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Research on Poverty Alleviation.
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Tel: 255-22-2700083; 0741-326 064
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Email: repoa@repoa.or.com
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Access to Formal and Quasi-Formal Credit by Smallholder Farmers and Artisanal Fishermen: A Case of Zanzibar

Khalid Mohamed

RESEARCH ON POVERTY ALLEVIATION

Research Report No. 03.6

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Ministry of Agriculture, Natural Resources, Environment and Cooperation, Zanzibar, Tanzania

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ABBREVIATIONS

FAO	Food and Agriculture Organisation
GoZ	Government of Zanzibar
LICs	Low Income Countries
NBC	National Bank of Commerce
NGO	Non-governmental Organisation
PBZ	People's Bank of Zanzibar
REPOA	Research on Poverty Alleviation
ROSCAs	Rotating Savings and Credit Associations
SACCOs	Saving and Credit Cooperatives
TPB	Tanzania Postal Bank
TV	Television
UNDP	United Nations Development Programme
ZPRP	Zanzibar Poverty Reduction Plan

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ABSTRACT

Using survey data as well as secondary information, this study was set out to review the operational mechanism of the existing formal and quasi-formal credit arrangements in Zanzibar with the view to assess their performance in serving micro-enterprise sector with particular reference to smallholder farmers and artisanal fishermen. The study aimed at providing useful information to aid the decision making process for the enhancement of access to credit by the majority small-scale producers.

The study also aimed at determining factors that influence accessibility of formal credit by the small farmers and artisanal fishermen. So as to establish

the empirical evidence on the link between credit use and poverty alleviation, the study attempted to make an assessment of the impact of the credit on income and improvement of standard of living of the credit user.

In collecting the primary data, questionnaires were administered to 300 randomly selected households in some villages of Unguja and Pemba. The analysis of findings was done using STATA 7 computer softwares. Cross tabulation, regressions and t-test were also done.

Study results show that there was inadequate flow of credit to the farming and fishing sub-sectors in Zanzibar. The existing formal banks: National Bank of Commerce (NBC), People's Bank of Zanzibar (PBZ) and Tanzania Postal Bank (TPB) completely avoided provision of credit to the agriculture and micro-enterprise sector.

Government institutions and donor-funded development projects extended piecemeal credit services that were made available to farmers and artisanal fishermen. Available evidence shows that services rendered by these sources were inadequate, at best targeted to specific groups and to the promotion of specific technologies. Generally, the performance of most of these micro-credit programmes was not encouraging. Poor loan recovery is also a big constraint to most of these schemes.

The empirical evidence of the study indicates that age, gender, education, income levels, and degree of awareness on credit availability are factors that influence credit accessibility by smallholder farmers and artisanal fishermen in Zanzibar. Moreover, the results of the mean significant T-tests indicate that there is significant difference between the credit users and non-users in relation to income levels, and value of productive assets owned by the respondent. The results suggest that there is need to address key factors that inhibit access to credit by small farmers and fishermen that would facilitate alleviation of poverty in the country.

1. BACKGROUND, PURPOSE AND OBJECTIVES OF THE STUDY

1.1 Introduction

Zanzibar is among developing countries in Sub- Sahara Africa. It comprises of two main islands of Unguja and Pemba and several islets. The total land area is 2,643 Km^2 (Unguja 1,658 Km^2 and Pemba 985 Km^2). Administratively, Zanzibar is divided into five regions and 10 districts. The districts are further divided into constituencies, *Shehias* and villages.

Based on the 1988 census, the estimated population of the islands for the year 2000 is 890,000 of which 51 percent are female and 49 percent are male. The average population growth rate is three percent per annum. The average density is 337 persons per Km^2. About 65 percent of the population live in rural areas with over 70 percent are directly or indirectly involved in agricultural activities. About 132,000ha of Zanzibar land (Unguja 64,000ha and Pemba 68,000ha) are under cultivation. The average size of landholdings per family is less than 1.5ha. Women perform most of the farm operations. About 20 percent of the households are directly involved in fishing as a main component in the family production system.

Like other Low Income Countries (LICs), Zanzibar has for the last four decades, been trying to eradicate three major enemies facing mankind: *poverty, ignorance and diseases*. Over time, several policies have been formulated, strategies and programmes developed all geared to improve the standards of living of the people. Starting from mid- 1960s the government, while pursuing a centrally planned economy, embarked on a special programme of providing social basic services to people free of charge as a way of improving the quality of life of the people and alleviating poverty. However, the unfavourable economic performance of the 1980s, did not allow the government to sustain this programme as was originally envisaged. Thus the government was forced to take remedial measures by embarking on liberal economic policies. In 1986, the reform programmes were initiated with a focus on getting away with the state- controlled economy and moving to market oriented economic system. The liberalisation process was expected to stabilize the macro- economic aspects and enhance private sector development in the economy that would lead to improved efficiency in the production processes.

Reforms in the financial sector initiated in 1991 aimed at liberalising the financial sector in order to create a more competitive and efficient financial system. However, the overall outcome of financial reforms has remained mixed. The reform process has so far encouraged the entry of private sector into the banking sector and has led to the liberalisation of the interest and exchange rates. Also demand-led credit allocation has been promoted and bank portfolio restrictions relaxed.

On the other hand the reforms have had adverse effects on the vulnerable poor, particularly those with limited resources at their disposal. For example, the inadequate operational practices of the major commercial banks that have led to negative impacts on the accessibility of financial services to farmers and micro-enterprises in both rural and urban areas is a case in point. Recent studies also show that the rural sector and in particular, the agricultural sector has continued to be marginalized even after the reform process and as such affected the quality of rural life.

1.2 Poverty Status and Zanzibar vision 2020

Various sources (UNDP 1996, UNDP 2001 and GoZ 2001), indicate that Zanzibar is still under the firm grip of poverty, which is more pronounced in the rural areas particularly in the Pemba island. Many households in Zanzibar are considered to live below the poverty line. Monthly income per capita is estimated at Tshs. 1,322 (1991 prices), which is only US$ 69 per annum. Those considered poor based on income poverty make 53 percent and severely poor form 24 percent (GoZ, 2000). Mkenda, (2001) estimation using the median income as a poverty line shows that 50 percent of people living in rural Zanzibar are poor. The peasant households are considered to be poorer than any other occupational groups in rural Zanzibar.

Low productivity in agriculture, livestock keeping and fishing due to poor technology are the major underlying cause of poverty in Zanzibar. Mkenda, (2001) notes that limited access to resources and productive assets such as land, cattle, and fishing equipment and gears is the main contributing factor to poverty as well as limited access to credit facilities, poor infrastructure and markets.

The literacy rate for Zanzibar is 60 percent (GoZ, 1999a) with Unguja scoring higher in education than Pemba. Men (in both islands) comparatively have more formal education than women. Malnutrition among under fives is also a problem with 40 percent of the children under five being stunted, 17percent severely stunted. There is higher prevalence of stunting in rural areas (49 percent) than urban areas (16 percent) and a high disparity between Unguja (seven percent) and Pemba (20 percent). Life expectancy in Zanzibar is low, estimated to be only 48 years of age at birth (UNDP, 2001).

In an effort to address poverty problems, the Government of Zanzibar (GoZ) starting from the mid-1990s has commissioned the preparation of a number of policy documents such as Vision 2020 (GoZ, 1999b), Grassroots Initiatives for Poverty Reduction (UNDP, 1996), Common Country Assessment (UNDP, 2001) and the more recent and comprehensive Zanzibar Poverty Reduction Plan (GoZ, 2001 seeking to improve governance, enhance participation and social inclusion with the ultimate objective of reducing poverty in the islands.

The overall goal of Zanzibar's Vision 2020 is to promote sectoral transformation from a predominantly rural based subsistence agricultural economy to a modern economy, with the primary objective of eradicating poverty. In the agricultural sector the emphasis is on transforming agriculture from subsistence to commercial production through: (i) developing and promoting the use of new and modern technologies to increase production and (ii) expanding and improving economic infrastructure in order to improve and open up markets.

The primary target groups for poverty reduction under the Zanzibar Poverty Reduction Plan (ZPRP) (2001) include the rural small farmers and artisanal fishermen. The ZPRP sees growth in the agricultural sector as the biggest challenge and the one with the potential to have the widest impact on poverty. Thus one of the key overall objectives of the ZPRP is to increase productivity in the agricultural sector (crops, livestock, fisheries and forestry) and achieve national and household food security. The specific objectives of the ZPRP and proposed actions are in line with the objectives of Zanzibar Agricultural Sector Policy (2000).

1.3 Statement of the Problem

Despite the fact that 65 percent of Zanzibar's population lives in rural areas and that 70 percent are involved in agricultural and fishing activities, there are no efforts to facilitate credit to farmers and fishermen which is crucial in rapid development of this dominant section of the population. There is no bank which caters for the specific credit and saving needs of small- scale producers. The available piecemeal credit services are operated by small credit schemes, which are limited in scope and have specific target groups. The inadequacy in financing and credit arrangements in Zanzibar impede development of agriculture and rural sectors. Given that these sectors are the mainstay of a large segment of the populace, their poor performance makes the fight against poverty even more challenging.

1.4 Study Objectives

This study involves a general assessment of formal and quasi-formal credit accessibility by smallholder farmers and artisanal fishermen. The study also attempts to assess the impact of credit on the standards of living of credit users. More specifically, the study aims at:

- Assessing the operational procedures and performance of the existing formal and quasi-formal credit sources in availing credit services to smallholder farmers and artisanal fishermen;
- Determining factors that influence credit accessibility by farmers and artisanal fishermen;
- Assessing the impact of credit on income and the livelihood of the credit users; and
- Suggesting best approach and practices for the promotion of effective and sustainable rural financial services for Zanzibar.

1.5 Hypotheses of the Study

The study was guided by four main hypotheses. First, smallholder farmers and artisanal fishermen have limited access to formal and quasi- formal credit facilities. Second, socio-economic factors such as age, gender, level of education, income, assets values and others have direct influence on individual's chances to access credit from formal sources. Third, lending procedures of the formal and quasi-formal credit institutions deter smallholder farmers and artisanal fishermen to access credit facilities. Fourth, there is a link between credit use, increase in income and poverty alleviation as a consequence.

1.6 Study Questions

The following research questions guided this study:

- How relevant are the operational procedures and conditionalities of existing formal and quasi-formal credit arrangements to the needs and aspirations of smallholder farmers and artisanal fishermen and to the sustainability of the credit arrangements?
- What socio-economic factors influence accessibility to credit by small farmers and artisanal fishermen?
- Has credit got any potential impact in increasing incomes and improving livelihood of the credit users?

1.7 Significance of the Study

The study will provide useful information on the status of smallholder farmers and artisanal fishermen in accessing credit from formal and quasi-formal credit facilities. This information is vital for policy makers in taking appropriate actions toward facilitating the establishment of comprehensive and sustainable financial institutions for the development of agriculture and rural sectors. The study results will also benefit the development partners and civil society organisations involved in the provision of credit facilities to small farmers and rural micro- enterprise sector in modifying the lending procedures and conditions to better serve the specific credit and savings needs of their clients. Moreover, it is also hoped that the study will highlight on the possible link between credit use and increase in income and more importantly on its contribution to poverty alleviation.

1.8 Limitations of the Study

The study was based on the assumption that the sampled farmers and fishermen were a fair representation of the rest of farmers and fishermen because of their homogeneous characteristics in cultural and socio-economic status.

Due to the fact that most households do not keep records, the accuracy of most of the data collected is depended on individual's ability to recall. However, it is believed that the data obtained provide a useful basis of information for making recommendations to improve access to credit by the majority rural poor and in the enhancement of the effectiveness and efficiency of the credit delivery and recovery mechanisms of various credit institutions and micro- credit programmes.

1.9 Organisation of the Study Report

The report has six chapters. Chapter one covers the general introduction, poverty status and Vision 2020 for Zanzibar, the research problem, study objectives, study hypotheses, research questions, significance of the study and study limitations. Chapter two highlights on the situation of formal and quasi-formal credit sources in Zanzibar. Chapter three reviews the literature which is relevant to the study topic. Chapter four describes the methodology used in the study such as data collection methods and sources and methods of data analysis. In chapter five, field results on the demographic and socio-economic characteristic of regandents and the determinants of access to credit in the study area are discussed with highlights on the linkage of credit use to poverty alleviation. Chapter six gives the conclusion and recommendations for the promotion of effective credit services for the poor small- scale farmers, artisanal fishermen and the entire micro-enterprise sector. Areas for further research work are also suggested and explanations given on how the report will be disseminated to the public.

2. SITUATION OF FORMAL AND QUASI- FORMAL CREDIT SOURCES IN ZANZIBAR

2.1 Formal Credit Sources

Despite the financial sector reforms, Zanzibar still has a limited number of bank establishments. The formal banking sector consists only of the Bank of Tanzania (BOT) and three commercial banks namely National Bank of Commerce (NBC) Limited, The People's Bank of Zanzibar and The Tanzania Postal Bank. Generally, the lending rules and procedures of these commercial banks exclude small farmers who basically farm on non-secured lands and possess no tangible assets to offer as collateral and security for bank loans.

Moreover, commercial banks regard farming and fishing as the most risky investment areas and avoid them in a bid to reduce loan transaction costs and raise their profitability. Due to this fact, the NBC Limited caters only for the commercial sector of the economy and does not lend to farmers and fishermen. The People's Bank of Zanzibar, which still remains wholly state-owned and controlled by the Revolutionary Government of Zanzibar, also has no credit line for farmers and fishermen and most of its lending activities are directed to the commercial sectors, government departments and parastatals.

The Tanzania Postal Bank, which started its operations in Zanzibar in April 2000, is only confined in the Zanzibar town areas and has not yet established outreach links to Pemba and rural areas of Unguja islands. The credit policy of this bank is to provide short-term credits to micro-enterprises repayable within a period not exceeding 12 months. Farmers and fishermen whose credit needs are mostly of medium and long-term nature are not covered by this bank.

The reluctance of commercial banks to lend to farmers and fishermen is influenced by the fact that these groups are numerous and widely dispersed geographically, they require small amount of loans which are costly to administer and that farming and fishing activities are high risky areas for investments because of their susceptibility to weather and external shocks.

These groups also are unable to offer collateral, they possess nil or low equity, weak project design, and have little management experience and poor financial controls.

2.2 Quasi- Formal Credit Sources

Quasi-formal credit is that which is provided by the government or non-governmental organisations and is meant to fill the gaps in credit delivery that are not addressed by formal and non-formal credit sources. Most countries in the developing countries, including Tanzania, have introduced quasi- formal credit arrangements in an attempt to catalyze economic development for poverty reduction. In Zanzibar a good number of these credit organizations exists, all having well defined target groups and scope of operations. Those visited for this study work are profiled in annex 2.

The credit programmes studied were found to have the following characteristics:

First, they are not comprehensive in their operations in the sense that they all have specific target groups based on sex, age, and socio-economic status and aim to promote specific type of technologies, such as dairy farming, poultry keeping, vegetable production, fishing, hand crafting and petty trading.

Second, they mostly serve the urban and peri-urban clients for easy management of loans and reducing risks.

Third, they typically offer small, short-term capital loans for periods of up to one year.

Fourth, interest rates vary widely and are highly concessionary.

Fifth, they concentrate on financing micro-enterprises that have high turnover and that generate regular income flows.

Sixth, most deal with the disbursement of loans and not mobilisation of savings.

Seventh, political and government interferences in the operations and allocation of credit is high particularly for the government owned schemes or programmes.

Eighth, they have sustainability problems because they fail to cover their costs and to recover their loans.

Ninth, most demand no collateral/security for the loans offered.

Tenth, most have poor loan follow-up systems, poor appraisal systems and lack capacity to administer credit; and eleventh they largely depend on external sources for loanable funds, which is difficult to sustain.

2.3 Loan Repayment Performance

Most of the schemes or programmes that are involved in the provision of credit services to smallholder farmers and micro-enterprise sector in Zanzibar have experienced poor repayment performance. Main reasons for this situation include:

- **Attitude of people towards loans from government sources:** There are wrong perceptions that once loans are provided by government and its affiliations there is no need to repay them resulting from time practices by the government to provide loans without pressing for repayment. There are misconceptions that these are grants and that the government use of the word loan is to prevent many people from requesting such services. Frequent pardoning of government borrowers to repay their loans for political reasons has made the situation even much worse.
- **Poor loan appraisal systems:** Different credit schemes or programmes visited have different loan conditions and appraisal procedures some of which are inadequate thus allowing uneconomic enterprises to be financed. Also some people managed to secure loans and used them for other unproductive purposes other than the loan agreements leading to failure by borrowers to raise sufficient funds to meet repayment obligations.
- **Weak capacity:** Many borrowers have weak management capacity and lack technical skills in production, marketing and financial control all of which lead to difficulties in servicing their loans.
- **Marketing problems:** Borrowers face severe marketing problems for their products particularly during peak production seasons and lack processing skills and facilities. The perishable products, such as agricultural and fish products, and poor transportation systems all contribute to low product prices with negative consequences to loan repayment performances.
- **Enterprise failures due to technical reasons and natural disasters:** Technical reasons such as breakdown of machines, wrong breeds of animals, poor quality seeds, crop failures due to drought, floods or outbreak of pests and diseases, death of livestock or sinking of fishing boats contribute towards failure to repay loans.
- **Poor loan follow-up systems:** Most credit schemes or programmes have poor loan follow-up systems, have no regular monitoring visits to borrowers to provide advice and collection of loan repayments. Borrowers are left to decide when to visit project offices for making

payments. This allows some borrowers to skip repayment schedules and others to completely default.

- **Lack of collateral/security:** Most of the loans offered by the visited credit schemes or programmes were provided without collateral or security. The explanation is that farmers and micro-entrepreneurs are poor and have no tangible assets for collateral. Majority of farmers cultivate on non-secured lands that cannot be offered as collateral. Lack of security to loans does not encourage accountability on borrowers since they have nothing to lose by not fulfilling their loan contractual agreements.

3. LITERATURE REVIEW

3.1 Financial Markets in Low Income Countries (LICs)

Financial Markets in Low Income Countries are characterized by fragmentations and imperfect market conditions. Ghate (1992) categorises the market into two forms: *formal and informal* financial markets. He defines formal financial markets as those financial market activities that are controlled by government, which are largely urban-oriented in terms of distribution of bank branches and the concentration of deposits and lending activities. Informal financial markets are defined as activities of various financial intermediaries ranging from farmers, money-lenders, friends, relatives, shopkeepers, merchants, traders, and Rotating Savings and Credit Associations (ROSCAs). Quasi–formal financial intermediaries are therefore falling between these two continuums and could include credit unions, village banks and various forms of credit schemes run by government or non-governmental organisations.

The formal and informal financial systems co-exist and operate side by side with one another (Kessler *et al*, 1985). The reality of operations of the two forms of market, however, is more complex and the dividing line is not so clear-cut (Chandavarkar, 1987). Zeller (1994) observes that each segment of the financial market provides credit services that differ from each other with respect to target group, loan duration, amount of loan, its use, interest rates and transaction costs.

Formal institutions are more inclined to provide its services to the public sector, upper-income households, large-scale enterprises and non-agricultural activities, while the informal financial institutions tend to match their products and services to the characteristics and demand of the predominantly private, low-income, small-scale and rural population of most developing countries (Germidis, Kessler and Meghir 1991). The coexistence of informal finance serving the latter market can be seen as "healthy and dynamic, permitting more people to participate in financial markets" (Von Pischke 1991).

Literature has viewed the informal sector as the consequence of policy distortions and emphasised the negative consequences of financial dualism for allocative efficiency, equity and economic development (Taylor, 1983, Roe 1990). However, the recent development have seen the informal financial institutions to have a comparative advantage in some market segments due to its ability to enhance efficiency in resource allocation by mobilizing household savings and financing small business activities that are beyond the reach of the formal system (Ghate 1988 and Adams 1992).

In Tanzania, like other LICs, the financial market is a complex mix of formal, quasi-formal and informal lending activities. The financial markets operate not according to market forces, a condition that discourages domestic savings and hence a need for support to the poor and vulnerable rural producers (Mchujuko 1991).

3.2 The Role of Credit in Household Economy

Most LICs' economies are agriculturally based and thus credit is as a major component of agricultural and rural development programmes and also considered as an important instrument in helping small farmers and micro-entrepreneurs increase their income. Numerous programmes have been established to increase the volume of credit to serve this purpose.

Advocates of credit as a poverty alleviation measure (see, e.g Howse 1978, Adam *et.al* 1984, Boomgard 1989, and Mutua 1996) contend that limited availability of credit services has undermined rural micro-enterprise activities due to lack of capital for investment and has prevented farmers to adopt improved farming practices because of their inability to purchase the necessary inputs required in the production. Low productivity in agriculture, livestock and fishing is generally attributed to the use of poor technology resulting from limited access to credit. Moreover, it is perceived that inadequate credit facilities has to a large extent discouraged the entry of youth to the farming and fishing sectors, and leave majority of them unemployed because of lack of investment capital and incentive.

Fatchamps (1997) notes that with insufficient funds, farmers and fishers cannot invest in new equipment and machinery, and it becomes difficult to reach out to new markets and products. He further contends that without financial assistance, small farmers and artisanal fishermen cannot cope with temporary cash flow problems, and are thus slowed down in their desire to innovate and expand. The general perception is that access to external finance is critical for poor entrepreneurs, who may never have funds proportional to their ambitions.

Gilla and Lassalle (1994) show that rapid development reached in Europe and Asia was highly facilitated by the availability of credit to the majority. Countries like India, Indonesia, Burma and even China were reported to have recorded a good pace of development after managing to solve problems of credit availability for the majority.

However, Gulli and Berger (1999) point out that access to credit is important for micro-enterprise development but not necessarily the main constraint. This view is shared by Von Pischke (1992), who observed that lack of funds is not the most important problem of small farmers and micro-entrepreneurs noting that product prices, poor education system and training, low output, land tenure, modern input costs and availability and risk turn out to be more important factors limiting small farmers and micro- enterprise development.

The access to credit by small producers in many African countries is rather disappointing. Very few small farmers and rural micro-entrepreneurs have been integrated into formal financial markets and many do not use credit or if they do, they continue to borrow from informal market lenders (Adams, 1984). Gonzalez-Vega (1983) reports that only a small fraction of farmers in LICs have received formal loans. It is estimated that only 15 percent of farmers in Asia and Latin America and just five percent in Africa are financed through formal credit sources (Gonzalez-Vega 1983, Braverman and Huppi, 1991).

In a survey carried out in rural Zanzibar, Krain (1998) observed that credit from the formal financial sources meets only a small portion of the total credit demand of the agricultural sector. He found out that credit from the formal financial sources accounted for only 9.9 percent of the total credit available to the agricultural sector. The remaining 90.1 percent is from the informal financial sources comprising mainly loans from relatives, neighbours, friends, rotational savings groups and one's superior at work ("boss") and other sources.

3.3 Access to Formal Credit by Small Farmers and Micro-enterprises

The majority of people in LICs, do not have access to banks and other formal financial institutions. The development and commercial banks view the small-scale and micro-entrepreneurs as risk borrowers and extending loans to them is to cut down their profitability in the transactions and to incur irrecoverable losses to the banks (Levitsky 1993). Small borrowers are regarded riskier than large ones for reasons often related to the difficulty in obtaining accurate information about them. Banks associate small and micro- enterprises to high transaction costs because they are widely dispersed geographically and their inaccessibility. Illiteracy and unreliable income of small borrowers are also regarded as reasons for the reluctance of banks to lend to them.

Bottomley (1975) argues that the ceiling on interest rates also imposes a considerable constraint for banks to advance small loans since they prevent banks to incorporate the additional administrative costs involved in processing small loans and not also permit banks to offer risk-adjusted interest rates. Thus banks tend to advance loans only to those who offer lower risk and better security, which implies that only rich and wealthy people receive loans at cheaper rates, leaving the small and poor borrowers to seek loans from the unorganised credit market.

Mchujuko (1991) reports that in Tanzania, small farmers, though not officially stipulated in various bank lending policies, are discouraged by the institutional framework to individually apply for loans from the banking system. He notes the situation as perpetuated by cumbersome and costly tender formalities and sometimes necessitating client to tip a bank official in order for his loan application to be processed.

Banks also link credit to possession of immovable assets which are taken as loan security. Collateral is considered as an important part in the lending process. Mutua (1994) argues that since lender takes calculated risk, borrowers must demonstrate their good faith by showing that they too have something at stake in the deal.

Farmers and rural entrepreneurs in Tanzania, particularly women, are much at a disadvantage as far as their ability in offering collateral for loans is concerned (Omar and Shaidi, 1992). Poor farmers lack title deeds for the pieces of land they own and as a result they do not qualify for bank loans with which they can expand their businesses and improve their incomes. Tibaijuka *et al.* (1989) concede that insecurity in land tenure in Tanzania reduces the innovativeness and willingness of poor smallholders to invest and as a consequence has limited their chances to receive financial support from formal financial institutions.

Reliance on collateral by banks often, however, excludes many otherwise creditworthy small-scale borrowers in many African countries where land titles are not well documented or readily transferable (Steel *et al* 1997).

Discrimination of women in formal financial market is also widely spoken (FAO, 1984, Otero and Downing, 1989). It is argued that women's lack of control over economic resources and the nature of their economic activities restrict their access to formal credit more than men's. Other factors pointed out as constrains for women in accessing credit are related to institutional requirements, cultural and social norms and to the type of reproductive activities that women are engaged. McKee (1989) observes that gender-based credit constraints, such as limited education, inferior legal status and unpaid reproductive responsibilities aggravate the problems for women when operating small businesses.

3.4 The Experience of Micro- credit Initiatives in LICs

The inability and reluctance of formal banking sector (private and state-controlled banks) to serve the small borrowers' credit and saving needs, many governments of LICs and development partners have shifted attention to quasi-formal credit arrangements. Donor-funded development projects, state–controlled credit schemes and various NGOs have over the recent years increased their role in the provision of credit to small scale-farmers and rural micro- entrepreneurs. Billions of dollars are spent each year in efforts to improve terms and conditions under which small-scale producers obtain access to credit and financial services.

The majority of these efforts focus on ways of extending institutional credit schemes to small farmers and rural micro–entrepreneurs, typically aiming to provide credit to finance agricultural inputs and other micro–enterprise investments needs. Adams and Von Pischke (1992) report a number of assumptions behind the move to establish targeted credit schemes. Some of the assumptions include: the target group is too poor to adopt new technologies without loans and is also too poor to save, operators of small farms are thought to be very much in need of training and technical assistance in order to progress, informal finance plays little or no positive developmental role and that most of the target groups have 'credit needs' that commercial bankers refuse to fulfil for reasons that are neither commercial nor economic and that many of the small borrowers have good chances of improving their status and to obtain conventional bank loans.

In Tanzania, the record and image of small targeted credit programmes, have not been very impressive. The majority of small farmers and rural producers have not benefited from this credit expansion even when programmes are specifically oriented to them (Mchujuko 1991, Krain 1998 and Mohamed, 1999). Small farmers and rural producers have continued to rely mainly on their own resources occasionally supplemented by credit from traditional sources (Mohamed, 1999).

Even targeted credit schemes have shortcomings as far as financing agriculture and rural micro–enterprises is concerned. Krain (1998) observes that targeted credit schemes offer only small short-term working capital loans and are limited in scope mostly serving the urban and peri-urban clients. Further, he observes that credit schemes usually concentrate on financing micro-enterprises that have high turn over and generate regular income flows, unlike in agriculture where the income flow is seasonal and profitability and turn over is low.

Furthermore, many small credit programmes tend to concentrate primarily on "productive" credit and neither offer easy-access consumption loans or flexible savings facilities which would contribute to poorer households coping strategies (Hulme and Mosley, 1996). Political influences (particularly in state-owned credit schemes) combined with problems of low loan recovery and unrealistic interest rates charged, to a large extent, limit the effectiveness of these credit schemes as are left to rely on external sources of loanable funds which are difficult to sustain (Krain op.cit). Adams and Von Pischke note that most of credit programmes that extend loans to farmers and micro-enterprises lost money, and collapsed or were sustained only by recapitalisation.

Zeller (2001) notes that despite the big effort by the governments of LICs and foreign donor agencies in establishing micro-credit schemes, it is estimated that only two percent of the population in the developing countries have accessed credit from these schemes.

3.5 Linkage of Credit to Poverty Alleviation

Many attempts to evaluate the impact of loans on borrowers turned out to be notoriously difficult, ambitious and misleading (Adams and Von Pischke 1980). Establishing the casual role to credit is complicated by household economics, which involve multiple sources of incomes. Feder *et al.,* (1990) point out that the difficulties in getting the data and the intrinsic 'fungibility' of money often obscures an exact link between a loan and changes in a household's situation. Thus studies that compared changes in economic activities between individuals with loans and those without loans encountered serious methodological problems. However, it should be noted that changes to both individual enterprises and local economies occur gradually and can be structural and be sustained over the long term. It is also cumulative rather than immediately evident.

Results from several studies attempting to measure the impact have given rise to debates over the effects and value of credit. A survey conducted by Khandker (1998) to three major micro-credit programmes in Bangladesh revealed an 18 percent increase in household consumption from micro-credit borrowing by women, and an 11 percent increase in consumption when men are the borrowers. He suggests that 5 percent of participating families can escape poverty each year because of the increased consumption resulting from micro credit. Other impact results of micro credit reported by Khandker are consumption smoothing, employment smothering and improved child nutrition. Khandker warns, however, that these effects will only be sustainable only if micro-credit is targeted at areas and economic activities with high growth potential.

On a more similar situation, Morduch (1998) examines the impact of micro-credit and results show no increase in consumption among micro-credit borrowers but find beneficial impacts through consumption smoothing among borrowing households, as well as an increased ability to diversify employment. These effects obviously reduce the vulnerability of borrowing households compared with non-borrowing households.

Hulme and Mosley (1996) note that credit gives poor people a means of investing and breaking out of the "vicious circle" of poverty. He notes that credit has the potential of improving credit user's income and savings and as consequence enhance investment and reinforce high incomes. This argument is highly supported by the findings of Kashuliza *et al*. (1998) who observe that income of the credit users are significantly higher than the income of non-credit users in the Southern highlands areas of Tanzania.

4. METHODOLOGY FOR ANALYSING THE DETERMINANTS OF ACCESS TO CREDIT AND IMPACT

4.1 Data Collection and Sources

Data collection was largely through interviews, both semi and formal structured. The former was conducted through key informants from various organisations and government institutions. It aimed at catching up their views and experiences and accessing the various unpublished documents. The formal structured interviews involved a total of 300 households for the purpose of identifying key socio-economic factors that influence credit accessibility among rural population. These respondents were randomly selected from 12 randomly selected villages of Unguja and Pemba. Villages included: Nungwi, Kinyasini, Kiboje, Mtende, Michamvi, and Dunga on Unguja and Kisiwani, Pujini, Furaha, Mwambe, Mkanyageni, Kiuyu Maziwa ng'ombe on Pemba. The information obtained was used in the logistic regression and t-test analysis in order to isolate socio-economic factors that influence credit accessibility by smallholder farmers and rural producers and assess impact of credit use.

In the t-test analysis, the respondents were categorised in two classes in order to assess the likely impact of credit use. The classes included borrowers and non- borrowers involved in poultry keeping, dairy farming and fishing activities. The borrowers were those who have accessed credit from formal and quasi-formal financial institution and non-borrowers were those who have never accessed credit from these sources. The underlying assumption in the two categories is that the economic status of both groups was comparable before receiving loans. The comparison of borrowers and non-borrowers under three sector enterprises were taken as the basis on which to evaluate the likely impact of credit intervention in the farming and fishing sub-sectors.

4.2 Data Analysis

(a) Logistic regression model was used to determine factors that influence an individual's ability to secure/access loan from formal and quasi-formal financial institutions. Logistic regression is useful for this kind of a situation where prediction of the presence or absence of an outcome based on values of a set of predictor variables is needed. This model is similar to a linear regression model but it is suited to models where the dependent variable is dichotomous. The logistic regression coefficient can be used to estimate adjusted odds ratios for each of the independent variables in the model.

In this analysis, the outcome of the response: *have an access to credit or not* does not matter. The major interest is the likelihood or probability of the outcome. The binary response in this study is whether the respondent has accessed credit from formal or quasi-formal sources ("success") or has not accessed credit from formal or quasi-formal sources during his/her life time ("Failure").

If Y is the random variable (dichotomous), it can then be assumed that Y_i takes on the values 0 or 1, where 0 denotes the non-occuoccurrence of the event in question and 1 denotes the occurrence. If X_1,......., X_p are characteristics to be related to occurrence of this outcome, then the logistic model specifies that the conditional probability of event (i.e., that Y = 1) given the values of X_1,.........,X_p is as follows:

$$P(Y) = 1/[1 + \exp - (\alpha - \Sigma\beta_{ii} X_{ii})$$

In order to linearize the right hand side a logit transformation was applied by taking logarithm of both sides, therefore we have:

$$\text{Logit } P(Y) = \alpha + \Sigma\beta_{ii} X_{ii}$$

Where as;

$$Y_i = \begin{cases} 1 \text{ if success (respondent obtained a loan from formal or quasi- formal financial sources)} \\ 0 \text{ if failure (respondent did not obtain a loan from formal or quasi-formal financial sources)} \end{cases}$$

α = Constant term
X_i = Independent variables (Socio-economic factors)
β_i = Logistic coefficients for the independent variables
E_t = Error term

For details on the logistic models see Maddala (1983).

(b) T-test was applied to compare borrowers and non-borrowers and t-value was calculated as:

$$t = \frac{X_1 - X_2}{\sqrt{S_1^2/N_1 + S_2^2/N_2}}$$

Where as,

X_1 and X_2 are sample means of alternative groups

S_1^2 and S_2^2 are sample variances for the two groups

N_1 and N_2 are sample sizes for the compared groups

For details on Mean difference T- test see Norusis (1988).

4.3 Data Processing and Analysis

Data were scrutinised, coded and analysed using STATA 7 computer programme where statistical parameters such as means and frequencies were determined. Later, some selected predictors were regressed against the dependent variable (success in accessing credit or failure to access credit) to identify the predictors which highly influenced the observed situation of some individuals failing to access credit. The variables specified in the model are: age, number of years of formal education, gender, farm size, land tenurial status, income level, location, main occupation, land title deed and credit awareness. Some variables earlier included in the model had to be dropped due to high correlations with other variables and also due to their weak relationships with the dependant variable.

T-test was run to compare borrowers and non-borrowers on their differences on household labour size, farm size, total annual income, and value of productive assets.

5. EMPIRICAL RESULTS

5.1 Demographic and Socio-economic Characteristics

5.1.1 Age and Gender of the Respondents

The results of the household survey show that the mean age of the household head was 42 years with about 17 years of working experience in the main occupational activities. The mean age for male respondent was 42.2 (n = 255) and female was 42.4 (n = 45). With age, respondents were grouped into four categories: those who are below 30 years of age (12 percent); those between 31 and 40 years (38 percent); those between 41 and 50 (29 percent) and those above 50 (21 percent). The results show that older people are mostly represented in crop farming occupational category than in fishing and livestock keeping.

Of the total number of household heads (300), 85 percent were male and 15 percent were female. Majority of female respondents (62 percent) were found engaged in crop farming as their main occupational activity, 38 percent were in livestock keeping and no one reported to be engaged in fishing. This could be due to the nature of the work in fishing, which is more demanding in terms of labour. About 256 (85 percent) of the sample were married, 94 percent male compared to 36 percent married women.

5.1.2 Main Occupational Activities

The survey focused on three main occupational activities into which respondents were grouped: crop farming, livestock keeping and fishing. These are, however, not mutually exclusive and exhaustive, as a good number of respondents simultaneously engaged in two or more occupations in varying degrees. Out of 300 household heads, 46 percent reported crop farming as their main occupational activity and the main source of income, while 30 percent and 24 percent reported livestock keeping and fishing respectively as their main occupations and major sources of income.

5.1.3 Household Size and Labour

On average the sampled households had about seven family members with an average of two (2) members working with the head of household in the main occupational activity. About 67 percent of the surveyed households had family size ranging from five to nine members, while 18 percent had a family size ranging from one to four and 15 percent had above nine members. Most of the crop farming households (66 percent, n = 137) had only one member working on the farm, 32 percent had between two to four members and only two percent had members ranging from four to six working on the farm. With regard to livestock keeping 79 percent (n = 90) households had only one family member attending the livestock, while 18 percent had between two and four and only three percent had between four and six members attending the livestock. In fishing, 90 percent (n = 73) had only one member engaged in fishing activity, eight percent had between two and four and only two percent had between four and six members.

5.1.4 Farm Size and Land Tenurial Status

The farm size, was expressed in terms of amount of land actually cultivated in any farming season, and 220 (73 percent) were found to work on pieces of land ranging between one and three acres, 53 (18 percent) worked on pieces of land ranging between three to six acres and only three (one percent) worked on more than six acres plots. The average farm size in the sampled households is 2.8 acres. About 24 (eight percent) of the respondents reported to have no land. Majority of those who work on land (85 percent, n = 277) do not have title deeds to the land they use and own.

The land tenure system is rather complex as evidenced by the survey results. About 31 percent (n = 277) indicated that they have borrowed the land from their neighbours, relatives and government and are only allowed to grow annual crops and strictly not allowed to grow tree (perennial) crops. About 19 percent cultivate on inherited pieces of land and 18 percent reported to use family plots to grow some food crops with limited tenurial security. 16 percent cultivate on 3-acre plots and again 16 percent indicated to have bought the land they use. Of those who have bought the land 73 percent (n = 44) have land title deeds.

5.1.5 Educational Status of Respondents

Respondents were grouped into four categories with respect to educational background. Those who have not had formal education (23 percent); those with primary education (38 percent); and 39 percent of the respondents had attained secondary education or post-secondary education. The survey found that women without formal education out-number men in the same category by a ratio of 2:1. In addition, the proportion of men (39 percent) who had acquired some primary education was substantially higher than that of women (29 percent). With secondary and post-secondary education the proportion of men (39 percent) and women (38 percent) is at par.

5.1.6 Annual Income of the Respondents

The average annual income of the respondent was Tshs. 479,360. About, 81 percent (n = 137) of crop farmers were found to earn less than Tshs. 400,000 per annum and only 19 percent earned between Tshs. 400,000 and 800,000. Livestock keepers were found comparatively better to crop farmers with about 56 percent (n = 90) earning between Tshs 400,000 and 800,000 and 16 percent earning between Tshs. 800,000 and 1,200,000. About 29 percent of the livestock keepers were earning less than Tshs. 400,000. Fishers were also better off compared to crop farmers with about 53 percent (n = 73) earning between Tshs. 400,000 and 800,000, 15 percent earning between Tshs. 800,000 and 1,200,000 and seven percent earning above Tshs. 1,200,000. About 25 percent of fishers were found to earn less than Tshs. 400,000. These results confirm those of Mkenda (2001) that crop farmers are poorer than any other occupational group in rural Zanzibar.

5.1.7 Use of Bank for Saving and Borrowing

The survey results show that few rural people actually make use of bank for saving and borrowing. The survey found that only 35 percent (n = 300) of the respondents had accounts with bank. The proportion of crop farmers who had bank account (23 percent) is smaller than that of livestock keepers (58 percent) and fishers (36 percent). In the sample no respondent has obtained credit from the bank and those reported to have obtained credit got it from quasi-formal financial institutions. These results confirm that the agricultural sector (crops, livestock and fisheries) neither depends on formal financing nor benefits from its operations.

5.1.8 Value of Productive Assets of Respondents

The mean assets value of the productive assets owned by the respondents was Tshs. 317,800 with borrowers having higher average assets values of Tshs. 593,830 than non-borrowers which was only Tshs. 222,489. Crop farmers were found to possess low value productive assets with majority of them (98 percent, (n = 137) owning productive assets valued at less than Tshs. 200,000. Only three (two percent) of crop farmers were having assets valued at a range of Tshs. 200,000 to 400,000. Many livestock keepers (38 percent, n = 90) were found owning productive assets (mainly cattle and animal houses) valued at a range of Tshs. 200,000 to 400,000. About 26 (29 percent) livestock keepers were found owning productive assets valued at less than Tshs. 200,000; while 23 (26 percent) were in the range of Tshs. 400,000 to 800,000 and only seven (eight percent) owned productive assets valued at over Tshs. 800,000.

In fishing, 22 (30 percent) respondents owned productive assets valued at above Tshs. 800,000, while 18 (25 percent) had assets valued at less than 200,000; 17 (23 percent) belong to the range of Tshs. 200,000 to 400,000 and 16 (22 percent) belong to a range of Tshs. 400,000 to 800,000. Compared to other occupational activities fishing requires heavy investment in terms of acquiring fishing gears and equipment, which are more costly.

5.1.9 Access to Credit

About 77 (26 percent) of the respondents have accessed loans from quasi-formal institutions. The average amount received as a loan was Tshs. 782,162.20. About 50 percent received loans of less than Tshs. 500,000; 25 percent obtained loans in the range of Tshs. 500,000 to 1,000,000; 12 percent obtained loans ranging between Tshs. 1,000,000 to 1,500,000. Only 10 (13 percent) of the respondents had obtained loans over Tshs. 1,500,000.

The majority of those who have accessed credit (61 percent) obtained their loans between two and five years ago, 30 percent obtained their loans more than five years ago and only nine percent got their loans in the past two years. Of those who accessed credit only 17 percent were crop farmers, 58 percent were livestock keepers and 25percent were fishers. On gender aspect, only 17 (22%) of those who accessed credit were women.

5.2 Determinants of Access to Formal and Quasi- formal Credit in Zanzibar

Logistic regression analysis was conducted to ascertain factors that contribute significantly to credit accessibility by some respondents and not others. Access to credit variable (*whether an individual has accessed credit or not*) was regressed on age, number of years of formal education, gender, farm size, land tenurial status, income level, location, marital status, main occupation, land title deeds and credit awareness.

Of those factors, only levels of income, gender, age, number of years of formal education, credit awareness were found to influence an individual chances to access credit from formal and quasi- formal credit sources. The results of the logistic regression analysis are shown in Table 1.

Age

The results indicate a negative but significant relationship between credit access and age. This finding suggests that older people have poor chances to access credit from formal and quasi-formal financial institutions. This relationship was expected because the older people are always risks averse and would not like to enter into debt obligations. In addition, the older people find it difficult to understand the operations, and conditions of formal and quasi-formal financial institutions and are also afraid of loan conditions.

Gender

Gender is also significant and had a negative coefficient, implying that women had low access to formal and quasi-formal credit compared to men. It is evident from the results that despite the presence of some targeted credit schemes in favour of women, they still face credit access difficulties compared to men. The variable marital status was found not significant, implying that being married or single does not matter for accessing credit from formal and quasi- formal financial institutions.

Level/Years of Education

Years of formal education were found significant variable in that it determines ones chances to access formal and quasi-formal credit. However, the negative coefficient was not expected for this variable, as it was believed that chances to access credit from formal and quasi-formal financial institutions improve with increase in levels of education. Nevertheless, the implications of these results imply that the available credit services from the small credit schemes targeted the poor and vulnerable people in the rural areas and the majority of those who had benefited had low education levels.

Income Levels

The relationship between income levels and access to credit was also significant but the coefficient was negative implying that those with low income had better chances to access credit from formal and quasi-formal financial institutions. The negative coefficient was not expected because most of the credit that was made available to farmers and artisanal fishermen was from quasi-formal financial institutions, targeted to the real poor (those with low income). In addition, most of the available credit schemes had eligibility criteria favouring people with relatively low income in rural areas. Also, low loan ceiling for credit-assisted activities was a disincentive to comparably better off individuals to ask for loans from these credit schemes.

Awareness

Awareness on credit availability had a positive significant relationship with access to credit, implying that those individuals who are aware of the availability of credit services have better chances to access credit than those who are not aware.

Farm Size

Farm size related positively to the chances to access credit because the owner of the large farm would usually have a higher capital requirement and this could entice owner to look for external financing opportunities. However, farm size was not a significant variable in the analysed sample. Land tenurial status and having land title deeds were also not significant variables. These results were expected since all borrowers (those who have accessed credit) obtained their loans from quasi- formal financial institutions where no collateral was asked and issues of land tenure and ownership were not considered in loan approval and disbursement processes.

Occupational Activity

The main occupational activity was expected to be significant because it was thought that type of activity and investment requirements could influence individual decisions to request for additional money and hence access to credit. However, the coefficient for the main occupation was not significant.

Location

Location of an individual (whether living in Unguja or Pemba) was also thought to be an influencing factor in credit access, but the regression results show that there is no significant relationship between location and ones' chances to access credit from formal and quasi-formal financial institutions. In a related study, Kashuliza *et al* (1998) pointed out that gender, the level of education and awareness of farmers on the available credit facilities in their areas are important factors in determining access to credit.

Table 1: Results of Logit Analysis on Credit Accessibility in Rural Zanzibar, 2000

Variable	B Statistic	Standard Error	Significance
Age	- 0.1585464*	0.0754659	0.037
Number of years of formal education	- 0.01004*	0.0049231	0.042
Location	- 0.0476971	0.0356125	0.182
Gender	- 0.2669831**	0.063019	0.001
Marital status	0.012031	0.03006	0.689
Main occupation	- 0.002585	0.025479	0.919
Farm size	0.0094489	0.0157805	0.550
Land title deed	0.0201518	0.0149685	0.179
Land tenure status	- 0.0112845	0.120405	0.349
Annual income earned	- 0.3057918**	0.0322302	0.001
Awareness on credit availability	0.3044144**	0.0411209	0.001
Constant	6.2888327**	0.5249399	0.001
Statistics:			
No. of observations	=	300	
F (11, 288)	=	35.19	
Prob > F	=	0.0000	
R – squared	=	0.5934	
Adj. R-squared	=	0.5751	

Source: Field survey, 2000
Note: * Significance at 5%, ** Significance at 1%

5.3 The Impact of Credit Use

T-test was run to determine the differences between borrowers and non-borrowers. Comparison was made on variables: household labour size, farm size, income and value of productive assets. Results of the Mean significant T-test indicate that there are significant differences between credit borrowers and non-borrowers in relation to income level (p £ 0.001) and value of productive assets (p £ 0.001). See Table .2 below.

The T-test results show that the income and assets values of borrowers are almost twice that of non-borrowers. Nevertheless, lack of baseline data makes it difficult to ascertain with full certainty that the observed differences are due to the loans obtained by the borrowers. Also it is appreciated that establishing a casual role to credit is complex due to multiple sources of income of households and the problem of reliability of data and the fungibility of credit funds. However, it was evident that majority of those who accessed credit (67 percent, n = 77) were individuals earning income less than Tshs 800,000 per annum. The implication is that the increase in income of borrowers who belonged to the low-income groups might have been caused by the credit facility. In addition, much of the assets that borrowers had were the ones bought through credit and hence the observed differences in assets values between borrowers and non-borrowers could be attributed to the credit facility.

Furthermore, the fact that 61 percent of the borrowers obtained their loans between two and five years ago and that 30 percent obtained loans more than five years ago show that with time credit had impacted positively on income and assets value of borrowers.

Therefore, the T-test results showing significantly higher annual income levels and productive assets values for credit users have the implications that the use of credit has a positive role in poverty alleviation. Credit enables the producers to acquire more and efficient productive assets and hence contributes to the increase in productivity and incomes and thereby contributes to poverty alleviation.

The T-test analysis has shown no credit impact on household labour size and farm size. This implies that credit provided had not been able to create an additional employment opportunity to the household members or that the benefited households had limitations to the household labour supply available. Similarly, with the farm size, the implication is that the households may not have accumulated enough amount of money to enable them acquire additional land through buying or that households were faced with problems of land shortages for expanding their farms, which is a common problem in the islands of Zanzibar.

Table 2: T-test Results of Borrowers versus Non-borrowers in a Selected Study Population of Rural Zanzibar

Variable name	Mean borrowers	Mean Non-borrowers	T-value	P-value
Household labour size (No)	2	2	- 0.2713	0.7863
Farm size (Acres)	2.8	2.7	0.5527	0.5809
Annual income earned (Tshs.)	747,077.90	386,923.80	12.5142	0.001*
Value of productive assets (Tshs.)	593,831.20	222,4888.80	6.9956	0.001*

Source: Field survey, 2000
Note: * Significance at 1%

5.4 Qualitative Assessment of Some Important Credit Aspects

Some qualitative information was also collected and the responses of the respondents on issues raised are summarized as follows:

5.4.1 Attitudes of Respondents Towards Credit and Interest

Out of THE 300 respondents, 276 (92 percent) showed a positive attitude to credit, pointing out that credit is a very essential element for increased production and that it enables the borrowers to get a working capital to start with or expand profitable enterprises and were ready to receive it if given an opportunity. However, about 24 (eight percent) of the respondents showed total reservations on credit from formal institutions arguing that conditions attached to such credits are difficult to meet and involve high risks of failing to repay, a situation which may lead to confiscation of borrowers' properties. This group of respondents, even after being given adequate clarifications by the interviewers showed reluctance to accept credit from formal financial institutions.

When asked about their opinions on the interest rates charged on the loan, 204 (69 percent) had no problem with interest rates and were prepared to accept credit charged interest. This group understood the fact that public institutions such as banks are operating with interest to cover their operational expenses and get some profit. 96 (31 percent) of the respondents were, however, very much against the use of interest claiming that interest is nothing but usury which is a condemned act in Islam and were not going to accept an interest charged loan.

5.4.2 Respondent's Opinion on Factors Limiting their Chances to Formal Credit

The study aimed at capturing respondents' views and opinion on factors which limit their chances to access credit from formal financial institutions. Five (5) factors were mentioned. The include lack of awareness (40 percent), difficult loan conditions (37 percent), long distance to travel to get credit services (five percent), cumbersome and difficult bureaucratic procedures (eight percent) and favouritism (10 percent).

5.4.3 Production Constraints

For further analysis, respondents were asked to identify the most important constraints limiting increased production in their main occupational activities. 127 (42 percent) of the respondents pointed at lack of capital as the main constraint. Marketing problem was mentioned by 59 (20 percent) of the respondents, while technical related problems (such as pests and diseases, lack of technical know-how, soil fertility and others) were mentioned by 68 (23 percent), weather related problem was indicated by 15 (five percent) respondents and about 31 (10 percent) claimed that vermin (thieves, wild and domesticated animals) to be their major problem.

5.4.4 Credit Impact on Household Income and Expenditure Pattern and Enterprise Operations

77 respondents who received loans were asked to register their views with regard to changes in their income and expenditure pattern and to the changes of their enterprise(s) operations after receiving loans. About 60 (78 percent) indicated that there was an increase in their income and expenditure levels and the operations of their enterprises expanded after loan. Whilst 15 (19 percent) indicated that no changes occurred and the remaining two (three percent) complained of declined performance in their income and expenditure levels as well as a decrease to their enterprise(s) operations.

5.4.5 Reasons for Borrowers Failing to Repay the Loans

Borrowers were also asked to indicate whether they were on arrears or have completed repaying their loans. 24 percent (n = 77) reported that they had completed repaying their loans in time and without difficulties while the remaining 76 percent were still in arrears and faced difficulties in servicing their loans. Reasons attributed to the delays and difficulties in loan repayment are summarised in Table 3.

Table 3: Reasons Rendering Borrowers to Fail to Repay their Loans

Reasons	No. of cases	Percentage
Enterprise failure	25	43
Natural disaster (eg drought, floods, pest diseases)	5	8
Distress consumption	7	12
Poor loan follow- up system	5	8
Marketing problems	17	29

Source: Field survey, 2000

The reasons given by respondents for the delays and difficulties they face in making repayments contradict the information they gave on performance of their incomes and expenditure patterns after loan. On one hand, they are proud that the credit has improved their welfare fearing that saying otherwise will jeopardize their future chances of getting more loans. On the other hand, they indicate several factors inhibiting their ability to repay loans in time with belief that contrary information may influence the credit staff to demand repayment of their loans. It is therefore important that information should be critically assessed to determine the impact of credit intervention. The situation is more complex because the recording system of most small borrowers is poor and can't be relied much. However, during the survey, it became evident that credit had some observable effect on income and assets values of the borrowers.

6. CONCLUDING REMARKS

6.1 Conclusions and Policy Implications

Overall, the study results suggest that farming and fishing sub-sectors in Zanzibar have limited access to credit services, a situation which has seriously constrained the agricultural and fisheries sub-sectors' development and to a large extent floundered attempts to alleviate poverty in the country. The study results indicate that both formal and quasi-formal credit institutions are inadequate facilities in meeting saving and credit needs of the farming and fishing communities. Commercial banks were found to have no credit lines for small borrowers and above all, most of the credit conditions are too difficult for poor small farmers and artisanal fishermen to meet. Commercial interest rates charged by the banks and collateral requirements largely restricted farmers and fishers from seeking loans from these sources.

The existing micro-credit programmes were also found to be inadequate. These programmes had limited scope and many were plagued by serious operational inefficiencies. Lending procedures, conditions, scope and target beneficiaries among different credit programmes differ significantly. While some of these programmes target their credit services to women, others were found to target unemployed youths and organised productive groups. Interest rates charged by these programmes also varied widely, mostly concessionary. Low loan recovery and interest rates have virtually led to gross operational inefficiencies of most of these small credit programmes, some of which have even collapsed thus escalating the problem of credit availability to the target beneficiaries.

These results conform with the first hypothesis of the study that smallholder farmers and artisanal fishermen of Zanzibar have limited access to financial services. The results also show that lending procedures and conditions influence small farmers and artisanal fishermen in accessing credit.

Furthermore, the study managed to establish five socio-economic factors important in influencing individual chances to access credit from formal and quasi-formal financial sources that include age, years of formal education, gender, income, and degree of awareness on available credit services. The level of education of an individual was found to be an important factor in influencing an individual chances to access credit as evidenced by the borrowers group in the study sample who were found to be better educated than the non-borrowers.

Further, it was also found that although some of micro-credit programmes target women, they do not benefit equally with men from the available credit services. These findings have serious implication for poverty reduction initiatives, since women form the majority of farmers and are among the most vulnerable groups in the society and show a serious weakness of the credit system in targeting the right beneficiaries for poverty alleviation.

Majority of the respondents in this study complained that lack of awareness (40 percent) of the respondents) and difficult loan conditions (37 percent) were the major factors that constrained their access to credit from formal sources. It was claimed that people were not aware of the availability of credit and the information on conditions and procedures of getting loans from formal and quasi-formal financial institutions was limited among smallholder producers, particularly those living in the rural areas. The findings show that awareness of people on available credit facilities is an important factor in enhancing credit access by smallholder farmers and artisanal fishermen.

The findings of this study show that majority of people in rural Zanzibar lack a culture of saving in the banking institutions. Of those interviewed, 65 percent (n = 300) were found to have no bank accounts. Lack of saving implies that the long-term sustainability of the credit institutions is not assured and chances of growth is limited for the small producers confirming the hypotheses that some socio-economic factors do influence small farmers and artisanal fishermen chances to access credit. They also provide answers to the study question number two.

On impact assessment, the study revealed that the income and assets values of borrowers are almost twice those of non-borrowers but lack of baseline data makes it difficult to associate the differences to the loans obtained by the borrowers although the changes in income and assets values among borrowers is linked to use of credit confirming the fourth study hypotheses that credit has positive effect on income and improvement of living conditions of credit users and gives an answer to the study question three.

6.2 Study Recommendations

There is recognition of the crucial role played by financial institutions in economic growth and improvement of livelihood. It is thus recommended that the credit policy for rural and micro-enterprise lending needs to be formulated in order to mobilise savings and maximise the availability of credit to the population in rural and urban areas of Zanzibar and Pemba. New legislation is required to enable the bank make unsecured loans and to allow loans to be made to potentially productive activities.

The existing commercial banks need to be encouraged to lend to smallholder farmers and micro-enterprise sector. The People's Bank of Zanzibar (PBZ), which is a government owned bank has to take a leading role in opening up credit facilities for the poor rural producers. The government has to take deliberate initiatives, which could include the restructuring of PBZ in order to reduce its costs of lending, reduced staff, and computerising bank operational systems in order to reduce overhead costs. This restructuring exercise should make bank loans more accessible and affordable to small borrowers. In addition, GoZ needs to consider privatisation of PBZ in order to improve efficiency, accountability and profitability. The bank should be made to operate commercially by reducing government involvement in decision-making processes and in the directions of credit allocation.

The government in collaboration with various development partners should consider the possibility of establishing a specialised credit institution to cater for specific credit and saving needs of the small farmers, fishers and micro-enterprises.

The establishment of a wider network of bank branches to serve the farming and fishing sectors may not be possible to the banking institutions thus the formation of cooperatives, farmers associations or other forms of group responsibility for the administration and supervision of credit programmes at the local level should be promoted. Group lending approach may not only reduce the high overhead costs associated with small lending but may also encourage the establishment of good credit culture and help in achieving acceptable loan repayment levels. The emergence of saving and credit cooperatives (SACCOs) and saving and credit groups (such as 'Upatu' groups) offers an excellent opportunity as a starting point for the use of group mechanism in accessing credit to the poor majority.

The Department of Cooperatives of Zanzibar should facilitate the group formation process such as assisting in registering and strengthening the existing productive organisations and cooperatives through capacity building. Strong cooperatives and associations can be a very useful instrument not only for channelling credit but also in the mobilisation of savings from small producers.

Furthermore, policies to enhance the role of informal credit institutions to bring about closer linkage between formal and informal institutions should be formulated. Better linkages would enable banks to benefit from the outreach and local knowledge of informal agents, expanding financial savings mobilisation and credit delivery and improving the overall efficiency of the financial system.

Quasi-formal credit arrangements need be promoted and encouraged to continue providing credit to small farmers, artisanal fishermen and micro-entrepreneurs. However, suitable mechanism should be explored to provide coordination of various fragmented credit schemes existing in Zanzibar in order to streamline their basic operations with a view to instituting common conditionalities and guidelines for lending to agriculture and the entire micro-enterprise sector. Proper coordination of various credit schemes will not only eliminate the present confusion confronting both lenders and borrowers but might also improve operational efficiencies of the schemes and bring about good repayment performance.

Gender differences with respect to access to credit facilities have to be critically looked into. Extending credit to women will not only accelerate production in agricultural and micro–enterprise sectors but also improve rural livelihood and reduce poverty and as such women should be encouraged to form their own credit and saving groups and take new viable economic forms of income generation. There is also a need to strengthen their capacity of analysis and decision making to improve their chances to access credit and to improve their capacity to efficiently utilise the credit.

Provision of training to credit beneficiaries in aspects of credit management, saving mobilisation, basic accounting, financial management, cash flow management, technical and on marketing aspects of agricultural, fisheries and other micro- enterprise products should be enhanced. Beneficiaries also need to be well informed on their obligations, particularly in loan repayment needs.

Furthermore, for credit to be effective as a poverty alleviation measure, its provision has to be well supported by relevant research activities and good extension services. Research should aim at developing appropriate innovations to improve agricultural and micro-enterprise performance. Extension services need to be effectively linked to research activities and to the target group in order to facilitate smooth flow of developed innovations to farmers and to give feed back to researchers for further improvement of the technologies. Promotion of effective linkages of researchers, extensionists and producers will, to a large extent, reduce the chances of enterprise failures and in so doing will give value to credit through the improvement of the performance of assisted enterprises.

The issue of marketing for agricultural and fisheries products, produced after the acquisition of credit, has to be seen as a critical factor in poverty reduction efforts. Thus the government should aim at improving the necessary infrastructures in the rural and urban areas in order to create market incentive to small-scale farmers, artisanal fishermen and small rural producers. Improvement has to focus on the road network, communication, power and water supply. Also agro-processing cottage industries need to be promoted and producers should be trained on quality aspects of their products. Moreover, the government should take serious actions to promote an obvious link between agricultural and fisheries sectors and the expanding tourism industry in the country.

The government needs to develop concrete strategies for mobilising the saving culture among the general public, both in urban and rural areas for sustainability of financial institutions and poverty reduction. The use of SACCOs, which have proved very successful in a number of countries, such as, India and Kenya, needs to be promoted and encouraged in order to provide a grassroots instrument for mobilising savings and extending credit.

Furthermore, there should be an effort to keep people informed on the availability of credit services through village barazas, meetings and in social gathering or through mass media such as the radio and TV. In minimizing element of bias in credit allocation, it is suggested that credit should be provided in a fairly competitive system based on credit worthiness of the proposed investment and the applicant.

Land ownership issues, though complex in their very nature need also be keenly scrutinised and accordingly acted upon to ensure security of land ownership by the majority of small-scale agricultural producers. It is thus recommended that land registration exercise already approved by the government be immediately carried out to benefit majority of poor farmers who remain insecure in the land they use and also to give them an opportunity of using their land as collateral to obtain loans from formal financial institutions.

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APPENDICES

Appendix 1: Description of Study Variables

VARIABLE NAME	VARIABLE DESCRIPTION
Age	Years of age
Gend	Gender of the respondent
Yedu	Years of formal education
Hhsize	Household size: Number of persons in household
Mexper	Yeas of experience of the respondent on the main occupation
Tainc	Total annual income earning of the respondent
Basave	Volume of money saved in bank(s) by respondent
Moccu	Main occupational activity of the respondent
Cview	View of the respondent of credit
Aware	Degree of awareness of the respondent on the available credit Services in the area.
Hhlab	Household labour force: number of adults working
Lhsize	Average size of land cultivated in any season
Avalu	Value of productive assess owned by respondent

Appendix 2i

A COMPARATIVE ANALYSIS AND RECOVERY SYSTEMS OF VARIOUS CREDIT INSTITUTIONS

Institutions	Target	Organisation in credit delivery	Training of Client	Type of Credit	Security	Interest Rate	Loan Ceiling Tshs.	Loan Period (Months)
Pride Tanzania	Mico-enter preneurs operating in town aged 36yrs with at least primary education.	Full fleged fleged credit NGO	Intensive, weekly meeting for a start and monthly after one year.	Cash	Group guarantee & regular savings	30%p.a charged on straight line method	2,000,000/-	6-24
Changamoto L.P. Fund	Members & Microenter-preneurs individually or in a group.	Registered NGO	One week training before loan dis-bursement for non-members only	Cash	Salary for member & guarantee for non-member	20%p.a charged on straight line method.	800,000/- for member & 300,000/- for non-member.	up to 12 months
WEDTF	Urban & rural women Micro-enter-preneurs	Registered NGO -Network with gvt extension services	Before, during & after loan disbursement	Cash	Group guarantee and saving.	30%p.a. charged on declining balance	2,000,000/-	up to 60 Grace period depends on type of activities

SLDP	Poor female headed in Pemba Island	Project is well connected into the extension system of MALNR	None	Kind (incalf heifer/ cow	None	None	Incalf heifer/ local cow to beA/ inseminated	After first borne female and given back to the project.
ZYEDF	Youth undertaking income generating activities individually or coope-ratively.	Individuals are required to form a group of five (Modified Grameer Bank Model	One week pre-loan training on technical & mana-gerial skills are offered to clients.	Cash	None	2% p.a on straight line method.	1,500,000/-	up to 12
Fund for Self-reliance	Unemployed persons with special priority to women	Credit unit is self man-aging but operate under the Ministry of Finance	A one week pre-loan training is provided	Cash	Group guarantee and saving.	15% on straight line method	500,000/-	up to 12
CRCF	Micro/small medium microenter-preneur	Administered by the Catholic Church	A one week pre-loan training is provided to clients	Cash/kind (heifer)	Group guarantee and forced saving	12% on straight line method	500,000/-	Up to 12 averaged

Appendix 2ii

A COMPARATIVE ANALYSIS AND RECOVERY SYSTEMS OF VARIOUS CREDIT INSTITUTIONS

Institutions	Target	Organisation in credit delivery	Training of client	Type of Credit	Security	Interest Rate	Loan Ceiling Tshs.	Loan Period (Months)	Achievement	
									Target	Loan Recovery
Heifer Project International	Smallholder Dairy farmers of Unguja Island	Administered by the Anglican Church.	None	Kind (Heifer)	None	None	300,000/-	Up to 12	Right target group served	10% of the borrowers have given back the female calf
The Sub-commission of Fisheries	Artisanal fishermen of Unguja and Pemba	Administered by the sub-commission of fisheries of MALNR	None	Cash/ Kind	None	None	Not fixed Amount of loan depends on requirements	Up to 12	Influencial people benefited	29% on average
IFAD Smallholder Support Project	Smallholder farmers, Livestock keepers and artisanal fishermen	PBZ managing the loan account. Project net-working with govt extension services. Indi-viduals as well as groups benefit.	None apart from general information on loan application form at and repayment schedule.	Cash/	None	Market rates 34%pa (‘96) 28% pa (‘97) 26%pa (2000) on a declining balance	3,000,000/-	Up to 12	A good no. of beneficiaries are above the target	70% on average

Rainfed Rice Dev. Project (RRDP)	Small scale rice farmers of Unguja & Pemba organised in associations.	Tractor hire services, rice seeds, and agrochemicals are provided on credit	None	Kind	None	None	60,000/- per individual farmer.	6 months	Right target group are served	15-20%
Women Economic Activities Credit Scheme	Poorest of the poor women in areas of low food production and high prevalence of diseases.	District Social mobilizers key in credit delivery and recovery. Women organised to undertake group/ individual projects	Training on group dynamics, technical and and business skills are occassionally provided to members of women productive groups	Cash	None	None	1,000,000/-	1-2yrs	Right target group reached	Average of 64%