	N	%	N	%	N	%	Sig.	Df	
Yes	36	80.4	39	84.8	31	57.4	107	73.3	0.00	2	11.261
No	9	19.6	7	15.2	23	42.6	39	26.7		4	
Total	46	100.0	46	100.0	54	100.0	146	100.0			
Respondent's reasons											
Value of assets	NA	NA	NA	NA	6	26.1	6	15.0	6.551	6	0.364
Lenders' capital	5	50.0	3	42.9	8	34.8	16	40.0			
Business experiences	4	40.0	4	57.1	7	30.4	15	37.5			
Repayment record	1	10.0	NA	NA	2	8.7	3	7.5			
Total	10	100.0	7	100.0	23	100.0	40	100.0			

4.3.7 Factors inhibiting micro entrepreneurs' access to credit services

With respect to non borrowers (Table 25), 48.6% were unable to borrow due to lack of adequate information on credit services. This supports findings from Lashley (2002), Mwachang'a (2000) and USAID (2006) who found that information about credit sources

had a significant effect on the demand for credit. Furthermore, 27% did not apply for credit because they did not have the required collateral and 13.5% of the micro entrepreneurs decide not apply for credit simply because they were not sure whether their businesses would be sustainable and profitable. This supports the findings by Cheng (2005), CEAL (2002) and Woodruff (2001). Very few (10.8%) respondents reported that they did not apply for credit due to high transaction cost involved i.e. the lengthy and bureaucratic procedures in processing loan (see also EQI, 2004). The analysis indicated that the factors inhibiting micro entrepreneurs' access to credit services were not different between the three districts at P<0.05.

Table 25: Factors inhibiting micro entrepreneurs' access to credit services

Access to credit	Iringa		Mbeya		SBA		Total		Sig. and df		χ^2 value
	N	%	N	%	N	%	N	%	Sig.	Df.	
Lack of information	4	28.6	11	64.7	3	50.0	18	48.6	6.157	6	0.406
Lack of collateral	4	28.6	4	23.5	2	33.3	10	27.0			
Unstable business	3	21.4	1	5.9	1	16.7	5	13.5			
Lending procedures	3	21.4	1	5.9	NA	NA	4	10.8			
Total	14	100.0	17	100.0	6	100.0	37	100.0			

4.3.8 Requirement for collateral items

The importance of collateral and what constitutes surety appears to differ markedly between the credit sources. The study has shown that semiformal credit providers considered group security (80.8%) as the most valuable condition for loan provision, where as the formal sources considered building (42.3%) as the most value collateral to secure loans. Twenty three respondents (38.3%) reported that they acquired credit from

the informal source without mortgaging anything. Collateral free loans have also been observed in the informal credit market in India (Sangwan, 2000).

Furthermore, about 30% of respondents mentioned good reputation of the borrower as another factor considered in issuing credit in the informal sources. The use of home assets and guarantors were mentioned by 21.7% and 15.4% of respondents who borrowed from the informal and semiformal credit sources, respectively. Most semiformal and some informal used these conditions to minimize the risk of credit defaults (see also Okurut, 2000). The analysis indicated that the requirements for collateral items varied significantly across the districts at P<0.01.

Land was also mentioned by 15.4% of the respondents as a form of physical collateral in the formal credit sector. Cheng (2005), CEAL (2002) and USAID (2006) also found land and building were important to secure loans from formal lenders. Another collateral for securing loans from formal sources was business license (23.1%). The use of compulsory savings (1.9%) was observed in the semi formal sources of credit. These observations have led Labie, (2006) and Woodruff, (2001),to conclude that micro business and small scale farmers need reliable sources of credit to which they can turn when they need credit, provided that they meet certain reasonable requirements of credit-worthiness. The results were significant at P<0.01 implying that the requirement fore collateral items varied significantly in the study area.

Table 26: Requirement for collateral items in the study area

Kind of Collateral	Formal		Informal		Both sources		None		Semi-formal		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Land	4	15.4	NA	NA	NA	NA	2	5.4	NA	NA	6	3.3
Group security		NA	6	10.0	2	7.0	9	24.3	42	80.8	59	32.2
Building	11	42.3	NA	NA	4	80.0	12	32.4	1	1.9	28	15.3
Guarantors	NA	NA	NA	NA	1	3.0	2	5.4	6	15.4	19	10.4
No collateral	NA	NA	23	38.3	NA	NA	NA	NA	NA	NA	23	12.6
Business license	6	30.8	NA	NA	NA	NA	9	24.3	NA	NA	15	8.2
Good reputation	NA	NA	18	30.0	NA	NA	NA	NA	NA	NA	18	9.8
Home assets	3	11.5	3	5.0	1	20.0	2	5.4	4	7.7	13	7.1
Savings	NA	NA	NA	NA	NA	NA	1	2.7	1	1.9	2	1.1
Total	24	100.0	60	100.0	8	100.0	37	100.0	52	100.0	183	100.0

Chi-square = 247.250   Df = 40   Significance = 0.000

4.3.9 Micro entrepreneurs' preference for credit source

Micro entrepreneurs in the study area preferred different sources of credit for their enterprises. Formal sources were found to be the most preferable source by more than half of the respondents (51.9%), followed by informal sources (23.5%) and semi formal sources (18.6%). Few respondents (4.4%) did not prefer any source and very few (2.2%) preferred both formal and informal sources of credit.

The survey findings (Table 27) indicate that formal sector was the most preferred by the majority of micro entrepreneurs. Formal loans have been regarded as important toward poverty reduction (Fernando, 2004). However, for a number of reasons formal banks preferred to lend to large business rather than small-scale indigenous business, mainly because these micro enterprises were not known to banks. The banks indicated that loan supervision for small enterprises was tedious and relatively expensive. For example, CRDB bank limited during the research period micro credit window was not yet established, and this was one of the comments raised.

The demand for formal credit services is usually constrained with poor access to formal finance. This has forced micro entrepreneurs in some areas to borrow from the informal lenders at very high interest rates. The high interest rate reflected the overall cost and expected profits of the lender (see also Chiduo, 2001; Kayunze, 1997 and Selejio, 2002).

Most of the respondents in Iringa district preferred the formal source (63.3%) followed by semiformal (18%), while in Mbeya the mostly preferred source was the formal (41.3%) followed by semiformal source (23.8%). Moreover, in SBA district the most preferred source was also formal source (51.7%) followed by the informal source (35%). The analysis indicated that the micro entrepreneurs' preference for credit source varied significantly between the three districts at P<0.05.

Table 27: Micro entrepreneurs' preference for credit source

Source of credit	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Formal	38	63.3	26	41.3	31	51.7	95	51.9
Informal	7	11.7	15	23.8	21	35.0	43	23.5
Semi-formal	11	18.3	17	27.0	5	8.3	33	18.0
Formal and	2	3.3	1	1.6	1	1.7	4	2.2
informal								
None	2	3.3	4	6.3	2	3.3	8	4.4
Total	60	100.0	63	100.0	60	32.8	183	100.0

Chi-square = 17.169   Df = 8   Significance = 0.028

4.3.9 Reasons for credit source preference

Analysis (Table 28) has shown that 10.9% of all respondents were of the opinion that the transaction cost involved in fulfilling the requirement such as attending training sessions, weekly loan collection which required all members to attend, influenced their choices of credit source. These conditions forced them to resort to sources that would minimize the transaction time.

About 31.1% of all respondents reported that the ability to get large loan size at low interest rate was the major factor that influenced their choice. This was more important in SBA district (38.3%). The ease of getting interest free credit was also identified as one of the major reason (13.7%), with SBA registering a highest percent (26.7%), probably because informal lenders were readily available.

On the other extreme, 23.0% and 14.2% of the respondents in the study area were of the opinion that availability of credit services from providers and the long repayment period, respectively, were among the factors that influenced their preference for credit sources. The analysis indicated that the respondents' reasons for the preference of sources of credit varied significantly between the three districts at P<0.01.

Table 28: Reasons for credit source preference

Reasons for preferences	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Large loan size	20	33.3	14	22.2	23	38.3	57	31.1
Transaction cost	7	11.7	8	12.7	5	8.3	20	10.9
No interest rate	3	5.0	6	9.5	16	26.7	25	13.7
Available in their area	11	18.3	25	39.7	6	10.0	42	23.0
Long repayment period	15	25.0	6	9.5	5	8.3	26	14.2
No detail on other sources	4	6.7	4	6.3	5	8.3	13	7.1
Total	60	100.0	63	100.0	60	100.0	183	100.0

Chi-square = 34.961   Df = 10   Significance = 0.000

4.3.10 Reasons for borrowing from sources other than the preferred source

Respondents in the study area were asked to give major reasons, which forced them to borrow from sources other than the most preferred source (Table 29). Majority of respondents (44.5%) indicated that stringent loan requirement in the most preferred sources prevented them from borrowing. The findings concur with those observed in Georgia and Mongolia by USAID, (2006) and Cheng (2005). Other respondents 26.9% suggested that the formal source was cheaper in terms of interest rate as compared with the semiformal credit sources. Moreover, 15.1% of respondents were not well informed about

alternative sources of credit. On the other hand, 4.8% of respondents reported that the semiformal source of credit is cheaper when compared to the specialized informal moneylenders. Additionally, 2.7% complained that there were no other credit sources in their areas, still 4.1% of the micro entrepreneurs considered the amount of loan size and interest rate as the main course for their ultimate choice of a credit source. The remaining 2.1% of the micro entrepreneurs applied for credit in the respective credit sources due to the ease of access. In spite of the price of the loan itself, location-wise, conditions of entry were the main reason (48.1%) for the choices by respondents in SBA district. The findings concur with those of Cheng (2005) who found that complicated procedures for loan application and approval, high interest rate, the use of collateral and lack of awareness of the micro entrepreneur have a propensity of segregating them into different sources of credit.

Table 29: Reasons for borrowing from sources other than the preferred

Reasons	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
No other sources	1	2.2	2	4.3	1	1.9	4	2.7
Cheaper compared to semi formal	10	21.7	17	37.0	12	22.2	39	26.9
Difficult entry condition	21	45.7	18	39.0	26	48.1	65	44.5
Lack of information	10	21.7	6	13.0	6	11.1	22	15.1
Uncomplicated	NA	NA	NA	NA	3	5.6	3	2.1
Cheaper compared to informal money lenders	2	4.4	2	4.3	3	5.6	7	4.8
large loan size	2	4.3	1	2.2	3	5.6	6	4.1
Total	46	100.0	46	100.0	54	100.0	146	100.0

Chi-square = 11.717   Df = 12   Significance = 0.469

4.3.11 Whether choice for credit is influenced by the available sources

With respect to the null hypothesis that availability of credit sources have no significant influence on the demand for credit, the survey results (Table 30) have shown that there is a relationship between the credit demanded and the availability of credit sources (the alternative hypothesis is accepted and the stated null hypothesis is rejected) at $P<0.01$. This implies that the credit demanded by the micro entrepreneurs was influenced by the availability of credit sources although this varied considerably across the three districts. More than half (64.5%) of the respondents reported that their decision to borrow was mainly influenced by the availability of credit in their areas. However, 35.5% of respondents were of the opinion that their decision to apply for credit (demand for credit) was not influenced by the availability of credit sources. This indicates that the availability of credit sources has important implication on the demand for credit because it may limit borrowers' selection of credit sources and hence the overall demand for credit.

These findings concur with those of Mpuga (2004) and Fernando (2004) in Uganda and Philippine, respectively where it was found that the availability of different sources of credit had influence on the demand for credit. This analysis indicates that the decision to

apply for credit among the micro entrepreneurs varied significantly across the three districts at P<0.01.

Table 30: Whether credit demand is influenced by the available sources

Decision	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Yes	32	53.3	44	69.8	42	70	118	64.5
No	28	46.7	19	30.2	18	30	65	35.5
Total	60	100	63	100.0	60	100.0	183	100.0

Chi-square = 46.766   Df = 14   Significance = 0.000

4.3.12 Relationship between credit sources and micro entrepreneurs' characteristics

Micro entrepreneurs' characteristics are summarized in Table 31. The results revealed that 36.7% of the micro entrepreneurs who applied for credit from the informal sector were male. About 23.1% of the total borrowers from semi-formal finance and 50% of the borrowers from formal finance were male. The high number of female borrowers in the semi formal credit is by and large attributed to the fact that semiformal credit providers prefer to direct their services to females because they are regarded as customers whose repayment record is good compared to males. Furthermore, the existences of semiformal sources in the studied districts, which served females only, had contributed to increase the participation of females in the semiformal credit sources. This analysis suggests that the demand for credit was significantly influenced by the sex of the micro entrepreneur across the districts.

With respect to education micro entrepreneurs who were educated beyond primary education were able to apply for credit even in the formal sector. Those who had no formal education as well as those with adult education applied for credit in the informal and semiformal sources of credit. Better–educated micro entrepreneurs had better access to

micro finance services and were more likely to establish their own enterprises. Education increases skills which are required by some micro enterprises to improve their efficiency.

With respect to the quality and characteristics of respondents' residence, results show that most of the micro entrepreneurs (88.5%) who had their own house were able to secure credit from the formal source. Such type of residence could easily be used as physical collateral for the loans from the formal source. Respondents who lived in rented house borrowed from the informal source (63.3%) and the semiformal sources (53.8%), while those who lived in family houses (inherited by the family) obtain credit from the informal and semiformal sources mainly because they did not have mandate to use the family houses as physical collateral.

Survey findings further indicate that the assets owned by the respondents had influence on the demand for credit because 80% of respondents who had no assets applied for credit in the informal sources of credit. A substantial proportion of micro entrepreneurs (73.1%) in this category were also able to secure credit from the semiformal sector because lending procedures were simplified to allow the poor to access credit without physical collateral. However other kinds of collateral were reported these included group liability, the use of guarantors and intensive loan repayment procedures (See also Okurut, 2000).

About 88.5% of the respondents reported the use of land as a form of collateral to secure loans especially in the formal credit source. Land is often required as physical collateral and this tends to intensify income inequality associated with micro enterprises activities. This is supported by the findings from a study conducted in Mongolia, Uganda and India by Cheng (2005); Mpuga (2004) and Swaminathan (1993), respectively. These studies

revealed that legal ownership of land and other assets were the major factors considered before credit was disbursed particularly in the formal sectors.

With regard to age, the results show that most of the young micro entrepreneurs (68.5%) were able to secure credit from different sources. Many of the sampled micro entrepreneurs were young people and were relatively more capable to take part in income generating activities than old people. The old people are more likely to rely on their past savings and accumulated wealth for investment and consumption purposes. Statistical test revealed that age of the micro entrepreneur had little influence on the choice of credit sources.

Moreover, credit demand was found to be associated with the prevailing loan repayment procedures of a given credit source. For instance, the daily repayment schedule was favored by the informal credit sector (20%), especially the specialized moneylenders. Loan repayment soon after selling the goods procured using credit was also observed in the informal sector (75%), especially between relatives, friends and neighbors. Micro entrepreneurs borrowing from formal sources paid their loans on monthly installments (100%). A large percentage of semi formal borrowers repaid their loans on weekly installments. Respondents indicated that they preferred specific repayment schedules over the others. Statistical analysis suggests that the repayment schedules exerted strong influence on the demand for credit.

Like any other product, the demand for financial services is likely to be affected by their own interest rates. .At higher interest rate the return from the activity must be high enough to enable the investor to retain profit after paying the loan plus the interest rate. Among the interviewed borrowers, all the clients of the semi formal sector indicated that the interest

charged was relatively high and it limited the majority to borrow from this source although its presence was felt in most areas of the surveyed districts.

However, 84.6% of the respondents suggested that the low interest rate charged in the formal credit sector motivated them to seek credit from this source. Nevertheless the difficult conditions associated with formal credit tended to screen out the majority of micro entrepreneurs forcing them to resort to the other sources. The informal sources served the majority and 80% of the borrowers from this source indicated that loans were interest free making it the most convenient source for micro entrepreneurs. However, the capital of most informal lenders was small to meet various demands of the micro entrepreneurs. Even those micro entrepreneurs, who managed to secure loans from this source, received less funds than their requests. Statistical test indicates that the interest rate charged by the credit providers was also an important factor that determined the decision to apply for credit.

The results further revealed that large loan size was associated with formal credit sources, while smaller loans were common in the informal and semiformal sectors. CEAL (2002), Woodruff (2001) and YanTang (1995) also found that informal and semi formal loans tended to be small and often issued as short term loans to reduce the default risk in the absence of tangible collateral. Results revealed that the limitations of the formal financial system may partly be compensated by the flexibility of informal and semiformal credit sources.

Table 31: Relationship between credit sources and micro entrepreneurs

characteristics

Variable	Informal		Semi formal		Formal		>One source		Total		χ2 value
Sex	N	%	N	%	N	%	N	%	N	%	
Male	22	36.7	12	23.1	13	50	4	50	51	34.9	11.971*

Female	38	63.3	40	76.9	13	50	4	50	95	65.1	
Total	60	100.0	52	100.0	26	100.0	8	100.0	146	100.0	
Formal education											
None	3	5	4	7.7	NA	NA	1	12.5	8	5.5	30.507*
Adult	1	1.7	1	1.9	NA	NA	NA	NA	2	1.4	
Primary	48	80	37	71.1	15	57.7	4	50	104	71.2	
Secondary	7	11.7	10	19.2	7	26.9	3	37.5	28	19.2	
College & above	NA	NA	NA	NA	4	15.4	NA	NA	4	2.7	
Total	60	100.0	52	100.0	26	100.0	8	100.0	146	100.0	
Dwelling characteristics											
Own house	18	30	20	38.5	23	88.5	5	62.5	66	45.2	29.689**
Rented house	38	63.3	28	53.8	2	7.7	3	37.5	71	48.6	
Family owned	4	6.7	4	7.7	1	3.8	NA	NA	9	6.2	
Total	60	100.0	52	100.0	26	100.0	8	100.0	146	100.0	
Assets owned											
Land	1	1.7	2	3.8	23	88.5	3	37.5	29	19.9	109.501***
furniture	11	18.3	12	23.1	3	11.5	3	37.5	29	19.9	
No asset	48	80	38	73.1			2	25	88	60.3	
Total	60	100.0	52	100.0	26	100.0	8	100.0	146	100.0	
Age of respondent											
18 – 35yrs	45	75	36	69.2	14	53.8	5	62.5	100	68.5	3.947
Over 35yrs	15	25	16	30.8	12	46.2	3	37.5	46	32.5	
Total	60	100.0	52	100.0	26	100.0	8	100.0	146	100.0	
Loan repayment procedure											
Daily	12	20	1	1.9	NA	NA	NA	NA	13	8.9	267.780***
After sold	45	75	NA	NA	NA	NA	NA	NA	45	30.8	
Monthly	3	5	NA	NA	26	100.0	5	62.5	34	23.3	
Weekly	NA	NA	51	98.1	NA	NA	3	37.5	54	39.0	
Total	60	100.0	52	100.0	26	100.0	8	100.0	146	100.0	
Price of the loan											
Low	NA	NA	NA	NA	22	84.6	4	50	26	17.8	211.350***
High	12	20	52	100.0	4	15.4	4	50	72	49.3	
Nil	48	80	NA	NA	NA	NA	NA	NA	48	32.9	
Total	60	100.0	52	100.0	26	100.0	8	100.0	146	100.0	
Amount of capital borrowed in Tshs.											
<400 000	55	91.7	51	98.1	6	23	3	37.5	115	78.7	84.556***
400 000- 700 000	4	6.6	1	1.9	5	19.2	1	12.5	11	7.5	
>700 000	1	1.7	NA	NA	15	57.7	4	50	20	13.8	
Total	60	100.0	52	100.0	26	100.0	8	100.0	146	100.0	

Note: *** , ** and * are level of significance at 0.1%, 1% and 5% respectively.

4.3.13 Ability to access credit from the formal sector

Table 32 indicates that 50.8% of respondents suggested that formal credit could be obtained without much difficulty, while 45.9% reported that this source of credit was unavailable and very few (3.3%) reported that they were ignorant about the existence of formal sources of credit. The statistical test indicated that the availability of credit from the formal sector varied significantly among the micro entrepreneurs across the three districts. A large proportion of micro entrepreneurs who revealed that formal credit was unavailable were from Mbeya (66.7%). These results are supported by the study done by Labie (2006) who reported that lack of credit was one of the key constraints faced by small enterprises. Licensing and registration of business was expected to enhance the development of the informal sector.

Table 32: Availability of credit from the formal sector

Formal credit	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Available	36	60.0	21	33.3	36	60.0	93	50.8
Unavailable	22	36.7	42	66.7	20	33.3	84	45.9
Not aware	2	3.3			4	6.7	6	3.3
Total	60	100.0	63	100.0	60	32.8	183	100.0
Chi-square = 19.045		Df = 4		Significance = 0.001				

4.3.14 Expenditure of the demanded credit

Survey findings (Table 33) shows that 69.9% of all respondents who applied for credit wanted to expand their business. Therefore micro enterprises' access to credit services is important because lack of capital has been found to be one of the major constraints limiting the expansion of micro enterprises (Cheng, 2005; Chiduo, 2001; Selejio, 2002; USAID, 2006).

Furthermore, 26.7% of the respondents used the credit as capital to start their micro enterprise. Only 3.5% of the micro entrepreneurs reported using the credit to meet family needs such as health and education. The uses of the borrowed capital among the micro entrepreneurs in the three districts were not statistically different at $P<0.05$.

Table 33: Expenditure of the demanded credit

Expenditure		Iringa		Mbeya		SBA		Total	
		N	%	N	%	N	%	N	%
Expansion business	of	35	76.1	31	67.4	36	66.7	102	69.9
Consumed family	by	NA	NA	2	4.3	3	5.6	5	3.5
Initial capital		11	23.9	13	28.2	15	27.8	39	26.7
Total		46	100.0	46	100.0	54	31.5	146	100.0

Chi-square = 15.973   Df = 10   Significance = 0.100

4.3.15 Economic activities financed by lenders

Retail business was the main economic activity carried out by micro entrepreneurs in the study area (47.3%) (Table 34). The majority of micro entrepreneurs under these categories were either selling shoes and clothes, food, cosmetics, stationeries, fresh milk, cold drinks or providing telephone services. Their major source of finance was the informal source (46.7%). However, percentage-wise, the micro entrepreneurs engaged in shop were the one who succeeded to get credit from the formal sector. For example, 57.7% of all borrowers from the formal source were engaged in food stalls, cosmetics and shoe shops. However, some of the shops operators borrowed from the informal sources of credit because they did not have business licenses to verify that they had invested in sound businesses. In addition, group liability discouraged some of them to secure loans from the semi formal institution; although a substantial number of micro entrepreneurs (40.4%) applied in the semiformal credit sector.

A few micro entrepreneurs were selling timber and their major sources of finance were the formal (11.5%) and semiformal sources (3.8%). Furthermore, crop and livestock enterprises were among the activities carried out in the study area, these activities were also financed by the semiformal and formal credit (17.3%). The micro entrepreneurs in this group invested in dairy cattle and poultry as their main activities and in crops such as banana and potatoes as their secondary activities.

Hair saloons were also amongst the activities carried out in the surveyed area and were mainly financed by the informal and formal sources (16.5%). Additionally, the major sources of finance for food vendors was found to be the informal (11.7%) and the semiformal (11.5%) sources.

Other enterprises selling agricultural and non-agricultural goods were also identified in the study area; they included those selling sardines, vegetables, fruit, cereals, beans, and sculptors. The major sources of credit for this category was the informal source (30%) followed by the semiformal source (26.9%). Likewise, in tailoring, the predominant source of credit was the semiformal source (7.7%) followed by the informal (5%). The economic activities financed were significantly different at P<0.01.

Table 34: Economic activities financed by lenders

Economic activity	Informal		Semi formal		Formal		>One source		Total		χ2 value
	N	%	N	%	N	%	N	%	N	%	
Retail	28	46.7	21	40.4	15	57.7	5	62.5	69	47.3	222.735
Timber sellers	NA	NA	2	3.8	3	11.5	NA	NA	4	2.7	
Farming and livestock	1	1.7	3	5.8	3	11.5	2	25	9	6.2	
Hair saloon	3	5	1	1.9	3	11.5	NA	NA	7	5.1	
Milling machines	NA	NA	1	1.9		NA	NA	NA	1	0.7	
Food vendors	7	11.7	6	11.5	1	3.8	NA	NA	14	9.6	
Selling agric.& non agric. Goods	18	30	14	26.9	1	3.8	1	12.5	34	23.3	
Tailoring	3	5	4	7.7	1	3.8	NA	NA	8	5.5	
Total	60	100.0	52	100.0	26	100.0	8	100.0	146	100.0	

4.3.16 Kind of credit preferred

Respondents revealed different preferences with respect to the type of credit they would wish to receive (Table 35). Out of 146 recipients, 96.6% preferred credit in form of cash. The main reason for this preference was that when a loan is issued in cash, it is easier to invest in the intended business and with more flexibility because cash might allow the micro entrepreneurs to invest in other high return activities. Very few (3.4%) did not prefer credit in cash because were afraid of diverting it to other uses such as financing family consumption. Credit in form of marketable goods, especially among shops owners, minimized other expenses associated with procuring of the needed items such as transportation costs, especially if one was to purchase goods from a distant city. These preferences were not significantly different implying that the kind of credit preferred by the micro entrepreneurs was not different across the districts at P<0.05.

Table 35: Kind of credit preferred

Credit in cash	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Cash	46	100.0	44	95.6	51	94.4	141	96.5
In kind	NA	NA	2	4.4	3	5.6	5	3.4
Total	46	100.0	46	100.0	54	100.0	146	100.0
Chi-square = 42.491	Df = 2		Significance = 0.288					

4.3.17 Whether the terms of credit were understood by the borrower

Table 36 shows that more than half of the respondents (76.7%) reported that the terms of credit from credit providers were understood. On the other hand 23.3% of the respondents did not understand the terms of credit. Statistical test indicated that the extent of understanding the terms of credit varied considerably among micro entrepreneurs in the surveyed districts, probably due to the variation of the of credit sources.

Table 36: Whether the terms of credit were understood by the borrower

Knowledgeable	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Yes	34	73.9	28	60.9	50	92.6	112	76.7
No	12	26.1	18	39.1	4	7.4	34	23.3
Total	46	100.0	46	100.0	54	100.0	146	100.0
Chi-square =14.288	Df = 2		Significance = 0.001					

4.3.18 Interest rate charged by credit provider

Analysis of annual interest rate charged by the credit provider by district Table 37 indicated that a large proportion of the respondents (32.9%) received interest free loans. This was a common phenomenon in the informal sector i.e. relatives and friends .The second group (29.5%) reported an interest rate of 30% per year, mostly from Iringa and Mbeya where as 17.8% of the respondents reported an interest rate of 24%, especially in Iringa (21.7%). However, about 14.4% of respondents did not know the interest rate which was being charged, this problem was common in Mbeya.

Few respondents (4.8%) reported high interest rate of 60% per year charged by the specialized informal moneylenders. The proportion of specialized informal moneylenders was higher in Mbeya, where the interest rate charged to micro entrepreneurs ranged from as low as 10% to as higher as 60% per year. This high interest rate in some cases reflected the monopoly of specialized moneylenders who were keen to maximize profit. Chiduo (2001) found that specialized moneylenders charged an annual interest rate, which ranged from 50% to 100%. Moreover, Mwachang'a (2000) also reported that many respondents complained that the interest rate was high. The high interest rate on loans is usually a burden to micro entrepreneurs because of scale diseconomies (Dehejia *et al.*, 2005; CEAL, 2002). Statistical test indicated that interest charged by credit provider varied considerably between the districts.

Table 37: Interest rate charged by credit provider

Interest rate charged per year	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Do not know	7	15.2	10	21.7	4	7.4	21	14.4
24%	10	21.7	6	13	10	18.5	26	17.8
30%	19	41.3	16	34.8	8	14.8	43	29.5
No interest rate	9	19.6	9	19.6	30	55.6	48	32.9
50%	NA	NA	NA	NA	1	1.8	1	0.7
60%	1	2.2	5	10.9	1	1.8	7	4.8
Total	46	100.0	46	100.0	54	100.0	146	100.0

Chi-square = 31.432   Df = 10   Significance = 0.000

4.3.19 Micro entrepreneurs' views on the repayment schedules

Results (Table 38) revealed that 61% of the micro entrepreneurs were able to meet the repayment schedule, while 32.9% of the respondents reported that they hardly met the repayment schedule and 6.2% of respondents reported failure to meet their repayment schedules. In order to reduce the number of defaulters short intervals of repayment were

adopted by credit providers. Location-wise, the proportion of respondents who meet repayment schedule was higher in SBA district (75.9%) than in Iringa and Mbeya.

Frequent repayment schedule has been known to be one of the difficult loan condition described by the micro entrepreneurs. The survey finding indicates that most of defaulters were among those borrowers required to repay their loan on daily and weekly basis. Evidence obtained from the survey indicates that the frequent repayment posed a major constraint to the micro entrepreneurs' financial cash flows. Clients noted that sometimes one had to find alternative sources of funds to repay the loan even before realizing return from the investment for which the loan was obtained. The findings concur with those of Mpuga (2004) who also noted the same complaint in Uganda.

Table 38: Micro entrepreneurs' views on the repayment schedules

Meet schedule	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Yes	21	45.6	27	58.7	41	75.9	89	61.0
No	5	10.9	1	2.2	3	5.6	9	6.2
Hardly meet	20	43.5	18	39.1	10	18.5	48	32.9
Total	46	100.0	46	100.0	54	100.0	146	100.0

4.3.20 Penalties imposed on loan defaulters

The study (Table 39) has shown that credit providers adopted various strategies against the risk of credit default. About 25.4% of the providers used group liability as a mechanism to minimize default risk. This method has been found to be the most difficult and unpleasant condition to most of the respondents in the surveyed districts. A similar observation has also been reported by Chiduo (2001). Results show that 21.7% of micro entrepreneurs in Iringa defaulted, of which 24.71% of these defaulters lost their collateral items.

Another measure used to minimize the risk of defaulting was excluding defaulting members from borrowers' list. This was prominent in SBA (31.5%) and was the simplest and most direct penalty in the informal sector (see also Udry, 1993). Another penalty imposed to defaulters associated with credit defaults, was the increased interest cost (compounded interest), which was also common in SBA district. Other consequences of defaulting were suing defaulters (2.8%); retention of pension funds (2.8%); and reduced amounts in subsequent borrowing (3.4%). However, 11.1% of the respondents reported that no penalties were imposed against defaulters.

Generally, clients seemed to realize the importance of repaying back the loans. This might be a result of the awareness created by loan officers through training sessions or penalties imposed against defaulters. The analysis suggests that penalties imposed on defaulters varies significantly across the districts at P<0.01.

Table 39: Penalties imposed on loan defaulters

Measures imposed	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Compensation by group members	23	50	14	30.4	NA	NA	37	25.4
Selling the assets	10	21.7	13	28.3	13	24.1	36	24.7
Sending to court	2	4.3	1	2.2	1	1.8	4	2.8
Extension of the repayment period	2	4.3	2	4.3	1	1.8	5	3.5
Reduction of the amount of the next loan	1	2.2	NA	NA	4	7.4	5	3.4
Increase in interest rate	NA	NA	2	4.3	12	22.2	14	9.6
Retention of pension	1	2.2	3	6.5	NA	NA	4	2.8
Exclusion to future loans	5	10.9	8	17.4	17	31.5	30	20.1

No penalties	2	4.3	3	6.5	6	11.1	11	7.6
Total	46	100.0	46	100.0	54	100.0	146	100.0

Chi-square = 64.136   Df =22   Significance = 0.000

4.3.21 Potential benefits to borrowers

The majority of the micro entrepreneurs (95.5%) indicated that there were many benefits of borrowing. Results (Fig.7) indicate that 45.2% of the respondents reported to have gained additional income from using the loans. Micro entrepreneurs were able to increase their per capita income, something they would not achieve without borrowing. About 12.3%, 17.1% and 13.7% of the borrowers in Mbeya, SBA and Iringa, respectively reported that the use of credit had enable them to expand their enterprises. They argued that the increase in working capital helped them to increase their investment thereby increasing their revenue. Others reported that loan had enabled them to start new businesses. These findings conform to the latest idea in the finance-growth relationship, which postulates that financial intermediation influences not only the capital accumulation but also enhances the productivity of factor inputs (King and Levine, 1993a; 1993b).

The survey has also shown that very few (4.2%) borrowers complained that they did not realize any benefit from borrowing. These borrowers argued that the interest rate charged by credit providers was too high for them to realize profit from credit use. They also felt that they were merely servants of the credit providers and loans tended to limit the expansion of their enterprises and in some instances contributed to business failure. Statistical analysis suggests that borrowers' benefit were almost similar in the surveyed districts at P<0.05.
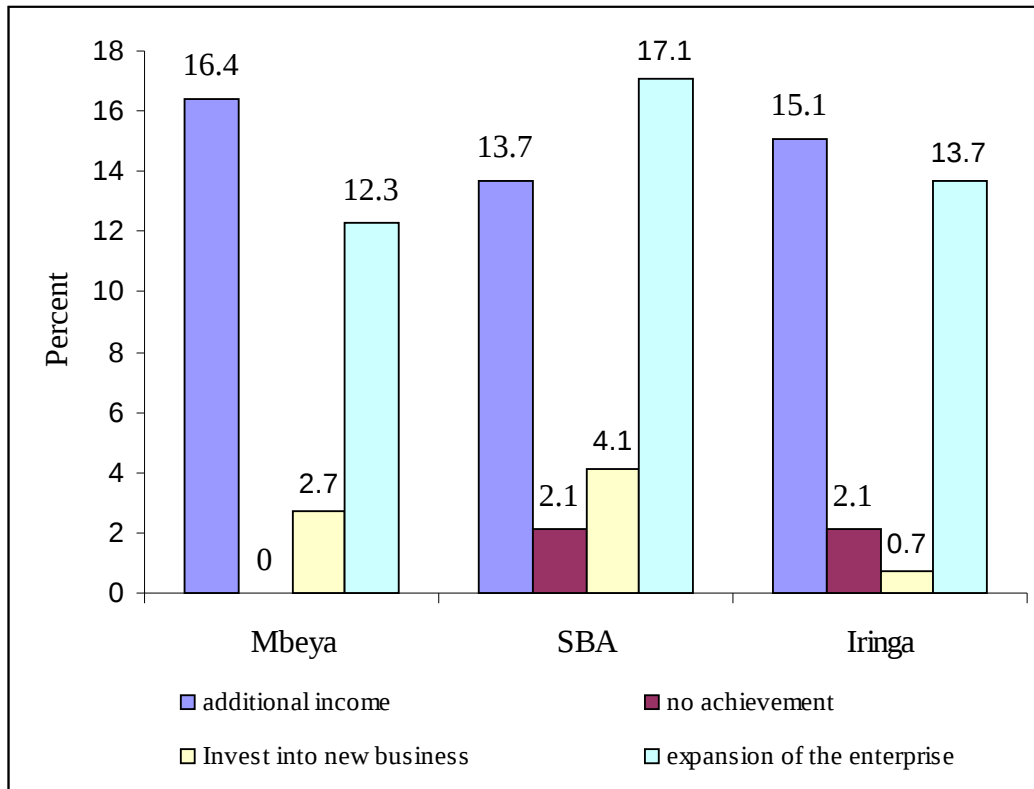
Figure 7: Potential benefits to borrowers

4.4 Credit diversion

4.4.1 Evidence of credit diversion into other uses

Out of the 146 respondents who applied for credit, 15.1% reported that other economic activities benefited from the credit they had received for one particular micro enterprise. These included the micro entrepreneurs who had diversified their activities. About 84.9% of all the respondents reported that they did not extend the credit received to other activities, especially in SBA district (87%) as compared to Iringa (84.8%) and Mbeya (82.6%). This is probably a result of the small amount of the loan received and specialization in activities.

Table 40: Evidence of credit diversion into other uses

Credit in cash	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Veer off the goals	7	15.2	8	17.4	7	13	22	15.1

| Used according to the goals | 39 | 84.8 | 38 | 82.6 | 47 | 87 | 124 | 84.9 |
| Total | 46 | 100.0 | 46 | 100.0 | 54 | 100.0 | 146 | 100.0 |

4.5 Regression Analysis

4.5.1 Interpretation of Probit and Tobit models

The coefficient from the Probit models are difficult to interpret because they measure the change in the unobservable y^* (the latent variable) associated with a change in one of the explanatory variables (Anderson, 2007; Economics 210 Handout, 2007; Garson, 2007). These probit coefficients measures the effect of the independent variable on the Z scores of the dependent variable, i.e. how much difference a unit change in the independents makes in terms of the cumulative normal probability of the dependent variable. But the probability of the dependent variable is not a linear function of Z, but rather a cumulative normal function of Z. This means the effect of a unit change in the independent on the probability of the dependent depend on the level of the independents when all independents are at their sample means (Garson, 2007).

A more useful measure is the marginal effect (Economics handout, 2007). Marginal effects for dummy variables are computed using the change in the probabilities rather than approximation using derivatives (Econometric software INC, 2002). It is incorrect to compare the coefficients unless the latent variable y^* is of interest, instead sign and significance level can be compared based on standard t-test of coefficients (Anderson, 2007).

Similarly in Tobit model it is important to realize that β (as specified in section 2.16) estimates the effects of x on y^* not y, therefore one can not rely on interpreting the coefficients. (Anderson and Sweeney, 2007).

With respect to goodness of fit one possibility is to use Pseudo R-square based on the log likelihood and defined as the McFadden's-R^2 statistic or likelihood ratio index (LRI). Also by observing at the percent correctly predicted, if predicted a probability greater than 0.5 then that matches y = 1 and vise versa.

4.5.2 Quantitative evidence

This section provides further quantitative evidence with respect to the tested hypothesis that: micro entrepreneurs' characteristics have no significant influence on the demand for credit.

Table 4.41 reports the regression results on micro entrepreneur demand for credit. The results show that micro entrepreneurs' characteristics have important implications on the demand for credit. Results indicate that the explanatory variables accounted for 63.74% of the variation in the dependent variable (the decision to apply for credit). The model chi-square was significant at 0.1% level, implying that independent variables significantly explain the variation in dependent variable. The log likelihood function of the estimated Probit model is -33.41. With respect to prediction success the model correctly predicts the actual 1's and 0's at 91.80%.

As expected, it has been found that age of the micro entrepreneur has significant negative effect on the demand for credit at P<0.01. The results further imply that with increase in age the demand for credit decreases by 0.5%. The young tend to borrow more for investment while the old are less active and therefore less likely to borrow. Crook (2001) reported the same. Given the nature of the economic activities under consideration, the younger of at least 18 years dominate this sector. According to this study the age groups of

18 – 37 years dominate in micro enterprises (see Table 4.4). These results are similar with those of Sowa *et al.* (1998) in Ghana who found that most of small and micro entrepreneurs are relative young people.

On the other hand marital status and experience in years of the micro entrepreneur have significant positive influence on the demand for credit at $P>0.01$. The positive relationship was expected because married micro entrepreneurs could be valued as suitable group to work with since they have stable families. Therefore micro finance institutions view them as good clients and hence are more likely to demand for credit. Moreover the family responsibilities force them to apply for credit so as to sustain their household needs. Married micro entrepreneurs are more likely to demand for credit by 46.52% than the unmarried category. While micro entrepreneurs' experiences acquire positive sign; additional year in business increases the demand for credit by about 1.25%. This is because, experienced micro entrepreneur is likely to be aware of the target market and can penetrate new market segments more easily, anxious to earn more and therefore ought to borrow more and in large amount. Moreover the credit providers are much more interested with experienced micro entrepreneurs since they have already establishes stable cash flow (see also Mpuga, 2004).

Furthermore availability of credit services (AC) as it was expected shows positive influence on the decision to apply for credit. This is probably attributed to the current distribution and reliability of the various financing institutions offering credit in the sample area although in some areas were few or did not exist. The coefficient was not significant at $P<0.05$, however it is more likely to increase the demand for credit by 7.28%. The findings are consistent with those of Mpuga (2004) who found that availability of credit sources have limited impact on demand for credit.

Education of the micro entrepreneur has positive influence on credit demand at P<0.05 as expected although not significant. Since it augments *ceteris paribus* returns on capital and therefore credit demand. For instance an additional year of education increases the demand for credit by about 16.14%. The finding concurs with those of Gropp *et al.* (1997) and Zeller (1994).

Assets owned by the micro entrepreneur (AS) has positive sign as it was hypothesized. This suggests that wealthier individuals are 6.188% more likely to demand for credit. The results conform to those of Crook (2001) and Gropp *et al*. (1997). However the coefficient was not significant, at P<0.05 implying that asset was not an important factor for one to apply for credit. In micro credit social collateral are frequently used than physical collateral.

Sex of the micro entrepreneur (GD) has negative sign as it was hypothesized. This suggests that male micro entrepreneurs are 1.71% less likely to demand for credit. The micro credit providers are hesitant to provide credit to males because they are regarded as customers whose repayment record is not good compared to females. This negatively reduce their demand for credit, moreover existence of micro credit sources which served females only, reduced the participation of males.

Table 41: Determinants of credit demand (Probit Model results)

Explanatory variable on the demand for credit	Coefficient	Std Error	Z- value	P [|Z |>z]	Marginal effect
Age of the micro entrepreneur (AG)	-0.0528892	0.0136	-3.878	0.001***	0.00570
Marital status (MT)	2.3446050	0.4189	5.597	0.0000***	0.46523

Asset owned (AS)	0.6294782	0.4245	1.483	0.1381	0.06188
Availability of credit (AC)	0.5810222	0.3779	1.538	0.1242	0.07287
Experience in years (EXP)	0.1161391	0.0339	3.427	0.0006***	0.01252
Education (EDC)	0.8884724	0.4633	1.918	0.552	0.1614
Sex(GD)	-0.1527069	0.3758	-0.406	0.6845	0.01706
Model chi – square	117.4372***				
Log likelihood	-33.40683				
Percent predicted correctly	91.803%				
Pseudo R - square	0.63738				

Note: *** is a level of significance at P<0.01.
Partial derivatives of expected value with respect to the vector of characteristics are computed at the means of Xs. The Z value is the test of the underlying coefficient being 0.

On the other hand results of the Tobit model regression Table 42 indicate that education, age and marital status of the micro entrepreneur had significant positive influence on the amount of credit demanded at P<0.01. This implies that the amount of credit demanded is likely to increase with an increase in education level. On the other hand married micro entrepreneurs are more likely to demand larger loan size than the unmarried ones by 81.32%. These indicate that married micro entrepreneurs demand large loan size.

Age of the micro entrepreneur shows positive influence on the amount of credit demanded at P<0.01. However, these older individuals are less willingly to apply for credit; in terms of the amount demanded once they apply seemed to be large. Implying that older micro entrepreneurs although are less likely to apply for credit, but whenever they apply, tend to demand large loan size by 6.08% as compared to the young who are gradually joining the business. Probably stability of their business motivates them to demand larger loans.

Assets owned by the micro entrepreneurs have significant positive influence in terms of the amount of credit demanded by the micro entrepreneur at P<0.01. This suggests that

wealthier individuals are more likely to demand large amount of credit by 35.86%. This is because some financial institutions consider ability to repay prior to advancing credit.

The terms of credit (TC) acquired positive sign though not significant at P<0.05, implying that the borrower will be more willing to borrow large loan size by 9.10% after getting sufficient information about the terms of credit e.g. mode of repayment and interest rate charged.

Sex of the micro entrepreneur has positive signs as predicted. Implying that men are more likely to demand large amount of credit than females, this is because, they are the one who posses collateral for loan such as titled land. Therefore being male increases the amount demanded for credit by 13.60%, though the coefficient was not significant at P<0.05. However, with respect to decision to apply for credit (Probit result) females tend to apply more while Tobit results indicates that they get smaller loan size as compared to males. Compared to Table 30, largest percent of males applied in the formal credit sector, this sector is the one which disbursed large loan sizes.

Experience in years (EXP) has positive sign as expected. This implies that experienced micro entrepreneurs are more likely to demand large loan size than the new comers. For instance additional year in micro enterprises activities increases the amount of credit demanded by about 0.71%. The coefficient was not significant at P<0.05.

The Pseudo R-square from the Table 42 is found to be 66.91%. This indicates that the explanatory variables explain variations in the dependent variable considerably.

Table 42: Determinants of the amount of credit demanded (Tobit results)

Explanatory variable	Coefficient	Std Error	Z- value	P [|Z |>z]	Marginal effect
Age of the micro entrepreneur (AG)	0.0678415	0.0078669	8.624	0.0000***	0.060818
Marital status (MT)	0.9071250	0.1791001	5.065	0.0000***	0.813216
Asset owned (AS)	0.4000626	0.1428996	2.800	0.0051**	0.358647
Sex (GD)	0.1517862	0.1314551	1.155	0.2482	0.136073
Experience in years (EXP)	0.0079484	0.0190377	0.418	0.6763	0.007126
Education (ED)	1.7656832	0.2969303	5.946	0.0000***	1.582893
Terms of credit (TC)	0.1015139	0.1509502	0.672	0.5013	0.091005
Sigma	0.6800569	0.0461250	14.744	0.0000***	
Log likelihood function	-130.0624				
Restricted Log likelihood	-393.2382				
Pseudo R- Square	0.6691				
Number of observations	183				

Note: *** and ** are level of significance at 0.1% and 1% respectively. Partial derivatives of expected value with respect to the vector of characteristics are computed at the means of Xs. The Z value is the test of the underlying coefficient being 0.

4.5.3 Respondents' comments on credit services

Numerous comments were suggested by borrowers to improve the effectiveness and efficiency of credit services. These comments are summarized in Table 43. The findings show that 32.8% of the respondents reported that they did not have enough information about the available sources of credit; the proportion was higher across the three districts i.e. 30%, 34.9% and 33.3% in Iringa, Mbeya and SBA, respectively. The lack of information about the existing credit market compelled majority of the micro entrepreneurs to rely on the semi formal and informal sources of credit.

Some (25.7%) of the micro entrepreneurs commented that the use of physical collateral restrained most of them to formal sources of credit, this problem was prominent in Iringa and SBA (33.3% in each district). Other respondents (15.7%) reported that they needed flexible repayment schedules to accommodate unforeseen problems such as business failure, theft and fire damages. This concern was dominant in Mbeya (41.3%) probably

because is where the semiformal sources were more abundant. Additionally 13.7% of all

the respondents reported that there were few formal sources in their areas, especially in

SBA district (21.7%).

Table 43: Respondent's comments on credit services

Comments	Iringa		Mbeya		SBA		Total	
	N	%	N	%	N	%	N	%
Physical collateral	20	33.3	7	11.1	20	33.3	47	25.7
Few formal sources	4	6.7	8	12.7	13	21.7	25	13.7
Lack of information	18	30	22	34.9	20	33.3	60	32.8
Flexible loan contract	18	30	26	41.3	7	11.7	29	15.7
Total	60	100	63	100	60	100	183	100.0

4.6 Brief summary of the surveyed credit sources

There were several institutions offering financial services in the study area. These are

grouped into formal, semiformal and informal financial sources. The formal financial

institutions identified were NMB Ltd, CRDB Ltd and Stanbic Bank. These banks viewed

micro entrepreneurs as riskier borrowers than large business because it was difficult to

obtain accurate information about their geographical locations, level of education and

incomes.

On the other hand, the semi formal source visited were PRIDE, SIDO, WASMEP,

SELFINA and various SACCOS which included UWAMU, Miyomboni, Sifa, Soko *Kuu*,

Bomani workers, *Tutulane* (let us help each other), RAAWO and SCCULT. Friends,

relatives, neighbors, specialized moneylenders and traders/shop owners were the informal

credit providers identified.

4.6.1 Lending conditions for the identified sources

This section describes the lending conditions of the micro finance institutions located in

the study area (Appendix III).

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Overview

This chapter summarizes the study findings and recommendations based on the objective of the study. The main objective of this study was to examine the determinant of the credit demand for micro enterprises activities in the Southern highland of Tanzania. The specific objectives were (i) to assess the influence of micro entrepreneur characteristics on credit demand. (ii) to assess whether available credit sources have influences on the micro entrepreneurs demand for credit, (iii) to identify the conditions of credit acquisition in semiformal and formal sources of credit in the study area. Both qualitative and quantitative methods of data analysis were used to estimate the relationship and to test the stated hypotheses.

5.2 Summary and Conclusion

The findings indicated that credit demand is quite huge and largely unmet. Moreover the results show that formal sector is almost inaccessible by the micro entrepreneurs although its demand is high. Therefore the informal and semi formal sources of credit; including specialized moneylenders, relatives and friends and rotating savings and credit associations are the main alternative sources for the micro entrepreneurs. In general surveyed micro entrepreneurs were very poor individuals, who lack working capital, depend on credit for starting and expanding their micro enterprises. The results further indicate that two third of the micro entrepreneurs had no formal employment. This implies that micro enterprises activities were the main sources of employment.

The first objective of this study was to assess the influence of micro entrepreneur characteristics on the demand for credit. The findings show that decision to apply for credit was strongly influenced by experience of the micro enterprises at $P<0.001$. However, it has no significant influence on the actual amount demanded for credit.

With respect to the age of borrowers results indicate that micro entrepreneurs with 18–37 years had a high demand for credit than those of ages over 37 years. However, the result from Tobit model shows that the actual amount demanded increases with age. In addition, the demand for credit was found to be very higher for married micro entrepreneurs, indicating that the credit providers view them as credit–worth clients and hence their loan application were considered more positively.

Furthermore, the findings indicate that education and assets owned by the micro entrepreneur had positively effect on both the decision to apply for credit and amount of credit demanded. This indicates that wealthier and educated micro entrepreneur demand more credit than poor and less educated micro entrepreneurs, this is because they owned valuable collateral and were relatively more enlightened with respect to financial transactions.

Terms of credit (TC) have also been found to have positive influence on the amount of credit demanded. This implies that the knowledge on the terms of credit was an important factor which determined the extent of borrowers participation in existing credit market.

The second objective of the study was to assess whether available credit sources influenced the micro entrepreneurs demand for credit. Descriptive evidence indicates that availability of credit services had significant influence on the demand for credit, this

implies that the availability of credit institutes has important impact on the demand for credit. This means that a small number of credit sources reduce the demand for credit by narrowing choices of credit sources.

Lastly the study aimed at identifying and describing the lending conditions and procedures of the semi-formal and formal institutions offering credit in the study area. Major credit institutions identified in the study area were NMB Ltd., CRDB Ltd and Stanbic banks which are formal financing institutes. The semi formal financing institutes identified were PRIDE, SIDO, WASMEP, SELFINA and various SACCOS. The surveyed SACCOS includes UWAMU, Sifa SACCOS, Soko Kuu SACCOS, Miyomboni SACCOS, Bomani Workers SACCOS, Tutulane SACCOS, RAAWO and SCCULT.

The findings revealed that these credit sources employed different lending policies and procedures to screen the applicants and disburse credit to credit worth micro entrepreneurs. The common approaches to screen applicants in the formal sector were: The use of physical collateral such as building, titled land and business license. While the semi formal sources emphasized on group liability, the use of guarantors and possession of valuable assets.

Moreover the study found that viability of the business, ownership of bank account and willingness of the clients to invest and manage micro enterprise were among the major condition for eligibility to formal credit system.

With respect to the operation of the financial institutions the findings revealed that NMB was well-established in the study area. Similarly the semiformal sources, especially SIDO was well-established in the study area, whereas PRIDE was identified in Mbeya and Iringa

districts but served many micro entrepreneurs than other sources. Nevertheless the survey indicated that the semiformal sources were not liquid enough and well-staffed to cater for its market.

5.3 Recommendations

Based on the conclusion drawn from the study the following are the recommendations.

While government considers micro enterprises as a valuable business toward attaining economic development, there is a need to enhance credit services in this sector. This calls for government to intervene the credit market to smooth the provision of credit to needy and credit worthy individuals and households.

In order to meet the existing demand for credit there is a need to promote specialized micro finance institutions which offer micro credit to micro entrepreneurs in urban areas, in which there is a large proportion of poor people who demand credit services but lack access. These lending institutions should be poverty and gender oriented in providing their credit services so that they can contribute to economic growth and development and hence poverty reduction.

There is a need for financial institutions to streamline their lending procedures to facilitate quick access to credit by trustworthy customers. This could be achieved through quick processing of loans. Furthermore, the repayment condition should be flexible, for example it should be possible to prolong the repayment period when the business is not doing well.

There is a need to take proactive steps toward promoting micro enterprises activities by ensuring a conducive business environment in terms of good policies.

The study recommends the establishment of efficient coordination systems between the government particularly the departments of land and the formal financing sectors, in order to assist these sectors when they need to confirm authoritative ownership of land. In addition there is also a need to restructure land act of 1999 to enable family property *(residential houses)* to be mortgage for loans.

Since credit has been recognized to be a panacea for economic development of the micro entrepreneurs there is a need for the government to support micro entrepreneurs by ensuring that they have access to credit by encouraging the lending institutions to give credit to the poor people. This could be achieved through;

(i)   Allowing some flexibility in repayment of the loan particularly when there is reasonable evidence to accommodate delays in repayment. This might allow defaulting borrowers to repay back and continue borrowing.

(ii)   Substitution of immovable assets with movable assets such as home furniture could enlarge the demand for credit provided that there are sound legal procedures to enforce the agreement between the parties involved.

Providing education on credit to micro entrepreneurs is important since it enlightens borrowers about borrowing and credit use and it promotes financial discipline among borrowers. The study also recommends the provision of business training to micro entrepreneurs so as to increase cash flow through embracing good business skills. These might help them to acquire large loan size as the lending institutions are assured of the loan repayment.

More saving and credit association need to be emphasized and established. These associations are important for sustainability of credit services. These can be achieved through establishing urban-based savings association to enable more micro entrepreneurs to save. Strategies should be laid such that even those micro entrepreneurs with relatively low returns to invested capital are encouraged to save. Savings and credit association could be important sources of credit to its members and therefore substituting the inadequacy of funds of the informal sector while sustaining the unmet demand for credit of the formal sector.

5.4 Limitation of the study and areas for future research

5.4.1 Limitation of the study

The research encountered some problem in data collection. Some of the micro entrepreneurs were not open to the interviewer; they had a bad notion that this information might be used for other purposes such as taxation. Others thought that they would be given credit so if they revealed their actual income and past records of credit transactions, they might be excluded from this wrongly perceived opportunity for future credit. However detailed explanations about the essence of the study and assurance of confidentiality of collected information alleviated the problem.

Some credit providers were not willing to express themselves openly about their lending operations. For instance the head office of FINCA Tanzania located in Dar es salaam prohibited the information regarding their operation. Therefore available information has been obtained from the public electronic sources only [http://www.villagebanking.org/].

5.4.2 Areas for further research

Further research studies are recommended to contribute new knowledge under the following broadly stated objectives:

(i)   To investigate the dynamics of credit market for small and medium enterprises in least developed countries.

(ii)   To conduct a time series research, to assess the impact of loan defaults in group-based credit schemes and their effect on the livelihood of other group members under the semiformal sector.

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APPENDICES

Appendix 1: Micro Entrepreneur Questionnaire

I. BASIC INFORMATION

Questionnaire number:……………..

1. District: 1= Mbeya, 2= Sumbawanga, 3= Iringa   **DR**   (………)
2. Ward…………………………………………..
3. Respondent's name……………………………….Age………**AG**
4. Gender: 1= Male,   2= Female   **GD**   (………)
5. Marital status
    1= Single
    2= Married
    3= Divorced   **MT**   (………)
    4= Widow)
    5= Temporary separated
6. Number of people in the household **HS**   ……………
7. Assets owned by the respondent
    1= land 2= livestock 3= machinery and equipment 4= vehicle 5= No assets 6=
    others   specify…………………………………… **AS**   (………)
8. Dwelling characteristics 1= Own house 2= Rented house 3= Others   specify
    …………………………………… **DW**   (………)
9. Experience in micro-enterprise (years) …………………….. **EXP**
10. Respondent's level of education
    1= No formal education
    2= Adult education
    3= Primary education   **ED**   (………)
    4= Secondary education
    5= college and above
11. Do you have formal employment? 1= yes 2=No   **FE**   (………)
12. (a) If the answer to question 11 is yes, what type of work
    …………………………………………   **TW**
13. (b) How much do you earn from this employment per month?
    …………………………………Tshs.   **EM** (………)
14. If the answer to question 11 is no, have you
    1= retired
    2= been retrenched   **NF**   (………)
    3= resigned
    4= you never been employed before
15. If you resigned, why?
    1= low salary
    2= prefers micro enterprise activities   **RR** (………)
    3. Other specify……………………………………………………
    ………………………………………………………………….

II. MICRO-ENTERPRISE DESCRIPTION

16. Kind of enterprise

   1= Shop and kiosk, 2= Restaurant and hotel, 3= Carpentry, 4= crop and livestock farming, 5= Tailoring, 6= Hair saloon, 7= Milling machines,
    8= Canning and processing industries, 9= selling agricultural goods and non-agricultural goods, 10= Others specify ………………………**EN**(……..)

16.Type of economic activity

   1= Food store, 2= Cosmetic shop, 3= Agrochemical store, 4= Pharmacy,
   5= Fresh milk kiosk, 6= Cold drinks kiosk, 7= Keeping milking cattle,
    8= Goat keeping, 9= Poultry keeping and poultry selling, 10= selling and growing cereals, 11= selling and growing legumes, 12= selling and Production of potatoes, 13= Banana production and selling
    14= Fruit and vegetable production and selling, 15= Fruit and vegetable processing and canning, 16= Milking processing and packaging, 17= shoe and body wear,
    18= Hair cutting and dressing saloon, 19= grain milling machines   **AC** (……..)

17. Distance to credit source…………………. Kilometers. **DS**
18. Ownership of enterprise;

   1= individual
   2= group   **OE**   (…….)
   3= others specify………………………………………….

19.Reasons for starting the micro-enterprise

   1= source of employment
   2= to supplement income   **RSME**   (……)
   3= interest in business
   4= others specify………………………………………

III. ENTERPRISE CAPITAL

20. How much initial capital was used to start up your enterprise? …………………………………………. Tshs.   **IC**

21.What was the source of the capital in question number 20?

   1= own savings
   2 = Grants   **SC**   (……)
   3= credit specify the source………………………….………**SCS**
   4= both own savings and credit

22. Why did you choose this source of credit?

   1= Lack of information on other sources
   2= cheaper compared to other sources
   3= Easier alternative but with high interest rate **WSC**   (……)
   4= Easy to get and no interest rate is charged

IV. DEMAND FOR CREDIT SERVICES

23. Did you apply for credit in the past 2 years? 1=Yes 0= No K_{it} (……)
24. Have you applied for formal / semi-formal / informal credit? (delete whichever is not applicable).   **HU**   (……)_
25. If the answer to question number 23 is yes, did you receive the credit?

   1=Yes 2= No   **RC**   (……)

26.If the answer to question number 25 is yes, did you receive the amount of credit requested?   1=Yes 2= No R_{it} (..…)

27. If the answer to question number 25 is no, what were the reasons?

   1=lack of collateral
   2= Time taken from applying to getting the credit

3= Number of visits to formal credit sources such as banks

4= Fees paid **RRC** (......)

5= Distance to credit providers

6=Others specify…………………………………………

28. If the answer to question number 23 is no, what were the reasons?

1= lack of adequate information

2= lack of collateral **DD** (......)

3= Adequate self savings

4= Lack of credit sources

5= Other specify………………………………………………….

29. What were the expected uses of credit?

1= To expand business enterprises

2= To meet health expenditure

3= Purchase of agricultural inputs **UC** (..….)

4= Consumer goods

5= To fulfill family cost required in education

6= To enter new business enterprises

7= To start this enterprises

8= Others specify………………………………………...

30. What kind of collateral is currently required for securing credit?

1= No collateral

2= land

3= Future harvest

4= Machinery and equipments **KC** (......)

5= Building

6= livestock

7= Group formation

8= Employer's comment

9= Referee's comment (unemployed group)

10= Others specify…………………………………………

31.What is your preference for credit source?

1=Formal source, 2= Informal source, 3= Both, 4= None 5= semi-formal source

PC (………)

32. Why?………………………

1= Able to get large loan size with low interest rate

2= other cost time, need group formation and impose penalties

3= No interest rate **CH** (......)

4= Available in the locality

5= other specify……………………………..

33. Why did you choose to apply from the current credit source?

1= No other sources

2= cheaper compared to semi formal? **MF** (......)

3= condition of entry to other sectors are difficult

4= lack of information about other sources

5= others specify……………………………..

34. Is your decision to apply for credit influenced by the available credit sources in your locality?   1= Yes   2= No. **IS** (......)

35. What can you say about the availability of credit from the formal sector?
    1= Available 2= Unavailable.   **FC**   (……)
36. Have you ever succeed in getting credit from the formal source?
    1= Yes   2= No   **SG**   (……)
 37. Do you prefer getting credit in cash? 1= Yes 2= No **PH**   (……)

V. CREDIT DIVERSION
38. How much of the borrowed capital was used for the stated purposes?

AMOUNT BORROWED	YEAR	AMOUNT USED

 39. Did any of your other economic activities benefit from the credit you received? (Refer to question number 38 above) 1= Yes 2= No.   **DID**

                                                        (………)
40. If yes how? …………………………………………………………..
        HOW   (………)

 41. Was any portion of the credit used for consumption by the family? 1=Yes
    2= No   **CONSUMPT**   (………)

VI.CREDIT TERMS AND BENEFITS
42. (a) Were the terms of credit e.g. interest rate understood by the micro
       entrepreneur? 1= Yes 2= No   **TC**   (………)
    (b) What was not understood? …………………………………………**terms**
     (c) If the answer to question number 42 (a) is yes, what is the interest rate charged
    by the credit provider?   ………………….. **CG**
43. State the loan repayment procedure for the credit……………………..
…………………………………………………………………..**repaymen**
 44. Indicate the amount repaid and arrears (if any)
    Amount repaid (Tshs.)………………………….**repaid**
    Arrears in (Tshs.) ……………………………… **Arrears**
 45. If you are in arrears give reasons ………………………………………………
    ………………………………………………………………………… **IAG**
46. What sort of penalties are imposed by the credit provider?
    …………………………………………………………………………………
    ………………………………………………………………………… **penalt**
 47. What is your revenue estimate with respect to your enterprise with and without the
    use of credit?
    With credit; total revenue……………………… Tshs.   **RE**
     Without credit; total revenue………………………Tshs. **RE2**

 48. What benefits have you obtained from using credit?
            1= additional income
            2= No achievement   **BO**
            3= Enter new business specify…………………….   (……)
            4= Expansion of the micro-enterprise
            5= Others specify…………………………………………………..

VII.OTHER CREDIT SOURCES

49. What were your sources of credit in the past 2 years?

Semi- formal sector	Informal sector	Formal sector

         1= Informal source (1= Relative and friends, 2= shop owner and businessmen, 3= family, 4= Cooperative societies, 5= Rotating savings and credit associations 6= specialized moneylenders, 7= neighbors)

         2= Formal sources (Non government institutions; 1= CRDB, 2= Community Bank, 3= Stanbinc Bank, 4= Exime Bank, 5= others specify…………………………………………
and Government institutions; 1= NMB, 2= NBC, 3= Postal Bank)

         3= None   **Di**   (……)

         4= Both formal and informal sources

         5= Semi-formal source ;Non government institutions, Donor agencies, specify……………………………………………….

50. Is your decision to borrow influenced by the size of the loan? Or the interest rate charges on the loan?

         1= loan size

         2= Interest rate

         3= both 1 and 2   **Decision**   (……)

         4= size of micro enterprise

         5= Other specify………………………………………………………

51.. What are your comments on formal sector and other credit services?

    1= Formal sector is costly in terms of time and transaction cost

    2= Formal sector requires collateral and has low interest rate

    3= Few formal sources in the locality limit their choices

    4= Informal sector does not require collateral and easy to get

    5= Semi-formal source charge higher interest rate, cost time and high application fees

    6= No interest rate is charged in the informal sector

    7= little information on credit sectors

    8= Other specify……………………………………**comment**   (………)

52. (a) Do you wish to apply for credit? 1= Yes 2= No **Continue**   (………)

    (b) If not why?

         1= Condition of credit are difficult to meet, specify………..
…………………………………………………………… .**cdn**

         2= Failure to pay back the credit

         3= Small amount of credit   **If not**   (………)

         4= The business are likely to collapse

         5= Others specify………………………………………...

Appendix 2: Micro finance And Credit Institution Questionnaire

1. Name……………………………………………………………………………
2. Year of establishment……………………………………………………………..
3. Type of organization
    - 1= Non government institution
    - 2= Government institution
    - 3= Donor agency   (……)
    - 4= Cooperative society
    - 5= Other specify…………………………………………………………
4. What is the total amount of loan disbursed so far?……………………. .(Tshs)
5. What amount of credit so far financed micro-enterprises?……………...(Tshs)
6. What are the major objectives of the institution?
    …………………………………………………………………………………………
    …………………………………………………………………………………………
    …………………………………………………………………………….

7. What kind of credit do you offer? 1= cash, 2= in kind, 3= both   (……)

8. What kind of micro-enterprises do you
support? ....
……………………………………………..
……………………………………………………………………………………………….

9. Type of credit offered by this institution
   - 1= individual loan to individual client
   - 2= group loan to individual enterprises   (……)
   - 3= group loans to group enterprises
   - 4= other specify ……………………………………….……………..

10. Rank the most important condition for eligibility
……………………………………………………………………………………………
………………………………………………………………………………………

11. How is the repayment schedule organized?
1= Weekly
2= Monthly   (……)
3= others specify…………………………………………………………

12. What client characteristics do you consider important to ensure high rates of loan
repayment…………………………………………………………………………….
……………………………………………………………………………………….

13. What factors are considered when scheduling repayment?
……………………………………………………………………………………………

14. Do you assess micro-enterprises before authorizing credit ?
1=Yes, 2= No   (……)

15. What parameters do you consider during micro-enterprises assessment?
……………………………………………………………………………………………

16.On average what proportion of micro-enterprises do no meet the assessment criteria
……………………………………………………………………………………

17.Have you ever performed an impact assessment of your financial services?
1= Yes 2= No   (……)

18. If yes, what positive changes have you observed?
……………………………………………………………………………………………
………………………………………………………………………………..…….

19. What loan condition seems difficult to meet amongst your clients?

………………………………………………………………………………………………………
……………………………………………………………………………………...……

20. What prevent you from improving them?

………………………………………………………………………………………………………
…………………………………………………………………………………………

21.What are the major institutitonal credit related problems?

………………………………………………………………………………………………………
…………………………………………………………………………………………

22.How many clients have received credit so far?…………………………………..

23. What is your current interest rate…………………………………………...…%

24. What is your loan ceiling?…………………………………………………..………

25. What are the procedures for obtaining loan from your institution?

………………………………………………………………………………………………………
…………………………………………………………………………………………….

26. What are the institutional strategies to ensure sustainability of the credit programs? ...

……………………………………………………………………………….

………………………………………………………………………………………...……

27. What are the institutional future plans (vision)?

………………………………………………………………………………………………………
…………………………………………………………………………………………

28. What are your comments with regard to the cost of administering loan?

…………………………………………………………………………………………

Appendix 3: Lending conditions in the surveyed credit sources

Formal Institution	Condition of eligibility	Lending problems	Operations
NMB Ltd	-Viable business -Age above 18years -Stable cash flow -Single loan per family -Business license -Physical collateral	-Information asymmetry -Death of clients -Monitoring of small loans	Individual credit to individual business
Stanbic Bank	-Viable business -Bank account -Registered business -Physical collateral	-Land act of 1999, which prohibit the use of family property -Death of clients -Termination of employment	Individual credit to individual business and companies
CRDB Bank Ltd	-Viable business -Age above 18years -Active account -Physical collateral -Business license	-Dishonesty of customers -Land act of 1999, which prohibit the use of family property -Death of clients	Individual and group credit to individual business

Semi formal organization/institution			
SIDO	-Age of at least 18 years -Assets wealth at least 40% of the loan -Viable business -Personal traits acceptable by the community - Registered business -Guarantors	-Inadequate funds -Credit default -Monitoring of small loans	Individual and group credit.
PRIDE Tanzania	-Age of at least 18 years -Registration fees -Compulsory saving -Good repayment record -Guarantors	-Monitoring of small loans -Conflict in groups -Group liability -Clients drop out	Group credit

SELFINA	-Target women only of at least 18 years -Viable business/ business idea -Finance 20% of investment cost -Guarantors	Inadequate funds to meet the demand	Individual credit
FINCA	-Target women only of at least 18 years -Viable business -Guarantors	-Monitoring of small loans -Conflict in groups -Group liability -Clients drop out	Group and individual credit
SACCOS	-Membership is voluntary -Mobilizing savings -Registration fees	-Monitoring of small loans -Conflict in groups -Inadequate funds -Lack of business skills -Default problems	Group and individual credit