Poverty Reduction Through Enhanced Access to Financial Services: Case Studies of Botswana, Kenya and Namibia

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Table of Contents

Abbreviations and Acronyms

ADF	African Development Foundation
AFC	Agricultural financial Corporation
ASAL	Arid and Semi-Arid Lands
ASCAs	Accumulative Savings and & Credit Association
Agribank	Agricultural Bank of Namibia
ATM	Automated Teller Machines
BAAC	Bank of Agriculture and Agricultural Co-operatives
BEDU	Botswana Enterprise Development Unit
BIDPA	Botswana Institute of Development Policy Analysis
BNLS	Botswana, Namibia, Lesotho and Swaziland region
BOBCs	Bank of Botswana Certificates
BRI	Bank Rakyat Indonesia
CARD	Center for Agriculture & Rural Development
CBK	Central Bank of Kenya
CEDA	Citizen Entrepreneurial Development Agency
CMI	Chr. Michelsen Institute
DFIs	Development Finance Institutions
EBS	Equity Building Society
FAP	Financial Assistance Policy
FCR	Food Consumption Ratio
FNBB	First National Bank of Botswana
FOSAs	Front Office Service Activity
FSAs	Financial Service Associations
GB	Grameen Bank
HHI	Herfindahl-Hirschman Index
HIPC	Highly Indebted Poor Countries
HPI	Human Poverty Index
IDB	Industrial Development Bank
ICDC	Industrial and Commercial Development Corporation
IPAR	Institute of Policy Analysis and Research
KCM	Kikundi cha Mkopo
KIE	Kenya Industrial Estates
KPOSB	Kenya Post Office Savings Bank
K-Rep	Kenya Rural Enterprise Programme
KTDC	Kenya Tourism Development Corporation
KWFT	Kenya Women Finance Trust
MAWF	Ministry of Agriculture, Water and Forestry
MCIs	Micro Credit Institutions
MDGs	Millennium Development Goals
MF	Micro Finance
MFI	Microfinance Institutions
MSEs	Medium and Small Enterprises

MTI	Ministry of Trade and Industry
NABARD	India's National Bank for Agricultural and Rural Development
NAD	Namibian dollars
NamPost	Namibia Post Office Savings Bank
NBFIs	Non-bank Financial Institutions
NDB	National Development Bank
NCCK	National Council of Churches of Kenya
NEPRU	Namibian Economic Policy Research Unit
NGOs	Non-Governmental Organisations
NHIES	Namibia Household Income and Expenditure Survey
NORAD	Norwegian Agency for Development Cooperation
PAR	Portfolio At Risk
RFIs	Rural Financial Institutions
ROSCAs	Rotating Savings and Credit Associations
SACCO	Savings and Credit Cooperatives
SEAPREN	Southern and Eastern Africa Policy Research Network
SME	Small and Medium Enterprise
UNDP	United Nations Development Programme
USD	United States dollar

SUMMARY

I. INTRODUCTION

This report is an output of Phase I SEAPREN-CMI research co-operation. Three countries, namely, Botswana, Kenya and Namibia were collaborating in carrying out a research project on Rural Banking. The overall objective of the project was to explore the possible impact that access to financial services can have on poverty alleviation in Sub-Saharan Africa. The researchers, without using a common methodology: analysed the link between poverty and access to financial services; explored the unique banking needs and preferences of the rural poor; assessed the potential that the un-banked rural segment carries in terms of sustainable rural banking; and carried out a situational analysis of rural banking practices and savings mobilization and utilization in the rural areas. Using different methodologies and country-level data, the researchers produced three country case study reports. These were then synthesised into a comparative analysis of the three countries.

The synthesised report is presented in section II summarizing comparative macroeconomic indicators, financial landscape, highlights of the methodology used in each study, findings, conclusion and recommendations as well as limitations and emerging issues and specific areas of possible future researches identified. Section III present the individual case studies (Botswana, Kenya and Namibia, respectively).

II. POVERTY REDUCTION THROUGH ENHANCED ACCESS TO FINANCIAL SERVICES: SYNTHESIS OF COUNTRY STUDIES[2]

1. Introduction

This section synthesises three country studies that were separately undertaken in Botswana, Kenya and Namibia.[3] The main objective is to present a comparative picture of the extent of financial intermediation for poverty reduction among rural populations. The studies basically addressed the effects of increased financing targeted to poverty reduction in rural areas. They were motivated by the realization that inaccessible and/or unaffordable financial intermediation in the rural areas is a seriously binding development constraint. The focal policy question that the studies sought to address was: is enhanced rural financial services intermediation key to achieving pro-poor growth and poverty reduction? Consequently, the main objective of the studies was to establish the extent to which rural populations have access to banking services. More specifically, they independently tried to: (i) demonstrate that the benefits from economic growth have not benefited the majority of the population living in the rural areas; (ii) examine how current banking practices cater/discriminate the banking needs of the poor; (iii) analyse the link between financial services and poverty reduction in the rural areas; (iv) present and analyse the current financial

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[2] This synthesis was written by Thomas N. Kibua (PhD) who is the Executive Director and Co-ordinator of the Macroeconomics Programme, Institute of Policy Analysis and Research (IPAR). The paper was presented at the Conference on "Poverty Policies and Budgetary Processes", held in Windhoek, Namibia.
[3] See references.

infrastructure landscape to show the magnitude of the un-banked population; (v) and examine the banking needs and preferences of the rural poor.

The three studies, in varied ways, reviewed the financial systems and their implications for poverty reduction in the respective countries. They recognised that the majority of poor people are found in rural areas and peri-urban settlements and that the promotion of efficient, sufficient and widely accessible rural financial services (rural banking) is key to achieving pro-poor growth and poverty reduction goals. Furthermore, they recognised that access to financial services tend to widen the economic opportunities and asset base of the poor and helps to mitigate the risks of remaining poor. The studies also revealed that there are multiple challenges facing formal financial institutions as they relate to the needs of the poor. The challenges include: low effective demand, high transactions/information costs, unmitigated risks, lack of appropriate collaterals, weak contract enforcement, inadequate regulatory frameworks, and dependence on peasant farming.[4]

The two common characteristics of these countries are that they have a high incidence of poverty and have a low level of external debt. They have, therefore, been unable to benefit from external debt relief under the HIPC initiative. This notwithstanding, their macroeconomic performance substantially differ from each other. A summary of respective selected macroeconomic indicators is shown in Table 1.

Table 1: Selected Macroeconomic Indicators

Indicators	Kenya	Namibia	**Botswana**
GDP Growth rate (%)	6.1 (**)	4.6 (**)	5.4 (**)
Population (million)	36.1 (**)	2.0 (*)	1.8 (*)
Per capita income (In USD)	1,200 (**)	7,600(**)	10,900 (**)
Gross fixed investment (% of GDP)	19.2 (**)	25 (**)	21.8 (**)
Gross domestic savings (% of GDP)	17.1 (**)	28 (in 2002)	52.1(*)
Inflation (%)	10.5 (**)	5.0 (**)	11.4 (**)
Government deficit (% of GDP)	3.5 (*)	3.6 (*)	3 (in 2002)
Current account balance (USD million)	-776 (**)	572 (**)	1698 (**)
Balance of payments (overall) million USD	635 (**)	20 (2004)	120 (2004)
Foreign exchange reserves (USD)	2,350 (**)	480 (**)	7, 445 (**)
Public debt (% of GDP)	50.5 (**)	31.6 (**)	7.1 (**)
Poverty situation (% of total population below poverty line)	46 (**)	35 (*)	30 (in 2003)

Sources: The World Factbook, Wikipedia (The Free Encyclopedia), and Key Development Data & Statistics (the World Bank and other international agencies).
Notes: (*) Represent data for year 2005 and (**) Represents data for year 2006.

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[4] The primary studies did not come up with suggestions on how to address these challenges.

The table shows substantial differences in population, per capita incomes, gross domestic savings, gross fixed investments, inflation, current account balance, overall balance of payments, foreign exchange reserves, level of public debt and poverty situations across the three countries. It also depicts about the same level of government deficit for the three countries. However, while the Kenya and Botswana economies are growing at about the same rate[5], Namibia's economic growth rate is much lower than that of the other countries. In general, it is clear that the macroeconomic performance of the three economies is fairly different.

2. Financial Landscape

Kenya has a well-diversified financial system. Currently, the banking sector comprises of 45 financial institutions and 95 forex bureaus. There are 41 commercial banks, two non-bank financial institutions (NBFIs) and one mortgage finance company and one building company. In addition, there are 39 insurance companies, two re-insurance companies and four development finance institutions. There are also about 250 microfinance institutions.

While there are currently five commercial banks operating in Botswana, the banking system is dominated by only three (namely: Barclays Bank, Standard Chartered Bank and First National Bank of Botswana). In Namibia, there are seven commercial banks, four of them privately owned and three publicly owned. In addition to these commercial banks, there exists both informal microfinance institutions (not registered or governed by any legally mandated entity) and formal micro-finance institutions. There are also provident institutions – namely – medical and funds, short-term insurance, life assurance and pension funds.

Two main aspects of the banking sub-sector in the three countries are summarised below. They include:

a) Access to Financial Services
In Kenya, the banking sector is more developed than in the other two countries and there are about 532 branches of financial institutions. The big five banks, namely: Kenya Commercial Bank, Barclays Bank of Kenya, Co-operative Bank and Standard Chartered, control over 70% of the total banking accounts in the country and 60% of the total deposits as well as loans and advances (Mutua and Oyugi, 2006, p9). The location of the banks is heavily tilted towards the urban areas and districts with good physical infrastructure. Nairobi and its environs, parts of Rift Valley and Central Province have the bulk of commercial bank branches leaving considerably large parts of the country un-banked. The two largest banks, Barclays Bank and Standard Chartered closed most of the rural/upcountry branches citing high transaction costs and unprofitability. It is noteworthy that current estimates are that rural coverage of financial services by commercial banks is just below 4%.

Generally, products and services offered by the commercial banks include deposit taking, lending/credit services, checking services, ATM banking, debit cards, credit cards, money transfers, online banking, and provision of safe deposit boxes. For

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[5] It should be noted that Botswana has previously recorded and sustained a higher growth rate than Kenya.

these, various banking charges, e.g., opening and minimum balances, monthly minimum ledger fees, transaction fee, closure of accounts, interim statements, duplicate statements, over the counter and ATM withdrawals, are levied. The multiplicity of charges make the cost of banking services escalate to levels that are unreachable to the rural populations. There is also reluctance to lend to Medium and Small Enterprises and low-income households due to lack of credit history, no usable collateral, and fairly high cost of the credit that is advanced by most financial institutions. This is notwithstanding the fact that some banks are also engaged in micro-finance but they are largely in urban areas.

In Botswana, all major banks have representation in the two cities (namely: Gaborone and Francis-town). The two cities have the highest number of retail branches. "The banking system is dominated by Barclays Bank, Standard Chartered Bank and First National Bank of Botswana. Three of them account for 82% of market shares of total deposits, 81% of loans and 83% of total assets" (Fidzani, 2006, p8). Only 24% of Botswana adult population has access to savings accounts of commercial banks. There is definite bias against the rural areas and rural resident's access to commercial banks is restricted - judging by average number of clients serviced by a single bank and the number of people served by ATMs. The types of services and levies associated with commercial banks are similar to those pertaining to the Kenyan banking sector. The country also has contractual savings institutions and other forms of non-bank financial services institutions.

In Namibia, the main financial service providers include banks, microfinance institutions, pension schemes and insurance companies. There are four privately owned banks (namely: Bank of Windhoek, First National Bank of Namibia, NedBank Namibia and Standard Bank Namibia) and three publicly owned banks (namely: Agribank, Namibia Post Office Savings Bank and Development Bank of Namibia). In addition, there are many micro-finance institutions and 482 provident institutions (Adongo and Deen-Swarrey, 2006, p12). The concomitant financial services are provided through a network of branches, agencies, ATMs and service and mobile centres spread throughout the country. However, and as is the case in the other two countries, most of the banking network is concentrated in urban centres. Extension of the existing banking network into rural areas is limited by harsh, dry desert climate, sparsely distributed rural population, high per unit costs of serving the rural poor due to the relatively small size of each transaction and rigid bank regulations.

b) Rural Banking Programmes
The governments of the three countries have over the years designed development programmes, which either directly or indirectly, targeted the enhancement of rural development and commercial financing. In Kenya, the government undertook deliberate programmes to extend mainstream banking to rural areas since 1980's. Furthermore, alternatives to mainstream banks started in 1990s (due to closure of most rural-based commercial bank branches). Thus, Savings and Credit Societies, Non-governmental Micro-finance Institutions, Kenya Post Office Savings Bank and recently Financial Service Associations/Village Banks, have been taking the lead in the provision of financial services to the rural population.

For instance, the Financial Service Associations started in 1997 in an effort to reach the poorest of the poor. They are semi-formal financial institutions that create access

to basic banking services on a sustainable basis by utilizing the communities rules, customs, relationships, knowledge, solidarity and resources combined with formal financial methods and services. They are owned, financed and managed by the community/villagers. The institutions offer both savings and credit services.

In the case of Namibia, various financial service providers have over the years provided access to the rural population to varying degrees. The majority of the programs have been extended through the Ministry of Agriculture, Water and Forestry and Ministry of Trade and Industry. In the case of Botswana, several programs have been in operation since 1963. The private commercial banking system has no significant interests in rural markets. However, the non-governmental organisations sector is the one that has made a meaningful contribution in the provision of rural finance. A comparative picture of the institutions that exist in each of the countries is presented in Table 2.

Table 2: Institutions Offering Financial Intermediation in Rural Areas

Kenya	Namibia	Botswana
▪ Commercial Banks with well developed rural banking operations	▪ National Agricultural credit Programme	▪ Post Office Savings Bank
▪ Post Office Savings Banks	▪ National Agricultural Support Services Programme (supports the creation of savings and credit co-operatives)	▪ Botswana Building Society
▪ Agricultural Finance Corporation	▪ Small business Development Policy (Supports small entrepreneurs through supply of short-term public capital)	▪ Botswana Co-operative Bank
▪ NGOs/Microfinance Institutions	▪ Micro lenders NGOs and Micro Finance Commercial Bank Branches	▪ National Development Bank
▪ Various schemes to finance small business through the Ministry of Trade and Industry and the Ministry of Labour and Human Resource Development	▪ Co-operatives	▪ Botswana Enterprise Development Unit ▪ Citizen Entrepreneurial Development Agency
▪ Youth Fund to support youth in starting small scale businesses ▪ Women Fund		▪ NGO/Micro finance Institutions
▪ Co-operatives		

The above summary shows that the broad financial intermediation development path is similar for the three countries. The configuration of financial service providers is about the same and similar initiatives have been put in place in an attempt to either mobilise savings or to provide credit. It is also important to note the cross-cutting emergence of Non-Governmental Organisation participation, with potentially similar initiatives, in the provision of micro-finance. Further, the three governments have consistently demonstrated desire to focus financing to the development of both agri-based and non-agricultural small and medium enterprises. It is against this background that the three studies were undertaken.

3. Methodology

Finmark Trust data of 2003 consisting of information on 810 households in Namibia and 550 households in Botswana was used in the two respective studies. The Namibian case used a censored regression model to test hypotheses based on income and food consumption as measures of poverty. Two hypotheses were tested. The first hypothesis was that "improved access to financial services by household heads is not or is negatively linked to their income." The second hypothesis was that "improved access to financial services by household heads is not or is positively linked to the food consumption ratio in the region where they live."[6]

The Botswana case used a probit regression model to estimate the relationship between poverty and financial service use. The implied hypothesis was that there exists a positive relationship between poverty (i.e. level of cash income obtained by the head of the household) and financial product exposure (i.e. the poor have limited exposure to financial products.)[7]

The Kenyan case did not have the benefit of the same type of data as in the case of Namibia and Botswana. The study largely used secondary data from various government and financial institutions documents to analyse access to financial services and outreach levels and sustainability. Using an outreach approach, which measures the relationship between financial services and poverty reduction, the study implicitly attempted to test the hypothesis that those who were reached by financial services were indeed poor.

4. Findings

A synopsis of the key findings of the three separate studies follows here-below:

Namibia: The econometric analysis found that: (i) higher income is related to a higher exposure to financial services; (ii) improved access to financial services has an important role to play in poverty alleviation efforts in rural Namibia, (iii) poor regions are associated with a higher probability of household heads that have never had

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[6] The potential endogeneity problem was not rigorously and adequately dealt with.
[7] The financial products used were automatic teller machines, post office savings account, savings accounts with a bank, mortgage bond/house loan, current accounts, debit cards, credit cards, garage/petrol cards, transaction/transmission accounts, fixed deposit accounts, vehicle finance from a bank, various types of loans and membership of a savings club/savings-credit co-operatives.

access to financial services, and (iv) poor regions are associated with a lower probability of household heads that currently have access to financial services.

Botswana: Similarly, an econometric analysis of the Botswana data found that: (i) the rural poor smooth their consumption and emergency expenditure needs through borrowing from family and friends; (ii) for business purposes, the poor depend more on government loans and grants; (iii) the majority of rural poor tend to save with Burial Society, Post Office Savings Bank and Commercial Banks and Group Savings in that order; and (iv) the key investment channels are starting business, buying of unit trusts and investing in livestock.

Kenya: A basic statistical analysis of Kenyan banking data found that: (i) few commercial banks have tried to provide micro finance to MSEs and the low income people; (ii) savings products offered by majority of commercial banks are not geared towards the needs of the poor; (iii) although the banking sector is highly liquid, loan advancement is still out of reach for the small-scale entrepreneurs and the rural poor-evidenced by the composition of the commercial banks credit share; (iv) government initiated and/or guided rural banking programme is hampered by lack of infrastructure, lack of an appropriate legislation that is focused and comprehensive to facilitate rural financing policy and intermediation; (v) although Financial Services Associations charges are affordable to the target client and they achieve 90% repayments, a vast majority of the rural poor are still not reached by affordable financial services; (vi) the rural poor have the capacity to mobilize savings and utilize resources optimally e.g. through informal groupings; and (vii) there is evidence that the poor borrow funds to invest in productive activities.

Notwithstanding these country-specific findings, the studies produced evidence of cross-cutting findings. They are: (i) foreign owned banks dominate the financial landscape in the three countries (with Barclays Bank and Standard Chartered Bank leading the pack) and some of them are increasingly and gradually diversifying their products to include microfinance; (ii) credit availability for the rural poor is generally left to the vagaries of profit-oriented/exploiting commercial banks who view the rural population as high risk borrowers; (iii) available credit and loan products are more targeted to the middle and high income groups; (iv) the three countries do not have a deliberate policy targeting the mobilization of financial resources among the rural poor and particularly there is lack of a clear framework to guide/govern informal and social financial networks that exist in rural areas; (v) bank products are not deliberately tailored towards the development needs of the poor in addition to them not being price-friendly (because of high transactions cost and systemic information asymmetry) to this segment of the population; and (vi) there is generally limited access to the financial system by the majority of the rural poor (in terms of physical access, appropriateness, affordability and simplicity of the financial instruments).

5. Conclusion and Recommendations

The three separate studies arrived at almost similar conclusions. First, the Kenyan one concluded that because formal financial institutions are concentrated in urban, peri-urban and cash-crop growing areas, most of the rural poor do not have access to their services. Furthermore, while the poor demand similar financial products and services as other socio-economic groups, the cost of banking further inhibits their access to

these services. However, experience and performance of those institutions that offer rural financing in Kenya shows that the poor can also save, borrow and repay their loans at market rates. Second, survey data in Botswana showed that the rural poor have different levels of access to the financial sector. Third, similar results of Namibian survey data lead to the conclusion that improved access to financial services can contribute to poverty reduction among the poor. However, improving access to formal financial services may result to the erosion of benefits derived by the poor from informal providers and make them more vulnerable to the vagaries of poverty.

Several recommendations are derived from the three studies. They are: first, based on the experience with village banks in Kenya, and considering the existing potential for savings mobilisation among the rural population, there is need to develop an innovative tailor-made financial products and services intermediation mechanism for the poor; second, it is important to implement overall financial sector reforms impregnated with policies and incentives geared towards the enhancement of rural banking; third, there is need to establish a policy environment which can facilitate proper functioning of rural financial institutions, ensuring the financial sustainability of microfinance institutions and reducing potential moral hazard; fourth, a deliberate policy platform should be created to enhance the linkage between informal and formal financial institutions without jeopardizing the existence and the role of the informal institutions; and fifth, governments should encourage the commercial banking sector to come up with schemes that appropriately target the rural poor. In this case, provision of tax incentives as well as a revision of the Banking Acts with a view to making them less prudential based for the poverty-targeted segment of their products may be necessary.

6. Limitation and Emerging Issues

While the results, conclusions and recommendations presented above are based on rigorous analyses and interpretation of available information, it is noteworthy that their combined robustness is impaired because of lack of a common methodology and data set. Nevertheless, some issues that need further analysis have emerged. They include the need to: (i) develop a compelling methodology for analysing the effectiveness of rural financial intermediation in poverty reduction; (ii) examine the role of rural social networks in the mobilisation of savings and their potential for being a source of investment funds; (iii) examine the appropriateness of regulating financing intermediation mechanisms; (iv) study the ownership structure of financial institutions as well as their legal status and how these affect their ability to act as appropriate financial intermediaries for rural populations; (v) investigate more comprehensively, the banking preferences of the poor and identify the most appropriate mechanism for meeting their banking needs8; and (vi) explore ways of addressing the challenges facing formal financial institutions as they relate to the savings and investment needs of the poor.

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[8] It is noted that the poor do not reside only in rural areas. Hence, the urban poor, though they may be geographically close to financial services, may not necessarily have access to appropriate financial products.

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III. CASE STUDIES

Case Study 1: Access to Financial Services and its Impact on Rural Poverty in Botswana[9]

Abstract

This paper reviews the Botswana financial system and its implications for poverty alleviation in Botswana. This is done by reviewing literature as well as analyzing a data set that was collected by FinMark Trust in 2003.

It emerges from this review that Botswana has experienced the paradox of having high economic growth rate with the levels of poverty remaining very high. The rural sector has strong physical as well as social infrastructure but the rural financial sector has remained weak. While the Botswana financial system has grown in size and sophistication and is considered leading in the Botswana, Namibia, Lesotho and Swaziland (BNLS) region, it does not seem to compare that well with its regional counterparts in as far as its rural aspects are concerned. This seems to have resulted from the government's emphasis on prudential requirements as well as its pampering of the commercial banking sector.

The analysis of data reveals that the rural poor smoothen their consumption more by borrowing from their family and friends and do not borrow much for this purpose from the other outlets. Second to this source is the sale of assets and desaving. However, when it comes to borrowing for business, the rural poor depend more on government loans and grants. There also exists some reasonable level of dependence on bank borrowing.

On the use of other financial services, the rural poor are more dependent on burial society membership. For savings the Post Office Savings Bank takes the lead followed by burial societies with the commercial banking sector coming third. On investment options, the rural poor display a very strong appetite for starting new business and, as would be expected, investment in livestock also features prominently.

The conclusion that is drawn from all these is that Botswana's rural poor are economically rational and would like to actively participate in the country's financial systems, the only problem is that their access is limited. Following from this, it is recommended that the Botswana Government should use carrot and stick method to get the private sector interested in this segment of the market.

1. Introduction

Botswana's economic development process has been characterized by a number of paradoxes. While the economy has grown at an average of 9.1% in real terms between 1966 and 2002/3, over 40% of the population has been estimated to have remained below the poverty datum line. Botswana is the leader in sub-Saharan Africa in the provision of both physical and social infrastructure to rural areas but rural access to

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[9] Analysis by N. H. Fidzani, the Executive Director of Botswana Institute for Development Policy Analysis.

the financial facilities has remained limited. The rapid increase in the percentage of the population in urban areas from 4% in 1966 to 51% in 2003, coupled with a strong commercial interaction between urban and rural areas may have increased the monetization of the rural sector, but the rural financial sector has remained weak and underdeveloped. Botswana does not have rural banks, or commercial banks targeted to rural areas. The only bank that was initially meant to service the agricultural sector, the Botswana National Development Bank (NDB), has over the years, closed down its rural branches and has tended to concentrate in the two cities of Gaborone and Francistown.

Against this background this study seeks to investigate reasons why high benefits from economic growth and the high structural transformation of the economy have both bypassed a majority of the population particularly those who live in rural areas. The paper also seeks to examine how the current banking practices cater for the needs of the poor and whether the provision of a better financial system to rural areas can actually reduce rural poverty. Policies that have led to the current state of affairs are reviewed with the view to make policy recommendations that will improve the situation.

The above stated objectives will be achieved by first briefly reviewing the literature on the link between the financial system and poverty alleviation in the global context, followed by a review of the poverty situation in Botswana. The next section then quickly reviews the Botswana financial system as it pertains to rural areas. A data set that was collected by FinMark Trust on the Botswana financial system is then analyzed to identify some emerging patterns, which may be important for policy formulation. The last section then draws conclusions and makes policy recommendations.

1.1 The Link between Poverty and Access to Financial Markets

Recent emphasis on the Millennium Development Goals (MDGs) by the international community epitomises the importance of human access to knowledge, economic empowerment as well as the elimination of poverty. Empowering the poor with education does not only give them access to good employment but also gives them access to information that they can use to take advantage of market opportunities. It has generally been argued that lack of market information, and, therefore, access to finance by the rural poor, is one of the main reasons why people remain poor. It is in this regard that Burgess et al. (2003) have argued that access to finance is critical to enabling the poor to transform their production systems and thus exit poverty. Access to finance through credit assists the poor not only to smoothen their consumption but also to build their assets, which enhance their productive capacity.

Some commentators have also argued that the problem with the poor is not so much that they cannot save but more lies with the fact that they lack opportunity to than the capacity to. Rutherford (2000) defends this position by stating that the poor in most times need more cash than they have at hand and the only way they can get that is to have the opportunity to save in order to build their cash reserves. If financial markets are properly structured and are designed with the poor in mind, this group will save, invest and exit poverty.

Rural financial markets that are designed to address rural poverty can lead to the growth in entrepreneurship, which, in turn, can lead to economic growth. When the poor are provided with working capital, investment will be generated with the net effect of economic growth. Availability of working capital will also facilitate the adoption of new and advanced technology that enhances productivity thereby enabling the poor to produce a surplus. Increased liquidity due to access to working capital generates the culture of saving and ability to take risk and innovativeness. All these create an environment in which the poor can exit poverty.

Zeller and Sharma (1998) have explained that the poor are normally caught up in the vicious cycle of poverty that is caused by lack of access to finance. When the poor fail to smoothen their consumption through borrowing their health and nutrition suffers causing their productivity to decline. Once their productivity declines it becomes impossible for them to produce any surplus. The vicious cycle can, therefore, only be broken by giving the poor access to finance. Easy access to finance will make them less risk-averse and have courage to invest in innovative processes that increase their productivity.

High transaction costs are another means by which the poor are excluded from participating in financial markets. When financial markets are improved and are accommodative of the poor through easy access to information and reduced transaction costs, savings rates, investments and technology adoption are all enhanced. Wood and Spencer (2003) have argued that the financial sector has a direct effect on poverty at micro economic level, primarily by affecting the ability of the poor people to accumulate large sums for life cycle needs, emergency or investment purposes. The only reason why the poor do not participate in this process is that the markets exclude them.

The nature of the rural economy has contributed to the exclusion of the poor from participating in financial markets. Low population densities, absence of both physical and social infrastructure cause high transaction costs. The dependence of the rural economy on agriculture, an economic activity that is highly prone to nature's vicissitude, renders the rural poor a high risk to financial markets- they are thus excluded from active participation.

Evidence that, the poor can actually exit poverty through increased access to financial markets has been given by the Asian Development Bank (2000) drawing on the Bangladesh case. It reports that the Grameen Bank of Bangladesh's programme on rural poverty elimination managed to uplift families of 21% of their borrowers from extreme poverty levels after four years of participation in the programme. Extreme poverty declined from 33% to 10% among the participants.

The success of the Grameen project resulted from the fact that it was well targeted to the poor, placed emphasis on groups and individuals and good use of the existing social institutions. The project targeted the poor and created social and financial conditions in that they received credit by identifying a source of self-employment in familiar rural non-farm activities. The Bank targeted only those who were willing to bear the costs of group formation, training, and monitoring each others activities and those who were satisfied with borrowing small sums of money and willing to repay.

Emphasis was placed on women more than on men so that the greatest impact could be felt on poverty alleviation. Training aimed at social and financial factors was provided.

Despite its awareness that lending entails risk in loan default due to adverse selection of borrowers and disability of lenders to enforce contracts, the Grameen Bank chose to lend to groups. Emphasis was placed on group responsibility where individual access to credit depended on the group's repayment behaviour. Group lending uses peer pressure to monitor and enforce contracts and helps to screen borrowers. The project also had a savings component that was compulsory to borrowers. It has emerged from this project that contrary to common belief, women are better credit risk takers with higher loan recovery rates than men –the recovery rate for women was 97% while that for men was 87%.

The evidence seems to suggest that the Grameen Bank has generated a number of benefits both at the household and village level. At the household level, the benefits from program participation included changes in income, employment, assets accumulation, net worth and other household welfare indicators (such as contraceptive use, school enrollment of children, etc.). Program participations enabled members to enhance their assets and net worth. For example, a participating household, on average, owned 56% more resources and 51% more net worth than a non-participating household. Program participation also increased calorie intake, especially among female household members. The incidence of poverty was substantially reduced among program participants. Labor force participation, especially among women, was higher among participants than non-participants; it stood at 66% among program participants compared to 52% for non-participants. The school participation rate of girls was also higher for participants (57%) than for non-participants (36%). Program participation also increased the use of contraceptives, better toilet facilities, and better drinking water. In addition, program placement generated income gains for the poor as a whole through its impact on the local resource allocation. For example, the daily male wage was 23% higher in program villages compared with non programme villages. Even after controlling for village characteristics, it was established that up to 11% of the 23% wage increase was due to Grameen Bank program placement. The World Bank has actually adopted this model and is currently implementing it in about 30 countries at a cost of US$2million.

1.2 Background of Poverty in Botswana
Since the early 1980s, the Government of Botswana has designed and implemented a wide range of programs to reduce the incidence of poverty and mitigate its impact. Government efforts have tended to focus on creating employment opportunities for both wage and self-employment for citizens, providing rural based social and economic infrastructure as well as welfare support for citizens who are unable to earn a livelihood on their own (Republic of Botswana, 2003). With a population of about 1.7 million, Botswana has had one of the highest rates of per capita income growth world wide, at 9.1% per annum in real terms for the post independence era until 2001. With regard to these growth rates, however, poverty indicators show that poverty levels are still significantly high, though considerable strides as regards poverty reduction have been achieved.

Income poverty trends seem to suggest that some decline in poverty incidence has been recorded over the years, where poverty incidence is defined in terms of the headcount ratio, which estimates the percentage age of the population living below the poverty line. The following table portrays a picture of poverty trends in three aspects: incidence, depth and severity. Depth is measured in terms of the poverty gap ratio, where the poverty gap ratio is defined by the average distance below the poverty line as a proportion of that line (the average is formed over the entire population counting the non poor as having zero poverty gaps). The sum of the poverty gaps reflects the minimum amount of consumption that requires to be transferred to bring all the poor up to the poverty line. Severity measure represents the mean of the squared proportionate poverty gaps (takes account of inequalities among the poor).

Table 1: Poverty Estimates at Rural Level (individual)

Poverty estimates	1985/86	1993/94	2002/03	1985/86-1993/94	1993/94-2002/03
per capita consumption					
Headcount ratio	46.1	32.9	30.2	-4.2	-0.9
Poverty gap ratio	18.5	11.8	11.6	-5.6	-0.2
Severity of poverty	10	5.8	6	-6.8	0.3
		per capita income			
Headcount ratio	46.1	31.6	30	-4.7	-0.6
Poverty gap ratio	21.3	12.3	12.2	-6.9	-0.1
Severity of poverty	12.8	6.7	6.8	-8.1	0.2

At individual level, poverty incidence, measured by the headcount ratio, in terms of per capita consumption declined at an annual rate of 4.2% over the period 1985/86-1993/94, but slowed down significantly in the period 1993/94-2002/03. A study by BIDPA (2004) attributed this sluggish reduction in the incidence of poverty to the overall economic performance during the same period. In terms of per capita income, poverty incidence declined at an annual rate of 4.7% over the period 1985/86-1993/94, and slowed down to 0.6% in the next period (1993/94-2002/03). The data indicates that depth of poverty (measured by the poverty gap ratio) in terms of per capita consumption, has also been on a rapid decline, at least in the period 1985/86-1993/94 with an annual rate of 5.7%, but slowed to only 0.2% per annum in the following period. A similar pattern was recorded when poverty depth is defined in terms of per capita income (6.9% over the period 1985/86-1993/94 and 0.1% in the period 1993/94-2002/03). Severity of poverty has also been on a decline over the period 1985/8-1993/94, but has since increased in the period 1993/94-2002/03. In terms of per capita consumption, severity of poverty has been increasing at an annual rate of 0.3% and 0.2% in terms of per capita income over the period 1993/94-2002/03. Overall, therefore, while the country recorded significant reductions in the period 1985/86-1993/94, recent developments where in fact, severity of poverty has been increasing, warrant a reconsideration of our strategy to alleviate poverty, specifically the potential of rural financial services in mitigating this problem. The situation at household level is almost a mirror of what is happening at individual level.

Table 2: Poverty Estimates at Rural Level (Household)

Poverty estimates	1985/86	1993/94	2002/03	1985/86-1993/94	1993/94-2002/03
per capita consumption					
Headcount ratio	37.5	25.8	21.6	-4.7	-2
Poverty gap ratio	14.7	9.1	8.3	-6.0	-1.1
Severity of poverty	7.8	4.5	4.4	-7.0	-0.3
per capita income					
Headcount ratio	37.3	23.6	20.8	-5.7	-1.4
Poverty gap ratio	17	9.7	8.5	-7.0	-1.5
Severity of poverty	10.3	5.6	4.9	-7.6	-1.5

The BIDPA study (2004), among other highlights of poverty in Botswana, has indicated that the risk of being poor is greater in rural areas compared to urban settlements, a situation which fits very well with the basis of this study. The basis of this study is to explore the possibility of using rural financial services as one of the many ways of fighting poverty. The arguments that access to finance in the form of savings and credit enables people to build assets, while also allowing them to smooth their income and therefore reduce vulnerability to economic shocks, particularly because economic activities in rural areas are often regarded as volatile. The following table presents the distribution of poverty according to the categorization of settlements (urban, urban villages and rural).

Table 3: Rural, Urban Poverty Levels

	Headcount ratio	Poverty gap ratio	Severity of poverty	Population share	Contribution to total poverty (% points)	Share of poverty
2002/03						
Urban	10.8	3.3	1.6	22.6	2.4	8.1
Urban village	24.9	8.5	4	33.4	8.3	27.6
Rural	44.2	18.2	9.7	44	19.4	64.4
1993/94						
Urban	18.3	5.9	2.7	23.4	4.3	13
Urban village	30.9	9.8	4.5	24.5	7.6	23
Rural	40.4	15.4	7.8	52.1	21	64
1985/86						
Urban	19.1	6.8	3.1	21.4	4.1	8.8
Rural	53.5	21.7	11.9	78.6	42.1	91.2

The data indicate that rural people account for a greater proportion of the poor in Botswana. Though it appears the contribution of rural settlements, to poverty has decreased by almost half during the period 1985/86 -1993/94, this figure might still be challenged on the basis of the classification of what was considered rural then, and what was considered rural in 1993/94 seeing that rural was disaggregated to urban

village and urban. Nevertheless, the fact remains that the rural areas account for a greater proportion of the poor in Botswana, which calls for a review of strategies aimed at alleviating poverty at the rural level.

The Poor in Botswana
According to a study conducted by BIDPA (1997) on 'Poverty and Poverty Alleviation' in Botswana, principal poverty groups that were identified during the study were rural households which depend significantly on arable farming, or on employment at cattle posts or as maids, remote area dwellers especially in the western part of the country where income poverty is often acute. The study also identified female headed households as one of the principal groups affected by poverty in Botswana, mainly because they have a significantly lower income earning capacity and fewer assets. The most immediate cause of poverty in Botswana is low household income (BIDPA, 1997), which is often a high rate of unemployment, low wages for those who are employed and a lack of viable alternative income generating opportunities for those not employed in the formal sector. The underlying cause of poverty in the rural areas especially is a weak rural economy resulting from the poor performance of agriculture.

2. The Botswana Financial Services System and Its Importance to the Rural Economy

This section reviews the Botswana financial environment with the view to establish how well suited it is for the rural economy. It seeks to address the key question of whether the rural economy has any effective access to the financial system. The five key components of effective access are: physical access; appropriateness of the financial system to the rural needs; affordability of the system to the rural population; simplicity of the financial instruments; and whether they are non-discriminatory.

Physical Access: considers travelling costs that rural residents incur in order for them to access these services. To the extent that commercial banks and related facilities are concentrated in urban areas, rural residents incur high costs to access them and, therefore, their physical access is limited. The absence of mitigatory facilities such as mobile banks imposes even more serious costs on them.

Affordability: on the other hand has to do with transaction costs as well as the level of returns on rural residents' savings. High bank charges coupled with low interest on saving deposits make it difficult for the rural poor to participate in the financial markets.

Similarly *Appropriateness* of the system might exclude or discourage this group from participating in the financial markets. For example, a requirement for high minimum balances by the banking sector can discourage the rural poor from participating in the financial system. Effective access of the rural poor to the financial system can also be negatively affected by discriminatory procedures such as providing facilities only to the formally employed. The review that follows below attempts to address the question of whether the rural poor have effective access to financial markets as well as ask the question of what needs to be done to improve the situation.

2.1 A Brief Historical Review of the Botswana Financial system

Before the formation of the Bank of Botswana in 1976, Botswana was part of the Rand Monetary Area, which meant that it was using the South African currency, the Rand. Because of this arrangement monetary policy was actually decided by the South African government. Two banks that were operating under an oligopolistic market conditions then had their headquarters in South Africa and were channelling about 50% of their deposits generated in Botswana to the South African headquarters. Such deposits included the Botswana Government's deposits, which were kept with one of the banks, the Standard Bank.

Since the establishment of the Bank of Botswana in 1976 a structure developed consisting of the commercial banking sector, investment banking sector, the statutory banking sector, and recently, one Merchant Bank has also emerged. This paper closely looks at the commercial banking sector as well as the statutory banking sector as these are the two sectors whose mandates are closely linked to rural livelihood. In addition, we look at the non-bank financial sector, a sector that seems to have had a much stronger impact on the rural poor.

2.1.1   The Commercial Banking Sector

According to Harvey (1998) when the Bank of Botswana Act was passed and subsequently revised, too much emphasis was placed on prudential requirements. It is probably this emphasis on prudential requirement that has made the operations of the commercial banking system keep off from poverty alleviating activities. Furthermore, the Botswana excess liquidity problem that the economy has experienced over a very long period of time seems to have made the commercial banking sector lack interest in the rural sector. In order for it to mop up this liquidity the Central Bank created some Bank of Botswana Certificates (BOBCs) that are sold to banks and other big organizations. Interest paid on these BOBCs has been so handsome that the Commercial Banking sector has tended to ignore its main mandate, the servicing of its depositors, let alone the rural poor. As a result of this, the low-income groups and rural dwellers have had limited access to this sector. FinMark Trust (1993) observed that while the Commercial Banking system has been highly profitable it has not had the incentive to be innovative enough to open new market segments and offer new savings instruments. They attribute this to the fact that there has been very little pressure from government to expand their services to the low-income groups.

In their regional comparative analysis FinMark Trust (1993) has shown that while the Botswana Commercial Banking sector might be the most developed and sophisticated in the Botswana, Namibia, Lesotho and Swaziland (BNLS) region, Botswana compares less unfavourably to Namibia in terms of low income groups' access to the financial sector. For example while only 24% of the Botswana adult population has access to savings accounts, Namibia' figure stands at 44%. It has been further pointed out that credit and loan products in Botswana are more targeted to the middle and upper income formally employed cadre to the exclusion of low-income groups.

2.1.2   Rural Urban Distribution of Commercial Banks

Work by Ndzinge (2005) shows that there are currently five commercial banks operating in Botswana: Standard Chartered Bank; Stanbic Bank; Bank of Baroda; Barclays Bank; and, First National Bank of Botswana (FNBB). At the end of 2004, commercial banks' total deposits stood at P11.8 billion, total loans at P8.5 billion and total assets at P14.6 billion. The banking system is dominated by Barclays Bank followed by Standard Chartered Bank, and FNBB. The three banks dominate the deposit and loan markets; accounting for 82% of market shares of total deposits, 81% of loans and 83% of the total assets. Barclays is the largest bank in terms of assets. It's P5.2 billion in assets accounts for 36% of the total assets of the five commercial banks. The second largest is Standard Chartered with assets totalling to P3.6 billion (25% of the total assets of the five banks) followed by FNBB accounting for 22% (valued as P3.2 billion).

Table 4: Total Assets and Percentage Market Share of Commercial Bank (Deposits, Loans and Assets)

Bank	Assets Pula billion	Percentage Share of Commercial Bank		
		Deposits	Loans	Assets
Barclays	5.2	39	34	36
Standard Chartered	3.6	24	21	25
FNBB	3.2	19	26	22
Stanbic Bank	2.4	17	15	17
Bank of Baroda	0.2	1	1	1

Information in the above table only shows the shares of the different banks in the market and does not give a clue on the accessibility of this Commercial Banking system to the poor. The first thing is to look at, is the distribution of bank services according to rural-urban distribution. It is important to note that Gaborone and Francistown are Botswana's only two cities while Orapa, Lobatse, Selibe-Pikwe, Sua Pan and Maun and Ghanzi are towns. Molepolole, Palapye, Mochudi, Kanye, Kasane are considered to be urban villages. These are large villages that have commercially grown to the status of towns.

All the major banks have representation in the two cities through branches. However, the new entrant, Bank of Baroda, has no branch in Francistown.

The two cities have the highest number of retail branches led by Stanbic and FNBB who have five branches each in Gaborone and one branch each in Francistown. Barclays Bank has three branches in Gaborone and one in Francistown. For towns, Jwaneng and Lobatse have the highest number of branches at three. Most urban villages only have one retail branch.

For urban villages, Ndzinge (2005) has observed that Barclays Bank provides by far the best service to the villages. Of the 17 retail branches located in villages, 10 belong to Barclays Bank, four to FNBB, two to Standard Bank and only one to Stanbic. It is curious that Standard Bank, having operated in Botswana since 1963, has only two branches in villages when its main competitor Barclays has 10. The bias against the rural areas is clearly demonstrated by the figures on the average number of clients serviced by a single bank. In cities, one bank services 12,229 customers while in

urban villages one services 18,150. This is indicative of the extent to which rural resident's access to commercial banks is restricted.

Another way by which access to the financial sector can be determined is to look at the services provided through the Automated Teller Machines (ATMs). Table 5 below shows that while in the two cities one ATM machine services 3, 057 people, in towns it services double the number at 6,110 and for urban villages it is even higher at 11, 155. This confirms that rural areas do not have easy access to financial market facilities.

Table 5: Commercial Bank Branches and ATM Distribution by City,

Town and Village

Location	Branches	Pop. per branch	ATMs	Pop./ATM
Cities				
Gaborone	18	10 443	72	2 583
Francistown	4	20 756	16	5 189
Total	**22**	**12, 229**	**88**	**3, 057**
Towns				
S/Pikwe	2	24 925	2	9970
Orapa	1	9 151	2	4576
Jwaneng	3	5 060	6	2530
Lobatse	3	98896	4	7422
Total	**9**	**11, 541**	**17**	**6,110**
Urban villages				
Kanye	2	24 072	3	13543
Maun	4	10 944	7	6254
Mochudi	1	36 349	2	18 481
Tsabong	1	6591	0	6591
Ghanzi	1	10 795	2	27 281
Molepolole	1	54 561	2	27 281
Kasane	1	7 638	1	7 638
Mahalapye	2	21 769	4	9 930
Palapye	3	9 855	6	4 382
Serowe	1	52 831	2	14 148
Total	**17**	**18,150**	**29**	**11, 155**

Source: Derived from Ndzinge, 2005

An interesting new feature is the introduction of Mini-ATMs by the FNBB in villages across the country. These innovative machines are installed in retail and supermarket stores. The mini ATM dispenses a voucher that can be exchanged for cash at the cashier point.

2.2 The Statutory Banking Sector
Botswana's obsession with the creation of a conducive macroeconomic environment without being complimented by a congruent microeconomic policy environment has led to this sector assuming the responsibilities of the commercial banking sector. Government has had to enter the market and crowd out the private sector because of this lack of congruence between the macroeconomic and microeconomic environments. For example, the Government's well intended policy of mopping up excess liquidity in the markets through BOBCs to avoid inflationary pressures has

resulted in the commercial bank sector ignoring its mandate. This has in the end forced Government to provide the poor and low-income groups with access to finance through various schemes. Botswana has had several such schemes some of which have come and gone and those running are about to be reformed. These have included the Post Office Savings Bank, the Botswana Building Society, the Botswana Cooperative Bank, the National Development Bank and the Botswana Enterprise Development Unit (BEDU), Financial Assistance Policy (FAP), which was later succeeded by the Citizen Entrepreneural Development Agency (CEDA). Our discussion below seeks to highlight the relevance of all these schemes to rural poverty alleviation.

Botswana Savings Bank: Created in 1963, this bank started as a Post Office Saving Bank with the clear intension to serve the rural poor who could not be serviced by the commercial banks (FinMark Trust, 2003). In 1992 a parliamentary act was passed to make this bank wholly Government owned. Although now separate from the post office, the bank has maintained some counters at all the national post offices for banking purposes. Government has, on occasion, used these counters to pay old age pension. As will be shown later, it is, therefore, not surprising that the Post Office Bank is the most popular outlet to the rural poor.

It is, however, disturbing that, in delivering his recent budget speech, the Minister of Finance and Development Planning announced that plans were at an advanced stage to merge this bank with the National Development Bank in preparation for the privatization of the two. Once privatized, there is no doubt that, the Bank will lose its income and rural bias.

The National Development Bank (NDP): Was established in 1963 through the NDB Act with the intention to provide both short and long term loans to the agricultural sector. It was later to serve as a desk for a number of Government subsidy schemes to both the agriculture sector and industry. It also managed the micro credit scheme that specifically targeted the poor. When it nearly collapsed some Irish consultants were called in to come and restructure it. The restructuring process turned it into what some commentators have described as being more commercial than the commercial banks, the only difference being that it does not accept deposits from the public. The major blow to the rural areas is that all rural branches were closed down. It is for this reason that some have worried about its proposed merge with the Botswana Savings Bank. The poor will be left in the cold as the resultant entity will become more commercially run.

The Citizen Entrepreneurial Development Agency (CEDA): CEDA succeeded the Financial Assistance Policy (FAP) which was a programme meant to diversify the economy by giving all qualifying investors (citizen and non-citizens) grants for investment and employment creation. After 10 years of operation it was felt that FAP was not delivering its originally intended results and so upon review it was restructured into CEDA, a project that would focus on providing finance to citizens at subsidized interests of one third of the market rate. Like FAP, it included loans to agriculture and industry and was designed with the rural poor in mind. However, as its implementation progressed emphasis was placed more on the ability to identify viable projects, which has proved very difficult for the poor particularly those in rural areas.

The needed high level of management skills has tended to block the rural poor from benefiting from this facility.

A point that needs to be made regarding all these statutory schemes is that in the past they were abused through default in repayment and being treated as conduits for accessing free government funds. This dependency culture has rendered well-intended Government schemes fail to boost production and assist the poor, as they are quickly abused and eventually collapse. This has led Government to take to the strategy of privatizing its commercial entities. Unfortunately, it is the rural poor who will suffer most from this shift.

Contractual Savings Institutions
The insurance industry has historically been the means by which risks are managed and consumption smoothened. This is a new phenomenon which is still more urban based and more relevant to those who are formally employed than the rural poor. The current HIV/AIDS scourge has, however, introduced an aspect that is relevant to the rural poor, namely the need to join burial societies and funeral schemes.

One other contractual arrangement that could have benefited the rural poor is the pension legislation. Government policy is that employers who do not have pension schemes should pay their employees compulsory severance benefits. These benefits are paid at the end of every five years regardless of whether the employee leaves the employment at that point or stays on. This is calculated at the rate of one day for every month worked for the first five years and two days for every month worked for the period beyond the first five years. The means that at the end of the first five years the employee receives 60 days salary and 120 days salary for the second five year term. This constitutes some form of forced savings for the employee.

Unfortunately, the agricultural sector where most rural poor work in, is not covered by most Employment Acts, especially this one in particular. This means that the opportunity for giving rural workers access to this form of forced savings has been missed.

2.4 Other forms of Non-Bank Financial Services
Non-Governmental Organizations have also participated in the provision of rural finance to the poor. According to FinMarktrust about P1million (about 0.01% of the GDP) worth of finance has been offered to the rural poor. This kind of finance has been targeted at women and youth groups. An example would be the Women's Finance House, which is financed by the United Nations Development Programme (UNDP) and the African Development Foundation (ADF) both of which are partly funded by the Botswana Government. The programme is run in collaboration with the Government's Women Affairs Department. In addition to providing micro-finance ranging from P1,500 to P5,000 (US$ 300 to US$1,000), the programme provides business counselling. At the time of the survey they were 3,500 clients who had taken 1,000 loans with a default rate of about 20%. Half of the defaulters are said to be due to HIV related deaths and are, therefore, written off.

Another example is the Kgetsi ya Tsie Fund that focuses on natural resources processing by women for economic and social advancement with a membership of about 700 women from 20 villages. Yet another women organisation is the Emang

Basadi (literally translated to mean '*Stand up women and fight for your rights*) which provides loans to members and provides business counselling. The Kuru Development Trust has targeted the marginalised communities in Botswana and has placed emphasis particularly on the San. Collaborative efforts between UNICEF, ADF and the Botswana Youth Council have come up with a similar arrangement through the Youth in Development Programme.

A conclusion that can be drawn from the discussion on access of the rural poor to finance is that the oligopolistic nature of the commercial banking system in Botswana combined with non-congruent macroeconomic and microeconomic policies of the country have produced a private commercial banking system that has no interest in rural markets, let alone the rural poor. Legislature has also not been very helpful in trying to inculcate a positive attitude towards rural areas by this sector. Government has instead entered the scene with not so sustainable poverty alleviation programmes that are now being threatened by the impending privatization programme.

On the other hand Government's efforts to mitigate the gap that has been created by the private sector has been marred by the dependency syndrome that has developed over the years, where Batswana believe that government loans should not only be interest free but should also not be repaid. Government's market recent approach to the problem of privatizing these schemes now threatens to hurt the intended beneficiaries. Going forward, it seems like NGOs will be the only sector that has made and will continue to make a meaningful contribution to poverty alleviation through the provision of rural finance. The main policy recommendation is that as Government leaves the scene of providing rural finance to the poor it should demand that the private sector should reinvest their profits in rural areas.

3. Survey Data Analysis

In 2003 FinMark undertook a field survey on access to financial markets that covered urban and rural areas. A total of 550 households were covered 329 of which, were rural based and the rest urban based. Of the 329 respondents 150 had an income level of less than P1,000 per month and this is the group that has been used as a proxy for the rural poor. This is no doubt not the best definition for the poor but in the absence of a better database this data set had to be used.

3.1 Methodology

Borrowing heavily from Adongo and Deen-Swarray (2006) the study uses a probit model to estimate the relationship between poverty and financial service use in Botswana. A probit model is an econometric model in which the dependent variable y_i can only be expressed as one or zero, and the continuous independent variable x_i are estimated in:

$$\mathbf{Pr(y_i=1)=F(x_i'b)}$$

Where b is a parameter to be estimated, and F is the normal cumulative distribution function. Unlike the logit model, which is based on cumulative logistic functions also known as log odds, the probit regression uses cumulative normal probability distributions. The following probit model will be regressed for the study.

$$Y = f(finvar) \qquad\qquad ………..(1)$$

Where Y is the level of cash income obtained by the head of the household. The variable has been recoded such that individuals with an income less than P1,000 are allocated 0 in the binary regression, while individuals with an income above P1001 are allocated a 1. It should be stressed at this point that the cash income in the regression is used as a proxy for poverty, where 0 will denote the poor and 1 will denote the non-poor. The variable, finvar, on the other hand, is an exposure index obtained as an average of the levels of usage of the different individual financial products. These individual financial products are ATM cards (ATM), post office saving accounts (POST), saving accounts with a bank (SAVING), mortgage bond or a house loans (MORTGA), current accounts (CURRENT), debit cards (DEBIT), credit cards (CREDIT), Garage or a petrol cards (PETROL), transaction or transmission accounts (TRANS), fixed deposit account (FIXED), vehicle finance from a bank (VEHICLE), loans from a bank (LOAN), loans from a registered money lender (MICRLOAN), loans from a unregistered money lender (PERLOAN), membership of a stokvel/motshelo or a saving club (MOTSHELO), loans and savings from an NGO (NGOSAVE), accounts with a store (STOREAC), loans or savings and credit cooperative (LOANCRCO). The study expects to obtain a positive relationship between poverty and financial product exposure. In other words the poor have limited exposure to financial products as opposed to the non-poor.

The codes used in the original survey to denote the level of exposure of financial products have also been changed for the purposes of the regression. The new codes are such that 0 is awarded to individuals who didn't answer the question or did not know the answer, 1 is awarded to individuals that had never used the product, 2 are individuals who used to have the product, 3 are individuals who have other members of the household using the product in question and 4 is allocated to individuals who currently have the product.

Equation 1 is run for both the overall sample and the rural sample in order to isolate the difference that may result between the rural and urban areas. The regression will also be run for each different individual financial product listed above as the dependant variable instead of finvar.

This model can, however, be criticized for the simultaneity problem that it seems to have. While it is true that the extent of sophistication in the financial markets can determine one poverty status, it is also true that one poverty status (income level) affects ones ability to participate in the financial markets. As acknowledged by Adongo et al. (2006) the direction of causality is not very determinant.

3.2 Interpretation of results

The results of the model given above (equation 1) is presented in Table 6 below.

Both the overall and the rural regression have a positive sign for the financial usage exposure index's coefficient are statistically significant at 1% level. These findings indicate that the non-poor are more exposed to the financial products mentioned in the previous section in comparison to the poor.

Table 6: Regression Results for Financial Usage Exposure Index

Variable	Coefficient		Standard Error		p-value	
	Overall	Rural	Overall	Rural	Overall	Rural
Coefficient	-2.2984	-2.2457	0.2722	0.315	0.0000	0.0000
Finvar	1.7406	1.6686	0.1838	0.218	0.0000	0.0000

As indicated in the previous section the regression was run for the individual financial usage exposure variables and the results are presented in Table 7.

Table 7: Regression Results for Financial Product Exposure

Variable name	Definition of Variable	Coefficient		Standard Error		p-value	
		Overall	Rural	Overall	Rural	Overall	Rural
ATM	ATM card	0.4775	0.4593	0.049	0.0553	0.0000	0.0000
POST	Post Office Savings Account	0.001	0.0464	0.046	0.054	0.9820	0.3902
SAVING	Savings/ Transaction account from a bank:	0.4900	0.4532	0.0459	0.0539	0.0000	0.0000
MORTGA	Mortgage bond or housing	0.3829	0.3256	0.1139	0.1319	0.0008	0.0136
CURRENT	Current or Cheque account	0.4839	0.4338	0.0637	0.0827	0.0000	0.0000
DEBIT	Debit card	0.685	0.5	0.1777	0.144	0.0001	0.0005
CREDIT	Credit card	0.3583	0.3555	0.067	0.0777	0.0000	0.0000
PETROL	Garage card/ Petrol card	0.4192	0.3973	0.2152	0.2207	0.0515	0.0718
TRANS	Transaction/ Transmission account	0.5077	0.644	0.1018	0.1324	0.0000	0.0000
FIXED	Fixed Deposit account	0.2654	0.2642	0.0625	0.0819	0.0000	0.0012
VEHICLE	Vehicle finance from a bank	0.8212	0.4445	0.1946	0.1192	0.0000	0.0020
LOAN	Loan from a bank	0.3858	0.2891	0.0641	0.0715	0.0000	0.0001
OVDRAP	Overdraft at the bank	0.4699	0.3035	0.133	0.1668	0.0004	0.0689
OVDRAB	An overdraft at the bank	0.4877	0.4847	0.1994	0.2355	0.0145	0.0396
MICRLOAN	Loan from a registered micro-lender	0.0528	-0.141	0.0834	0.1288	0.5264	0.2732
PERLOAN	Loan from an unregistered money lender	-0.2792	-0.290	0.0933	0.1083	0.0027	0.0073
MOTSHELO	Membership of a stokvel/ motshelo or savings club	-0.0385	-0.011	0.446	0.0528	0.3878	0.8339

3.3 **A Close Look at the Rural Poor Sample Data**
As already stated above the causalities between the dependant and independent variables in the regression equations may be suffering from the simultaneity problem. To get some insight into the rural banking issue there is, therefore, a need to isolate the data on the poor group and interrogate it to see whether it gives any clear trends and patterns with respect to the rural banking problem. In this section the data set has been split into the rural poor, that is those who received less than P1,000 per month in the Finmark Trust data set, and the non-poor, that is those who had more than P1,000 per month income. The analysis that follows below looks at this group's savings pattern, its investment habits, and its access to different financial instruments. A comparison between the rural poor's characteristics is then made with that of the rural non-poor as well as the urban dwellers.

3.3.1 Sources of Finance for Various Expenditure Needs
This section examines the rural poor's access to different available options to finance their various expenditure needs. These sources of finance include banks, money lenders, government grants and loans, other sources which might include desaving and sale of assets. The various expenditure needs are on studies, payment of debt, starting a new business, emergency expenditures, purchase of food and clothing as well as consumption smoothing during retrenchment. This analysis is not based on actual spending but is instead based on how the respondent would sponsor the expenditure if the need should arise.

Table 8 below summarizes the results and the following trends emerge. The table clearly shows that the rural poor smoothen their consumption needs through borrowing from family and friends and do not borrow much for this need. For their food needs about 57.3% indicated that they would borrow from family and friends and this is followed by other sources (desaving and disposal of assets) at 20.7%. A similar pattern develops for emergency expenditure where the two are 79.3% and 36% respectively. Debt repayment and medical emergency follow the same pattern though at a relatively lower level. It is interesting to note that this group does not believe in borrowing to buy clothes, 74.7% indicated that they would not borrow for clothing.

For business purposes the group depends more on government loans and grants (27.3% and 16% respectively) and the group is not very much averse to desaving and disposal of assets for this purpose. A proportion of 14% indicated that they would also approach the bank for loans for this expenditure.

This outcome underscores the two main points that were raised in the literature review namely that the poor need access to working capital so that they can invest and expand their business. Once they are given that access they will aim at expanding their production. The second point is that Government provides most of the rural poor's investment needs.

A comparison of the rural poor with the rural non-poor and the urban group follows more or less the same pattern but to lower intensity levels. For example, while the other two groups would use family loans to smoothen their consumption, relative to

the 57.3% for the poor the figures for the rural non-poor and the urban group stand at 36.9% and 34.6% respectively. On the use of banking facility for starting business the urbanites are more dependent on this facility than the rural poor and the rural non-poor fall someway in between. This reflects the different levels of access that these groups have to the banking sector.

Table 8: Sources of Loans for Various Purposes

	Study	Debt	Start Bus.	Emerg ency	Buy food	Rentr ench	Med. exp	Clothing
Rural poor sample								
Bank	4	11.3	14.0	2.0	1.3	1.3	2.0	.7
Money lender	0	3.3	5.3	4.7	1.3	.7	2.0	0
Family /friend	1.3	25.3	6.7	79.3	57.3	6.7	36.0	6.7
Gov grant	28.7	0	16.0	.7	.7	.7	1.3	0
Gov loan	2.0	0	27.3	0	0	1.3	0	0
Other sources	4.0	26.0	18.0	36	20.7	19.3	38	20
Not borrow	17.3	20.0	7.3	2.7	23.3	43.3	6.7	74.7
Rural non-poor								
Bank	5	12.8	16.8	9.5	.6	1.7	7.3	3.4
Money lender	1.7	6.1	2.2	3.4	.6	.6	2.8	0
Family /friend	1.1	14	3.4	42.5	36.9	6.1	30.7	4.5
Gov grant	33.5	0	24	.6	0	1.1	1.1	0
Gov loan	15.6	1.1	36.9	2.8	0	.6	1.1	0
Other sources	5	31.8	8.4	44.7	29.1	15.6	40.2	10.6
Not borrow	8.4	26.8	2.8	8.9	33	54.7	13.4	81
Urban total sample								
Bank	1.9	18.5	28.4	8.6	1.2	3.1	3.1	1.9
Money lender	0	14.2	3.7	14.2	1.9	0	9.3	1.9
Family /friend	1.2	16	2.5	56.8	34.6	13.6	24.7	6.8
Govt. grant	32.7	0	21.6	6	0	2.5	2.5	0
Gov loan	8.6	0	11.1	0	0	1.2	.6	0
Other sources	3.1	29.6	8.6	29	19.8	10.5	41.4	16.7
Not borrow	9.9	17.3	.6	8.6	43.2	34	12.3	72.2

It is interesting to note that moneylenders are not prevalent providers of finance to all the three groups. Also interesting is that government is expected to be the main provider of education as seen in all groups.

3.3.2 Usage of Other Financial Services

The survey also collected data on the use of other financial services such as membership in burial societies, life insurance policies, medical aids etc as shown in Table 9. This gauges the level of sophistication as well as access to these markets that the rural poor have. It clearly emerges from this table that membership in burial societies dominates the rural poor's portfolio. Interestingly endowment investment and pension funds show some strong presence. This could be reflecting the fact that the P1,000 per month income threshold could be too high to define the real rural poor the majority of whom do not even earn P100 per month.

Table 9: The Usage of Various Financial Services

Financial services	Never have	Used to have	Have it now	Don't have but others in h/h have it	Don't know
Rural Poor					
Membership of a burial society	71.3	2.0	18.0	6.0	2.7
Funeral Policy	74.7	1.3	12.7	6.7	4.7
Life Insurance	76.7	2.0	12.0	3.3	5.3
Retirement Annuity/Provident Fund/Pension Fund	76.0		13.3	4.0	6.7
Endowment/Investment	86.0		6.7		7.3
Household/Car Insurance (short term)	89.3		1.3	2.0	6.7
Medical Aid	87.3	0.7	8.0	2.0	2.0
Hospital Plan	96.7				3.3
Disability Insurance	90.7	0.7	3.3	1.3	4.0
Education Insurance Cover	94.7		1.3		3.3
Rural Non-Poor					
Membership of a burial society	68.7	3.9	19.0	8.4	
Funeral Policy	67.6	0.6	25.7	5.0	1.1
Life Insurance	57.5	1.7	29.1	10.1	1.7
Retirement Annuity/Provident Fund/Pension Fund	58.7	1.1	27.9	10.6	1.7
Endowment/Investment	87.2	0.6	10.1		2.2
Household/Car Insurance(short term)	78.2	1.1	14.5	2.8	3.4
Medical Aid	55.9	3.4	30.7	9.5	
Hospital Plan	95.0		1.1		3.9
Disability Insurance	91.1		7.3		1.7
Education Insurance Cover	93.9		2.8	1.1	2.2
Urban					
Membership of a burial society	63.0	3.1	24.1	9.9	
Funeral Policy	67.3		23.5	9.3	
Life Insurance	53.1	0.6	38.3	8.0	
Retirement Annuity/Provident Fund/Pension Fund	64.8	0.6	25.9	8.6	
Endowment/Investment	81.5		8.6	7.4	2.5
Household/Car	76.5		17.3	5.6	0.6

Insurance(short term)					
Medical Aid	54.3	1.2	39.5	3.7	1.2
Hospital Plan	95.7		0.6	0.6	3.1
Disability Insurance	93.2		4.3	0.6	1.9
Education Insurance Cover	91.4	1.9	3.7	1.9	1.2

A comparison with the other two shows that membership in burial societies features but not as prominently as in the rural poor group. The portfolios for the rural non-poor and the urbanites are dominated by medical aid and life insurance but burial societies also feature prominently.

3.3.3 Saving Channels

Respondents were asked to rank their different savings channels and the results are as shown on Table 10 below. The rural poor gave the burial society the highest vote as the most excellent channel for saving. This was followed by the Post Office Savings Bank, and commercial banks come third. Group savings with friends got a decent vote too. If votes for excellent, very good and good are combined Post Office Bank emerges as the leader of the pack followed by the burial society and banks still remain third. This corroborates the earlier claim made that the Post Office Bank is the rural poor's bank and that burial societies are a major feature in the rural poor's lives.

A comparison with the other two groups reveals a completely different picture where the Post Office Savings Bank is a clear leader for the rural non-poor and the banking sector is the leader for the urbanites.

Table 10: Excellent Ways of Saving

Rural Poor						
Ways of Saving	**Poor**	**Fair**	**Good**	**Very good**	**Excellent**	**Don't know**
Saving with friends	62.0	22.7	10.0	2.0	3.3	0
Saving in group	38.7	22.7	28.7	6.0	3.3	0.7
Post office savings account	0	4.7	34.7	28.7	31.3	1.3
Savings at the Bank	0.7	9.3	41.3	22.7	21.3	4.0
Burial Society	0.7	2.7	35.3	18.0	38.7	4.7
Hiding money at home	77.3	15.3	2.7	2.7	2	0
Keeping your money in pocket, handbag or wallet	83.3	10.7	3.3	1.3	0.7	0.7
Rural Non -Poor						
Ways of Saving	**Poor**	**Fair**	**Good**	**Very good**	**Excellent**	**Don't know**
Saving with friends	64.8	15.1	16.8	1.7	1.7	0
Saving in group	48.6	25.7	16.8	3.9	3.9	1.1
Post office savings account	1.7	12.3	26.3	29.6	28.5	1.7
Savings at the bank	0	7.8	19.6	35.8	36.3	0.6
Burial society	1.1	10.6	36.3	18.4	27.4	6.1
Hiding money at home	88.3	9.5	1.7	0	0	0.6
Keeping your money in pocket, handbag or wallet	89.4	10.1	0	0	0	0.6
Urban						
Ways of Saving	**Poor**	**Fair**	**Good**	**Very good**	**Excellent**	**Don't know**
Saving with friends	65.4	20.4	6.8	2.5	4.3	0.6
Saving in group	50.6	25.3	15.4	4.3	4.3	0

Post office savings account	2.5	6.8	30.9	35.2	24.7	0
Savings at the bank	2.5	3.7	17.9	20.4	53.7	1.9
Burial society	2.5	12.3	27.8	38.9	15.4	3.1
Hiding money at home	84.0	11.1	2.5	1.9	0.6	0
Keeping your money in pocket, handbag or wallet						

3.3.4 Investment Channels

This section briefly reviews the respondents' perception about the best ways to invest their money. This basically captures the answer to the question; if you had money how would you invest it? Starting a business was ranked highest by all the groups. However, for some unclear reason, the rural poor rated the buying of unit trusts second while this channel does not seem to feature prominently in the other groups' ratings. This can only be a data error. However, as would be expected, investing in livestock also features strongly in both rural groups and to a lesser extent in the urban group. All groups value investing in property.

Table 11: Excellent Ways of Investing Money

Rural Poor						
Ways of Investing money	Poor	Fair	Good	Very good	Excellent	Don't know
Starting a business	0	2.0	22.0	30.7	45.3	0
Lending money to others	15.3	21.3	30.7	24.7	8.0	0
Buying shares	2.7	12.0	27.3	14.7	8.0	35.3
Buying unit trusts	13.3	18.7	10.0	2.7	54.7	0.7
Buying livestock	1.3	8.7	20.0	31.3	29.3	9.3
Investing in a retirement annuity	0	8.7	36.0	16.7	16.0	22.0
Having good insurance policy	0	8.0	39.3	21.3	20.7	10.7
Buying property	0	2.7	24.7	40.7	30.7	1.3
Maintaining and providing security for house	1.3	5.3	30.7	33.3	28.0	1.3
Rural Non poor						
Ways of Investing money	Poor	Fair	Good	Very good	Excellent	Don't know
Starting a business	0	2.8	18.4	26.3	50.8	1.7
Lending money to others	24.6	22.3	21.2	21.2	10.1	0.6
Buying shares	2.2	7.8	20.1	23.5	30.7	15.6
Buying unit trusts	0.6	8.4	14.5	20.1	14.0	42.5
Buying livestock	6.1	12.8	22.9	24.0	26.3	7.8
Investing in a retirement annuity	0.6	8.4	25.7	29.1	25.7	10.1
Having good insurance policy	1.7	5.6	24.6	29.6	32.4	6.1
Buying property	0.6	1.1	21.8	25.1	50.3	1.1
Maintaining and providing security for house	0	1.7	20.7	37.4	39.7	0.6
Urban						
Ways of Investing money	Poor	Fair	Good	Very good	Excellent	Don't know
Starting a business	0	1.9	10.5	24.7	63.0	0
Lending money to others	19.1	25.9	13.0	17.3	23.5	1.2
Buying shares	0.6	3.7	13.6	24.1	35.8	22.2
Buying unit trusts	0	3.1	13.6	14.2	32.7	36.4
Buying livestock	2.5	24.7	23.5	28.4	17.3	3.7

Investing in a retirement annuity	0.6	16.7	16.0	21.6	34.0	11.1
Having good insurance policy	0	17.3	22.2	16.7	38.9	4.9
Buying property	0	8.6	17.9	27.2	45.1	1.2
Maintaining and providing security for house	0	13.6	22.8	35.2	24.7	3.7

3.3.5 Summary of Findings

The analysis of the survey data seems to confirm that the rural poor have different levels of access to the financial sector. Though a bit suspect, the regression analysis has shown that income varies directly with the level of sophistication in the participation in financial markets. Therefore, with their low incomes, the rural poor are expected to actively participate in the financial markets. The fact that this group still treats burial societies as its major savings outlet seems to corroborate this. A recommendation emerging from this is that government policy should use the carrot and stick methods to encourage the commercial banking sector to come up with schemes that target this segment of the market. Tax incentives and moral suasion as well as revising the banking acts with the view to make them less prudential based might help. This sector stands to benefit substantially from the active participation of the rural poor in all financial markets. An economy with fewer poor people stands to benefit all segments of the market.

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Case Study 2: Poverty Reduction through Enhanced Rural Access to Financial Services in Kenya[10]

Abstract
The study infers the impact of enhanced financial service in poverty reduction in rural Kenya using secondary data. On the basis of outreach levels, and financial sustainability indicators, and available literature of other countries that have conducted surveys, the findings of the study indicate that rural financing programmes have a positive impact on poverty reduction among the poor. The study also reveals that the saving mobilisation of the rural poor, utilisation potential and their unique banking needs have not been exploited and catered for adequately. In addition, in spite of the fact that formal banking institutions have come in to try and bridge the gap between the service provision and service requirements in this market by extending branches in the rural areas, their impact has been limited by the poor rural infrastructure and lack of clear rural financing policy and the pending Microfinance Institutions (MFI) Bill and Savings and Credit Cooperatives Organisations (SACCO) Bill. Therefore, this study recommends for the formulation of an accommodative legal and regulatory framework that will encourage growth of micro finance institutions especially in the rural areas; provision by financial institutions of a wide range of demand-driven products and services needed by the poor, a deliberate improvement of rural financial infrastructure by the government and linkage of village banks with the formal financial institutions.

1.0 Background
The challenge of addressing poverty[11] has remained virtually in all Kenya's development strategies since independence. Efforts by the Government to address the problem over the years notwithstanding, available data indicate that over 46% of the Kenyan population is absolutely poor. Though poverty in the urban areas is growing fast, in Kenya it still remains overwhelmingly a rural phenomenon (Republic of Kenya 2007). Three quarters of the Kenyan poor are to be found in the rural areas while the majority of the urban poor live in slum and peri-urban settlements (Republic of Kenya, 2004a; 2004b; 2003; 2000a; 2000b). This is not unique to Kenya. A study by Asenso-Okyere et al. (1993) indicates that about 73% of the population of developing countries live in the rural areas, compared with only 33% in developed economies.

The poor attribute their poverty to a number of factors including: unemployment, lack of assets, lack of credit, inaccessible markets, corruption, poor health, illiteracy, insecurity and economic shocks. Poverty is a multi-dimensional phenomenon that goes beyond the lack of incomes. This multi-dimensionally makes the poor vulnerable to multiple factors arising from the interactions of economic, political and social processes (World Bank, 2000a).

To address the multi-dimensional aspects of poverty, the poor need to be empowered. Although high and sustainable economic growth is central to poverty reduction, studies by Asenso-Okyere et al. (1993) and Yaron (1997) reveal that promotion of efficient, sufficient and widely accessible rural financial services (rural banking)[12] is key to achieving pro-poor growth and poverty reduction

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[10] Analysis by John M. Mutua and Lineth N. Oyugi, Research Intern and Assistant Research Fellow respectively, at the Institute of Policy Analysis and Research.

[11] Poverty is lack of power to command resources. It is a multidimensional phenomenon that goes beyond the lack of incomes. The poor are disadvantaged in accessing productive resources such as land, credit and services and are vulnerable towards external economic shocks and natural disasters.

[12] Rural banking and rural financial services will be used interchangeably. Rural finance refers to financial services offered and used in rural areas by people of all income levels while providers of financial services for the rural poor include both financial institutions, such as banks, MFIs, credit unions, and non-financial mechanisms. This study will concentrate on

goals. This is because, access to financial services plays a critical role in helping the poor widen their economic opportunities, increase their asset base, and diminish their vulnerability to external shocks. However, most formal financial institutions do not serve the poor because of several challenges, notably: low effective demand/dispersed demand, high transaction and information costs, high levels of unmitigated risks, lack of usable collaterals, weak contract enforcement, inadequate regulatory frameworks, and dependence of the poor on seasonal agricultural activities.

1.1 Objectives of the Study
This study seeks to document the links between enhanced rural financing and poverty reduction and to assess the potential of enhancing financial services to rural areas. Specifically, the study:
1. Analyses the link between access to financial services and poverty reduction in rural areas;
2. Examines the unique banking needs and preferences of the rural poor; and
3. Analyse the potential for savings mobilisation and utilisation in rural areas.

1.2 The Poverty Situation in Kenya
Poverty in Kenya is widespread. Nonetheless, the poor have been identified by region and social-economic characteristics. For instance, the majority of the poor are to be found among the subsistence farmers, the illiterate, landless, female headed households; large households, widows; polygamous households; pastoralists in drought prone areas, unskilled and semi-skilled casual labourers; informal sector workers; and households with limited access to markets and social amenities (Greer and Thorbecke, 1986a, 1986b; Republic of Kenya, 1998; Mwabu and Mullei, 2000; and Mwabu et al., 1999). The highest incidence of poverty has been recorded in the Arid and Semi-Arid lands (ASAL) districts where the majority of Kenyans' pastoralists live. Further, analysis of the 1997 welfare monitoring survey data indicated that 60% of the poor are concentrated in seventeen of the 47 districts in the country (Republic of Kenya, 1999).

The poor are heterogeneous. This notwithstanding, there are several instruments to address the multidimensional aspect of their poverty, especially in target groups. According to Yaron et al., (1997), these instruments include financial interventions and non-financial public interventions such as labour intensive public works projects, food subsidies, rural primary education and health care project, rural roads, electricity and water projects and support for low-income housing.

The Government of Kenya has over time employed a combination of both financial and non-financial instruments to address poverty with little success. Financial intervention has been through subsidised credit through government corporations, namely: Agricultural financial Corporation (AFC); Industrial Development Bank (IDB); Industrial and Commercial Development Corporation (ICDC); Kenya Tourism Development Corporation (KTDC); and Kenya Industrial Estates (KIE). An examination of their performance by Murgatrod and Gachuba, (2004) reveals that on average, their overall performance has been disappointing and with the exception of KTDC, they are engulfed in a financial crisis. On a combined basis, the corporations total assets declined from a high level of Ksh. 13.8 billion in 1999 to a low of Ksh. 9.5 billion and their non-performing loans totalled Ksh. 17 billion, equivalent to 93.7% of their portfolio value.

Yaron et al. (1997) citing Charles and Sanchez (1995) notes that: "Best practice in rural financial markets indicates that efforts should be aimed at increasing access to financial services in rural areas at large… the idea behind rural as opposed to *sector* development is that development

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formal institutions mainly formal banks with rural bank branches, SACCO's FOSAS, KPOSB, and FSAs though, the impact of MFIs programmes on poverty will be captured in the literature review.

should occur on a regional or location basis and not on sector or activity basis'. This is necessary to ensure diversification of rural households' sources of incomes in addition to balanced development. To address poverty, therefore, the poor need to access: assets; affordable health care; education; security; and be able to cushion themselves against unforeseeable economic shocks. All these need financial resources.

1.3 Overview of Banking Sector in Kenya

Kenya has a well-diversified financial system with the Central Bank of Kenya sitting at the apex of the financial sector as its supervisor and regulator. As of October 2005 the banking sector comprised 46 financial institutions compared with 51 in October 2004. These are composed of 41 commercial banks, two non-bank financial institutions (NBFIs), two mortgage finance companies and one building society. There are 39 insurance companies, two re-insurance companies, and four development finance institutions (DFIs), (CBK, 2005a).

The banking sector is dominated by five commercial banks, namely: Kenya Commercial Bank, National Bank of Kenya, Barclays Bank of Kenya; Cooperative Bank of Kenya; and Standard Chartered Bank, in terms of total assets, customer deposits, net loans and profit before tax. This is illustrated in Table 1. According to Ngugi (2003), eight banks with assets of more than Kshs 10 billion, accounted for 61% of the total assets, and 71% of the total deposits by June 2001. The same banks accounted for 67.7% of the total assets and 70.7% of the total deposits in June 2000. In a study by Khodhek (2004), the five biggest banks held 73% of the 1,910,000 total banking accounts. The dominance in the banking industry by these five banks is also documented by Mugwanga (1999), who shows that these banks held about 60% of total deposits and about the same level of total loans and advances. Of these banks, Barclays Bank Kenya is the market leader with a total asset base of Kshs 105 billion, customer deposits of Kshs 82 billion and net loans to customers of Kshs 66 billion as at December 2005. Nonetheless, analysis of 41 commercial banks and two non-bank financial institutions using Herfindahl-Hirschman index (HHI) reveals that the market is moderately concentrated[13].

Table 1: Performance of the Main Commercial Banks, 2005 (Ksh. Billion)*

Basis of comparison	KCB	NBK	Co-op Bank	BBK	SCBK	Equity Bank	K-Rep Bank
Total Assets	74.3	32.58	51.84	104.52	72.97	11.46	3.78
Customer Deposits	59.95	25.25	43.37	81.8	59.68	8.8	1.96
Net loans to customers	32.85	24.21	29.09	65.56	34.04	5.52	2.43
Profits before Tax	1.91	0.86	0.71	5.40	3.5	0.50	0.048

Sources: Bank Website and via www.bankelele.blogshot.com/2006_04_01

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[13] The Herfindahl-Hirschman Index (HHI) is a commonly accepted measure of market concentration. It is calculated by squaring the market share (MS) of each firm competing in the market and then summing the resulting numbers.

$$HHI = \sum_{i=1}^{n} (MS_i)^2 \; ; 0 \le MS_i \le 1 \forall i \; ;$$ Where MS_i is the market share of firm i in the market, and n is the number of firms. The HHI takes into account the relative size and distribution of the firms in a market and approaches zero when a market consists of a large number of firms of relatively equal size (perfect competition). The HHI increases both as the number of firms in the market decreases and as the disparity in size between those firms increases. Markets in which the HHI is between 1000 and 1800 points are considered to be moderately concentrated, and those in which the HHI is in excess of 1800 points are considered to be concentrated (towards monopoly). The Herfindahl-Hirschman index for fourty three commercial banks in the banking sector as at 2005 is 1346.33, implying that the market is moderately concentrated.

1.4 Conceptual and Analytical Framework

The emphasis on the fight against poverty is universally agreed on in such policies as the United Nations' Millennium Development Goals (MDGs), whose objective is to tackle the various dimensions of poverty, namely, nutrition, education, health, and environment. Equally, financial sector policy objectives are set with the goal of poverty reduction. Although the sole provision of sustainable financial services is not a panacea for poverty reduction, financial sector policy affects poverty both directly and indirectly. The direct way that financial policy can influence the poors' income generation and income stabilization (poverty reduction) is by increasing their access to financial services. To this end, Zeller and Meyer (2002) point out that micro finance as well as rural financial policy targeted at the poor need to be evaluated against three objectives: financial sustainability, breadth and depth of outreach and welfare impact. However, the relative effectiveness and efficiency of the policy objectives in terms of emphasis differs from country to country. In view of this, Christen et al. (1995), Otero and Rhyne (1994) argued that increasing the scale of operations would also increase the absolute number of the poor people reached, hence increasing the depth of outreach and financial sustainability are seen as compatible objectives. In contrast, Hulme and Mosley, (1996), Conning (1999) and Zeller and Meyer (2002) support the idea of a trade-off between improving depth of outreach (reaching relatively poorer people) and achieving financial sustainability.

To expound on these policy objectives further, firstly, the impact approach aim at measuring the effect of the increased use of financial services on various indicators of poverty by using a control group (non participants in the access to financial services) and a treatment group (people who have access to financial services) over a period of time. However, impact studies have been found to suffer from serious statistical problems, notably endogeneity and selection bias.

Secondly, one can use econometric techniques (a logit or a probit) to establish households' average usage of financial products and services as a proxy for financial service access in relation to their poverty levels/income levels. The assumption is that the higher the income level (the less poor) of a household the more the exposure to a higher average usage of financial products and services.

On the other hand, outreach approach measures the relationship between financial services and poverty reduction, and it is based on one of the core principles of modern economics, namely consumer sovereignty[14]. In outreach approach, the focus is on analysing whether those who were reached by financial services were indeed poor and whether they were satisfied with the services they received. Satisfaction, in the outreach approach, is measured through loan repayment and acquisition of new loan(s). The major advantage of outreach studies is that their focus on information about loan size, loan repayment and borrower retention imposes no additional costs beyond what a serious lender would normally require for borrower selection and loan recovery. The three objectives of rural financial policy, namely; financial sustainability, outreach and impact are represented in Figure 1 below.

The inner circle in Figure 1 represent the many types of institutional and technological innovations and best practices that contribute to improving financial sustainability (such as employment of cost-reducing measures), impact (such as innovating demand- tailored services for the poor) or outreach to the poor (such as enhanced poverty targeted mechanisms). The outer circle represents the external environment (e.g. macroeconomic stability). Overall, innovations at the institutional level (inner circle) and improvements in the policy environment (the outer circle) contribute to improving the overall performance of the financial system and its institutions.

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[14] Consumer sovereignty reminds us that the user of products and services are presumed to be the best judge of the benefits of these products and services relative to the cost of acquiring them.
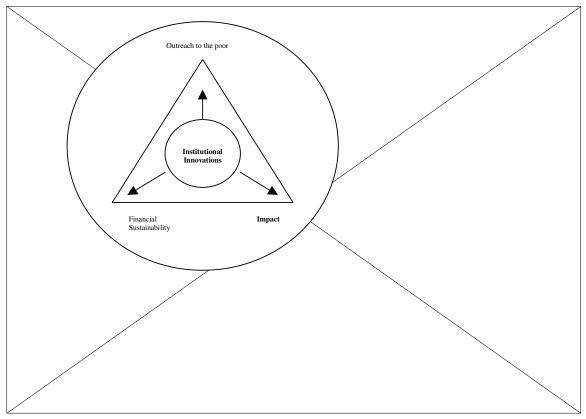
Figure 1: The Triangle of Micro Finance

Due to the unavailability of survey data on rural household access to and utilization of financial services, it is not possible to carry out an impact assessment or an econometric estimation of increased financial services access on poverty reduction. Therefore, this study restricts its analysis of the link between access to financial services and poverty reduction by using outreach levels and financial sustainability indicators. The impact of enhanced financial services is only deduced through reviewing of available literature from other countries where surveys have been conducted. The underlying assumption of this analysis is that if an individual has been able to access financial services and repay loans on a continuous basis from/to a given rural financial institutions (RFIs) that has attained high levels (percentage growth) of outreach and sustainability, then it implies that the individual's well being has been improved. Furthermore, identifying the unique banking needs and preferences of the poor and also establishing their savings' potential will facilitate enhanced rural poor access to financial services. The study analyses the following study variables:

1. Financial Access: refers to the availability of supply of quality financial services at "reasonable costs." The different dimensions to access include; the dimension of availability to be measured by bank branch distribution and the second dimension is the question of cost: at what price are the financial services available.

2. Outreach levels: measures the scale and depth of penetration of rural financial institutions to targeted clientele. The key outreach indicators are the number of clientele/members, number of FSAs, and total shareholders' equity.

3. Sustainability: this is the ability of RFIs to survive over the long term. The financial performance indicators, namely: volume of savings/deposits; profitability; loan repayment rates; loan portfolio at risk and return on assets or equity measure financial institutions sustainability.

1.5 Data Types, Sources, and Data Analysis
The study largely used secondary data collected from various government and financial institutions documents, notably: *Economic Surveys*, Republic of Kenya poverty and social indicators reports, the Central Bank of Kenya's annual reports, various monthly economic reviews, CBK prudential guidelines, K-Rep Development Agency-FSA data, and various commercial banks websites and reports. Secondary FSAs data will be complimented by literature on some formal banks with rural branches, mainly Equity Bank, Kenya Post Office Savings Bank (KPOSB), SACCO Front Office Service Activity (FOSA) in the descriptive analysis of outreach and sustainability. Financial service accessibility, the banking needs and the potential for savings mobilizations by the poor were established from the abovementioned secondary data of institutions engaging in rural financing.

2. Study Findings

2.1 Impact of Financial Services on Poverty Reduction
Available literature on the causal relationship between access to financial services (micro finance) and its impact on poverty alleviation is mostly observational from a few case studies. A study by Hulmes and Mosley (1996) of 13 MFIs in seven countries, including Grameen Bank (GB) in Bangladesh and Bank Rakyat Indonesia (BRI) found out that there is a positive impact of the MFI programmes on borrowers income (the poor), with an average increase over the control group ranging from 10% - 12% in Indonesia, to around 30% in Bangladesh and India. However, their study found that for the very poor, loan impacts on income are on average, small or negative in comparison to the control group.

Sebstad and Snodgrass (2002) examined the impact of MF programmes on opportunities (income, assets, and employment), capabilities (education, nutrition), vulnerability (coping strategies and financial shocks), and employment (participatory decision making, self esteem, women's roles) at the individual levels, households, and enterprise levels. The study was based on three MFIs, namely; SEWA bank in India, Zambuko Trust in Zimbabwe and Accion Communitaria del Peru, which offered loans to their clients with SEWA also offering voluntary savings services. The study revealed the overall impact of these MF programmes on the clients (comprising 46% below world's Bank poverty line in SEWA, 4% in Accion and 34% in Zambumko) as very moderate. It is only in SEWA that some borrowers experienced income growth over two years while some were still trapped in the poverty cycle. Moreover, the savers at SEWA made some steady progress out of poverty although at a slower rate than the most successful borrowers.

Coleman (1999) found no evidence linking months of access to a village bank program on any asset or income variable and no correlation between loan access from village bank and increased productive activity, while Pitt and Khandker (1998) study estimated that 5% of participants' households were pulled above the poverty line annually. Overall, the impact of MFIs' credit programmes is positive among the middle to upper income poor but rather unclear to the very poor clients who require an innovative range of financial products.

The poorest households engage in risk-reducing rather than income-growing behaviour and hence have little or no debt capacity, preferring access to flexible and convenient savings services. It is in this regard that Hulme and Mosley (1996), and CGAP (2000), believe that the MFIs focus on credit has had little impact on the poorest households. The reasons cited by these authors for this lack of impact are: (i) the clients of MFIs tend to be in the middle to upper income levels of the poor due to: (a) the poorest households view loans as inappropriate hence exclude themselves from MF programmes, (b) the poorest are seen as a risky lot in the group based lending schemes, and (c) the more commercialised MFIs and their staff incentive structure pushes them to deal with the more well

off clients; (ii) evidence, albeit limited, shows little indirect benefit for the poorest households from loans advanced to the middle-upper income poor; and (iii) lastly, even when the very poor join the MFIs, their actual benefit is questionable.

Studies by Yaron et al. (1997, 1998) depicts such RFIs; GB in Bangladesh, Bank of Agriculture and Agricultural Co-operatives (BAAC) in Thailand, and Village Banks {Unit Desas, BRI-UD of Bank Rakyat Indonesia BRI} as being largely successful in achieving the primary performance objectives of outreach and self sustainability in poverty reduction. BAAC served about 76% of borrowers of the Thai farming households, while the BRI-UD credit reached approximately 5% of all the Indonesian households (1.9 million households) with as many as 14.5 million households savers. These numbers grew to 2.5 million loan accounts and a phenomenon 16.2 million deposit account in 1996. The GB had 2.06 million clients and provided an estimated 36% of the total credit to the poor Bangladesh people[15].

Yaron et al. (1998), further reveals that BRI-UD achieved profits earnings of $177 during 1996 and a return on average assets of more than 5% a year between 1994-1996. As of July 2004, GB had 3.7 million borrowers, 96% of whom were women. With 1,267 branches, it provides services in 46,000 villages covering more than 68% of the total villages in Bangladesh[16]. The good performance and success of the three RFIs has largely been attributed to many factors, including: favourable macroeconomic environment, innovative and flexible loan terms and conditions, good physical and social rural infrastructure (Thailand and Indonesia), management autonomy, staff training, and some tax related incentives. These cases demonstrate that financial services can be extended to the low-income rural clients at relatively lower costs with minimal subsidy dependence through the use of innovative and replicable techniques.

The foregoing success stories have inspired many other countries that have come up with replica models of the three institutions, especially the "Grameen Bank Replicas." Felloni Fabrizio and Seiel H. D. (2003) study show that in the Philippines, rural banking started out way back in 1986 with the Center for Agriculture & Rural Development (CARD), a credit NGO, which provided micro-loans to the rural poor. Its success story was exemplified by the increase in active membership from 307 in 1990 to 6,844 in 1996. Besides, outreach levels reached 92,500 poor and non-poor depositors, 56,400 poor women borrowers in 1992 and repayment rate of 99.7% over the same period. On the same note, India's National Bank for Agricultural and Rural Development (NABARD), the pioneer in rural banking model, hit 1,051,906 credit outlets (196 Regional Rural Banks and 14,536 branches) in 2000/01. India's agriculture and allied exports have been boosted by the development of rural credit institutions. The high repayment rate is an indication that the poor can run investments, make profits and repay the loans – good indicators that the poor are credit worthy.

A variety of MFIs, in particular village banks (FSAs) have emerged over time, to meet the unsatisfied demand for financial services in Africa, (Basu Anupam et al., 2004). Pearce and Helms (2001) revealed that as at December 1999, Uganda village banks- Financial Service Associations (FSAs) had 299 shareholders with an outstanding loan portfolio of $71,300 and savings deposits of $14,100. The figures for Benin as at April 2000 were 244, $112,000 and $30,800 respectively while Kenya had 18,771 shareholders with net deposit of $64,000 in 2000, which increased tremendously to 52,070 shareholders, $1,010,958 outstanding loan portfolio and saving deposits of $2,706,986 in 2005. According to Pearce and Helms (2001) the growth and success in FSAs is dependent on demand oriented product diversification and linkage with other formal financial institutions, competition from other financial service providers, governance structures and the significance of donor support.

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[15] The BAAC's high penetration could be attributed to the legislated requirement that commercial banks in Thailand lend 20% of their deposit to the agricultural sector directly or through BAAC, in 1987. The commercial banks went with the latter option.
[16] Via grameen-info.org/bank/index.html

In sum, the foregoing literature reveals that access to financial services by the poor can improve their incomes and, therefore, their welfare, especially if complementary inputs such as sufficient infrastructure are provided. Though the poorest of the poor are often risk averse, they too need financial services to boost their investment ventures. Once the poor are financially endowed, they can lift and sustain themselves out of poverty. They have the ability to mobilise and utilise savings and with a loan repayment rate of about 99% in FSAs in Kenya, FSAs can sustain their activities with good profit margins. An important lesson for Kenya and commercial banks to learn is that it is not always the case that all the poor cannot afford credit. Some can, and due to peer pressure, social norms and threats, loan defaulters are fewer.

2.2 Access to Financial Services

Access to financial services has been identified as a major problem experienced by many in attempts to start and sustain business in Kenya. Though it is true that credit in formal banking has grown steadily over the years, the same is not available to the people in the rural areas. Although there are about 532 branches of financial institutions in Kenya (CBK, 2005b), their location is heavily biased towards the urban areas and districts with good infrastructures that can fetch good returns. Nairobi, Rift Valley, and Central province provinces have the bulk of commercial bank branches, 77, 52, and 44, respectively. Central province has an advantage over the others as a result of Equity Bank mobile banks - out of a total of 43 Equity's mobile banks of, 36 are in central province. Nyanza and Western provinces have the smallest number of commercial banks branches, 19 and 16 respectively (see Table 2). For instance, two of the largest banks, Barclays Bank of Kenya and Standard Chartered Bank of Kenya closed most of the rural/upcountry branches, citing high transaction costs and, therefore, unprofitability. This further increased the number, especially in the rural areas without access to banking facilities. It is estimated that in Kenya, 30% of households have access to credit (Republic of Kenya, 2007).

Table 2: Provincial Distribution of Main Bank Branches

Provinces	KCB	NBK	Co-op Bank	BBK	SCBK	Equity Bank	K-Rep Bank	Sub-total	Equity Mobile Banks	K-Rep Microfin.	Total
Nairobi	13	4	14	26	12	5	3	77	0	4	81
Coast	13	2	1	10	4	0	1	31	0	0	31
Rift valley	25	5	3	7	6	4	2	52	1	5	58
Eastern	13	2	5	3	2	3	0	28	6	9	52
Nyanza	8	3	2	5	1	0	0	19	0	0	19
Western	7	2	2	3	1	0	0	15	0	1	16
Central	15	4	5	7	3	10	1	44	36	0	80
N. Eastern	3	0	0	0	0	0	0	4	0	3	7
Total	97	22	32	61	29	22	7	270	43	22	

Source: Bank Websites and Republic of Kenya, 2005a

Commercial banks are reluctant to lend to MSEs and low-income households because they lack adequate or credible credit history and any usable collateral. Another explanation for locking out the bulk of the poor in financial services by commercial banks is the high transaction cost and the perceived high risks. Commercial banks also view the poor as people who cannot save and only need credit services. As a result, only a few commercial banks have tried to provide micro finance[17] to the MSEs and the low-income people, with the exception of Kenya Commercial

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[17] Micro finance means services (savings, credit, payment transfers, insurance) for poor and low-income people.

Bank, Equity Bank and K-Rep Bank, the other commercial banks target client is largely urban and a few rural people just above the low-socio-economic strata.

Although the core function of banks is the extension of savings and credit facilities, banks offer different financial products. The type of products and services offered depend upon the type of bank in question. Products and services offered in retail banking include: deposit taking; lending/credit services; cheque cashing; ATM banking; issuing of debit cards, credit cards; facilitation of money transactions; online banking; and provisions of safe deposit boxes. Banks offer these services at a fee. Commercial banks across Kenya charge various prices on the variety of products and services they offer. Table 3 provides an indication of the cost of maintaining a basic personal saving account at the five major banks selected in terms of network coverage and profitability, with an additional two banks that have been documented to have a substantial foothold in the provision of financial services to poor households.

Table 3: Banking Charges Across various Banks in 2005 (Ksh.)

Commercial Banks	Opening and Minimum Balance	Minimum Ledger Fees per Month	Ledger Fee Per Entry	Closure of A/c	Interim statement per Page	Duplicate statement per page	Withdrawal OTC	Fee per ATM withdrawal
Barclays Bank of Kenya Ltd.	30,000	300	N/A	500	100	300	300	30
Kenya Commercial Bank Ltd	Nil	200	Nil	600	100	300	100	20
Standard Chartered Bank Ltd	50,000	350	37	600	100	2,500	500	25
Co-operative Bank of Kenya Ltd	1,000	Nil	Nil	300	100	250	100	25
National Bank of Kenya Ltd	500	250	Nil	500	100	250	100	20
Equity Bank Ltd	400	Nil	Nil	300	50	50	50	30
K-Rep Bank Ltd	500	N/A	N/A	500	150	150	N/A	N/A

Source: Central Bank of Kenya via www.centralbank.go.ke/downloads/bsd/bankcharges

Although it is difficult to compare bank costs across different banks, Table 4 shows that all the seven banks offer an opening and minimum balance ranging from Ksh 400-50,000, with the exception of KCB. An opening minimum balance of Ksh 400 and the concomitant monthly charges are still out of reach for many poor households (46% of Kenyans who live below the poverty line). However, KCB charges a prohibitive average monthly charge of roughly between Kshs 250 and Kshs 500. This suggests that availability of financial services does not always result in accessibility.

Furthermore, the trends in commercial banks and NBFIs real deposit rates have been negative for the last five years, resulting in little incentives to hold savings in banks. Besides, commercial banks' average deposits rates ranged 0.98% and 3.34% for under three months time deposit in December 2004. However, the mobilizations of savings were not dented by the negative real interest rates on deposits (Republic of Kenya, 2005b). The savings products offered by majority of the commercial banks are not geared towards the needs of the poor people, locking them out in the provision of the valued financial services.

The banking sector liquidity ratio has been just over 40% in the last five years (42% in 2004), which is way above the 20% minimum requirement. This shows that the banking sector is highly liquid by 20%. The figure of Ksh 179, 425 million of liquid assets in December 2004 represent a 4% liquidity ratio, down from Ksh 186, 224 million in December 2003. The decline in liquid assets may be explained by the rise in advances to deposits ratio from 77% to 82% in the private and public sector, with a rise in unsecured personal loans following an aggressive marketing blitz

and reduced lending rates. Commercial banks lending rates have been declining from 19.49% in June 2001 to about 13.09 in June 2005 (CBK Statistical Bulletin, 2005d). Although, there was increased loan advancement, it was still out of reach for the small-scale entrepreneurs and the rural poor as evidenced by the composition of the commercial banks credit share, mentioned earlier in this section.

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Rural Banking Programme: The government undertook a deliberate programme to extend the access of mainstream banking in the rural areas in the early 1980s. However, these efforts failed due to closure of banks citing insolvency problems in the late 1990s.[18] It is as a result of this that alternatives to mainstream banks have come up, including: SACCOs, NGO-MFIs, KPOSB and the recent model known as Financial Service Associations (FSAs)/Village banks. Of the current 41 commercial banks, only five have well-developed rural banking operations including; KCB, Co-operative Bank, Equity Bank, K-Rep Bank and Family Finance Building Society. However, despite the presence of both the formal and informal institutions in the rural areas, a significant percentage of the rural people do not have access to financial services. For instance, during 2005, the mainstream institutions, namely, Co-operative Bank, Equity Bank, K-Rep Bank, Family Finance Building Society and KPOSB, mainly provided micro finance services to the urban and rural areas. According to the CBK, the five institutions together had 4.2 million savings clients and 1.35 million loan clients, (CBK, 2005b).

FSAs / village banks were established in 1997, in an effort to reach the poorest of the poor. These are semi-formal financial institutions that create access to basic banking services on a sustainable basis by utilizing a community's rules, custom, relationships, knowledge, solidarity and resources combined with formal financial methods and concepts. FSAs are owned, financed and managed by the community/villagers, who are shareholders. FSAs offer savings and credit services, in addition to other services like cheque clearing and money transfers to members and the wider community. Loans are disbursed to members only with no requirement for a formal collateral, as members act as guarantors of the individual loan borrowers. The FSA programme covered 16 districts[19] in rural Kenya in 2003, with a total of 42,148 clients of which 41.8% comprised of women with the membership/clients increasing to 46,712 as of June 2004. Overall rural banking programme in Kenya has been hampered by lack of infrastructure meant for upgrading technology; lack of appropriate micro finance and SACCO legislation and to a large extent lack of a deliberate rural financing policy in Kenya.

Banking Regulations: The Banking Act, which provides the legislative framework for regulating banking business, empowers the Central Bank to issue guidelines to be followed by institutions in order to maintain a stable and efficient financial system. As a result, all banking institutions are expected to be fully compliant of the Banking Act and the Central Bank Prudential guidelines. Of particular importance is the minimum capital requirement for commercial banks, which has faced several reviews, in order to ensure that banks maintain adequate capitalization, especially after the early 1990s bank crisis. These revisions for banks minimum capital has seen them go up from Ksh 15 million in 1985 to Ksh 400 million and down to the current Ksh. 200 million, amended in 2003 and Ksh 150 million for NBFIs. Consequently, the Central Bank encouraged small banks to merge so as to ensure adequate capitalization as stipulated under the Banking Act. The Banking Act was also amended to give CBK more power to enforce banking laws and regulations, including the power to levy monetary penalties for non-compliance. The Banking Act precludes any institution not licensed under the Act from soliciting or accepting deposits with the exception

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[18] See KIPPRA Special Report, 2001
[19] The districts included, Marsabit, Turkana, Garissa, Kwale, Kilifi, Taita Taveta,Western (Busia, Butere-Mumias), South Nyanza (Migori, Suba), Kakamega, South Rift (Bomet, Buret), Machakos, Makueni, Kitui, and Meru South.

of Kenya Post Office Savings Banks (KPOSB), Agricultural Finance Corporation (AFC) and member-based societies registered as cooperative societies, under section 54 of the Banking Act.

Unlike the commercial banks, the major challenge constraining the development of MFIs and SACCOs is the lack of appropriate legal and regulatory framework to govern their specific operations. To this end, the deposit-taking Micro Finance Bill, (Republic of Kenya 2005b) has already received cabinet approval and is waiting tabling in Parliament while the SACCO Societies Regulatory Bill, (Republic of Kenya 2005c) is with the Attorney General's Office for finalization. According to the Micro Finance Bill, 2005, every deposit taking MFI will have to maintain various capital ratios, including a core capital of at least Kshs 60 million. Besides, institutions categorized under section 7 of the Act in terms of their geographical and administrative factors are required to maintain a core capital of Ksh 20 million. The Bill also proposes to give CBK sweeping powers to supervise and regulate these institutions, and in addition, addresses corporate governance issues, which involve the relationship among the owners, stakeholders, directors and the management. In this regard, the bill proposes a minimal stake for owners and those running the institutions.

The minimum core capital requirement may lock out businesses and some MFIs operations, especially those in the rural areas. Moreover, the minimum capital of Ksh 60 million could create a second tier of commercial banks. In retrospect, regulators conversely see the requirement of minimum balance as appropriate for business survival and for the benefit of all the stakeholders and that the separation of roles among owners, managers and directors limits opportunistic behaviour.

The section below elaborates on the market penetrations in terms of outreach and sustainability levels of the main players in rural financing/banking.

2.3 Outreach and Sustainability

Following major financial sector reforms initiated by the World Bank in 1989, the country has seen recent innovations and development in the rural financial landscape. The SACCOs savings volume has grown from Ksh 29 billion in December 1997 to over Ksh 155 billion by September 2004. Equally, the outstanding loans amounted to Ksh 22 billion increasing to over Ksh 90 billion in the same period (KIPPRA, 2001; CBK, 2005b). Despite SACCOs' growth in financial service delivery they have met various challenges and overcome this by continuing to diversify their products and services, including the introduction of FOSA in response to the gaps left as the main commercial banks closed their rural bank outlets.

As of June 2002, the total smallholder credit for the five commercial banks with rural branches was close to Kshs 11.5 billion (or US$ 161 million), of which the Co-operative Bank of Kenya provided 94%. Of the other large commercial banks, only the Kenya Commercial Bank had a smallholder credit portfolio, but this was insignificant in comparison to the bank's total loan portfolio. In the mid 1990s, two building societies, Equity Building Society (EBS) and Family Finance and Building Society moved into rural finance with innovative products and combined rural portfolio of some US$ 9 million. In addition, the five banks had about US$ 20 million in micro finance, most of it, disbursed in urban areas but with potential to expand into the rural areas as well (CBK, 2005b). Out of the US$ 20 million in micro finance, K-Rep Bank, EBS and Family Finance and Building Society accounted for 87%.

This notwithstanding, a vast majority of the rural poor were still not reached by affordable financial services. This is what led EBS to further institute a US$ 262 thousand mobile banking

unit drive in 2000 to meet the challenge of providing financial services in remote rural areas. As of October 2002, EBS's change of approach led to 35,501 micro-borrowers with an outstanding balance portfolio of US$ 13.1 million and an average size loan of US$ 471 per loan. EBS also had 148,299 savings clients with a portfolio of US$28.3 million. Following the bank's conversion and registration to a fully-fledged bank in December 2004, EBS savings clients increased to 430,000 with a portfolio of US$68 million and the bank currently offers a full range of commercial banking services including checking accounts and foreign exchange services besides village banking.

According to Arora (2004), Equity's mobile units have penetrated isolated communities especially in Central province. There are currently a total of 43 mobile banking facilities covering Central, Rift Valley and Eastern provinces with Central being the biggest beneficiary, with a total of 36 mobile banks. On the other hand, K-Rep Bank had 25,422 savers and 55,441 active borrowers as of December 2004 up from 17,269 savers and 45,379 active borrowers in 2003[20]. Further the portfolio at risk (PAR), a sustainability indicator measuring the value of all loans outstanding that have one or more instalments of principal past due more than 30 days for K-Rep Bank has been relatively low, below 10% although rising from 3.56% in 2001 to about 8.17% in the 2005. This means that the portfolio quality is good, however, the portfolio quality for Equity Bank appears poor because its PAR greater than 30 days has risen from 13.31% in 2001 to about 24.3% in 2005. There could be several reasons leading to repayment problems (non-performing loans) and hence increasing PAR for Equity Bank. Although the asset quality may undermine the profitability and hence sustainability of a financial institutions, the PAR for these two banks with rural branches is intact.

Table 4 and Table 5 below summarize the current 59 FSAs established in the years 1997 to 2005 with the reduction in the number of FSAs from 67 in 2004 as a result of the high loan and share delinquency rates in the Northern Kenya province (i.e. Marsabit and Garissa districts), hence their collapse[21]. Outreach levels for the 59 FSAs are notably high with the growth of shareholders averaging about 177%, share capital of about Ksh. 668 million, and net aggregate savings of Ksh 198 million.

Table 4: Summary of FSA under K-Rep Management

Region	No. of FSA	Number of shares	Share Capital	Total Shareholders at Launch by 2000	Total No. of Shareholders in 2005	Growth
Kitui	7	24,355	7,306,500	2,341	4,720	101.62
Makueni	7	28,302	8,490,600	2571	5,309	106.50
Kilifi	7	24,286	7,345,800	1,449	6,458	345.69
Kwale	8	17,153	5,145,900	1,812	4,443	145.20
South Rift	7	55,656	16,620,300	3,636	12,648	247.85
S. Nyanza	6	24,373	7,311,900	2,124	6,248	194.16
Western	8	22,135	6,438,800	2,756	6,767	145.54
T. Taveta	9	27,265	8,179,500	2,082	5,477	163.06
Total	59	223,525	66,839,300	18,771	52,070	177.4

Source: K-Rep Development Agency

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[20] Source via http://www.mixmarket.org/en/demand/demand.print.profile.
[21] See Osterloh S (2001)

Table 5: Summary of Loans and Savings Details

Region	Loans (Mn. Kshs.)		Performance	Savings (Amount in Millions of Ksh.)	
	Loans Disbursed	Loans Outstanding	Loan Repayment%	Number of savers	Net aggregate savings
Kitui	44.03	11.10	97	4,396	4.62
Makueni	46.45	13.72	100	4,083	7.16
Kilifi	26.68	7.28	94	5,614	7.62
Kwale	19.72	4.79	87	2,523	5.48
S. Rift	145.79	7.28	100	11,613	79.36
S. Nyanza	27.04	4.63	90	7,111	49.78
Western	24.04	11.64	92	9,994	37.78
T. Taveta	65.70	13.35	97	4,243	5.81
Totals	399.35	73.80		49,577	197.61

Source: K-Rep Development Agency

The sustainability of these village banks is confirmed by high loan repayments rates from all the FSAs registering over 90% (Tables 5) with the exception of the FSAs in Kwale averaging about 87%. In fact, all FSAs posted profits, with FSAs in Kitui and Makueni recording very low rates of loan delinquency as measured by the PAR of 6.38% and 1.46%, respectively. The high growth reveals that more clients are joining the FSAs and the high loan repayment rate is an indication that the customers are able to service their loans and acquire new loans. Implicitly, the member borrowers' welfare must have improved. Following the high outreach levels of the 59 FSAs and their sustainability levels, the operational performance of the FSA is deemed good and this again translates to the improved welfare of the members who access financial services from these institutions.

2.4 Banking Needs and Preferences of the Poor

Despite the strides made by formal MFIs, a large portion of the rural poor in the country still lack access to financial services. There are only four commercial banks that are reported to provide micro finance and some form of rural finance operations, namely, KCB, Co-operative Bank, Equity Bank and K-Rep Bank. The remaining commercial banks target high-net worth individuals and corporate clients.

The poor have been disadvantaged because the conventional banks and other formal financial institutions rarely cater to them. The reasons cited are: they are a high-risk group; do not perceive themselves as being able to meet the requirements for obtaining financial services from formal institutions, lack a credit history, are often unable to raise the minimum balance for opening a savings bank account, face high transactions costs, face unfriendly and bureaucratic procedures in dealing with formal institutions and the cost implications would make the financial providers unsustainable. Therefore, the poor, who earn less than a dollar a day, are thought to be neither credit worthy nor able to save or pay for insurance against any of the risks they face. These assumptions were discounted by the empirical research on informal financial markets and the risk-coping behaviour of households, (Zeller, undated, Alderman and Paxson, 1992, Deaton, 1992 and Rutherford, 2000). Besides, the findings from the FSA's (village banks) statistics on savings and loans volume, Table 4 and Table 5 and also from the above mentioned commercial banks with rural banking have proved these assumptions to be false.

In order to serve the rural poor in a sustainable manner, policy makers and financial institutions must first understand their specific needs (Rutherford, 1999 and Nigri, undated). Generally, the financial services the rural people need or demand are more or less similar to those of the people

across the socio-economic spectrum, right form the high income earners to the medium and the low-income earners (the poor) themselves (Rutherford, 2000, Porteous, 2003). The difference is in the cost and the accessibility of the services. These needs are as follows:

- A safe place to keep their cash and savings opportunities. Despite the poor peoples' low-income levels and a high propensity to consume, their ability to save is not in question as pointed out by Yaron et al. (1997) and Rutherford (2000). This is evident from the poors' engagement in "reciprocal lending" and their participation in informal savings groups." In many instances, their demand for saving facilities is greater than for credit (see Nigri, undated);

- Access to liquidity through either savings, and/or credit services for the poor to cover lump sum needs or basically to smooth their consumption. The fact that the poor have low-income levels does not mean that all their expenditure is small sums. Both Mugwanga (1999) and Rutherford (2000) show that the expenditures requiring lump sum consumptions are divided into; lifecycle events (e.g. birth, marriages, festivals), emergencies (e.g. sicknesses, deaths, wars, natural calamities) and investment opportunities;

- Insurance for risk management, social security and loan protection;

- Transfer payments services. The dispersion of families, relatives and friends in the urban-rural areas and abroad necessitates a service that will allow for electronic transmission facilities for people to receive money from loved ones and for pensioners to access their pension as most are found/ retired in/ to the rural areas (Spio et al., 1995; Jazayeri, 1996; Yaron et al., 1997).

In addition to saving and credit facilities, FSAs also offer money transfer facility to their clients, especially in areas where FSA-commercial bank(s) proximity, allows for a linkage. It is through this link with commercial banks that FSAs can deposit members' share capital and enable their members to access the telegraphic transfer system use.

FSAs charges are affordable to their target client in comparison to what the conventional banks charges. Firstly, the transactions cost of the clients are reduced due to the proximity of FSAs and secondly, the cost of maintaining a bank account is usually lower than the approximate Ksh. 250-500 per month charged by the commercial banks. FSAs minimum opening balance is Ksh. 200 for members and Ksh. 400 for associate clients, and most of the charges are flexible, usually per transaction or withdrawal as opposed to the common fixed monthly fee by conventional banks. The typical charges of operating an account in an FSA as shown in Table 6, confirming their affordability as compared to conventional bank charges in Table 3.

Table 6: Typical Charges among FSAs in Ksh.

Withdrawal Amount	Charges
20 -100	5
101 – 1,000	10
1001 – 10,000	50
10001 and above	100
Other Sources of Income	
Registration Fees	100
Passbook	60
Loan Application form	100
Affidavit	10

Source: Khodhek (2004)

2.5 Potential for Savings Mobilization and Utilization

Experience and performance of the above mentioned players in rural banking reveals that the rural poor have the capacity to mobilize savings and utilize resources optimally. The good performance of the various FSAs under the promotion of K-Rep further attests to the fact that the poor also have the capacity for financial savings, albeit in small amounts. This is against the popular belief of conventional banks that the rural poor do not save and are, therefore, not credit worthy. It is alongside this belief that earlier MFIs offered credit without taking deposits.

Evidence from literature on informal financial institutions supports the fact that the rural poors' savings potential has remained largely unexploited (Gugerty, 2005). The informal financial market, and in particular the local-level financial savings organization known as ROSCAs[22], have been the bedrock of savings mobilization in the rural areas of many developing countries. There is extensive use of the informal sector group savings mechanism in Kenya. A sample of 115 households in Central Province of Kenya showed that 45% of the women participate in at least one merry-go-round and some in as many as five (Kimuyu, 1999, Johnson et al., 2002). The growth of money lending and the evidence of managed ASCA programmes in savings mobilization by the rural poor, where the formal credit market is thin are enormous (Mule et al., 2002). The reasons for joining ROSCAs are varied, but according to Gugerty (2005) most participants reported that ROSCAs make them committed to save while Anderson and Balland (2002) show that ROSCA participants, and in particular married women in a low-income neighbourhood in Nairobi, use this medium to protect household savings against claims by husbands for immediate consumption.

In Kenya, the poor people mobilize savings through various ways to meet their lump sum needs. As of May 2005, the 57 FSAs had a total of 306 mandatory groups savings with a total savings of Kshs. 32,000,880. These groups, meant for borrowing and co-guaranteeing member loans are popularly known as Kikundi cha Mkopo (KCMs) and usually comprise 5-10 members. Out of these KCM groups, 5,214 members are active shareholders. Further, Mugwanga's (1999) study reveals that savings mobilization is stimulated by micro credit institutions (MCIs). In his study of five MCIs (K-Rep, KWFT, Pride, NCCK and Wedco), compulsory and regular savings was a condition to participate in MCI programmes. One can only withdraw their savings when they are exiting the programme; otherwise the savings are basically illiquid.

Apart from the rural poor being involved in informal groupings like merry-go-rounds (ROSCAs), ASCAs, for savings mobilizations, MCIs also stimulate interest in such arrangements through the use of group lending mechanism. This is evidenced by the multiple memberships of merry-go-rounds among MCIs/FSAs (e.g. K-Rep and KWFT) clients more often than among non-clients. Besides, all members of MCIs and FSAs are encouraged to operate bank accounts for processing their loan cheques. A clear indicator of active bank accounts is shown by the decision to fall back on the savings when one faces urgent lump sum needs.

The poor use borrowed funds from both formal and informal institutions in a varied manner. The bulk of the FSAs members' loans in Kenya go to investment/productive activities, followed by school fees and medical emergencies (Kodhek, 2004). However, as much as Osterloh (2001) agrees with the above sentiments, her study also found that over 40% of the loans in the five FSAs in Marsabit, Northern Kenya were used for consumption rather than production activities. This is due to the few business opportunities in Marsabit district and this could explain the reason why several FSAs from this region collapsed. In line with this, Littlefield et al. (2003) demonstrate that the poor not only use financial services for business investment in the micro enterprises but also

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[22] Rotating Savings and Credit Associations also known as merry-go-rounds

to invest in health and education, to manage household emergencies and to meet a wide variety of other cash flow needs that they have.

The common loan facilities offered by FSAs are working capital/business loans, emergency/medical loans, school fees loans, development loans (e.g. houses, business premise) and consumption loans[23]. Though each FSA develops its own loan product depending on demand, the aforementioned loan products are common (investment/developmental and social loans).

3. Conclusions and Recommendations

The following conclusions and associated recommendations are made:

3.1 Conclusions
Government efforts in addressing poverty over time have not been fruitful - poverty still remains high and wide spread in the rural areas, though it is fast growing in the urban areas. As the country strives to address poverty, proper use of a combination of instruments, both financial and non-financial is important, if gains are to be consolidated. From the literature reviewed above, it is evident that poverty can be addressed through enhanced rural financing, notwithstanding the fact that the poorest of the poor are risk averse.

Kenya's financial market still remains thin in the rural areas, as most financial institutions are concentrated in urban, peri-urban, and cash crop growing areas. This means that most of the rural poor do not have access to formal financial services, with the situation exacerbated by the cost of banking. The poor require similar financial products and services as the other socio-economic groups, albeit in small proportions and at affordable costs. The fears that formal banks and other financial institutions have about their survival are dispelled by the performance of village banks/FSAs in terms of outreach and sustainability although their scale of operation is smaller than for formal banks. Consequently, the tabling of the deposit-taking MFIs Bill 2005 is a milestone in putting in place the much needed legal and regulatory framework but the proposals therein, may restrict the growth and survival of micro finance institutions especially as it relates to offering services in rural areas, where majority of the poor are.

Experience and performance of institutions offering rural financing shows that the poor can also save, borrow and promptly repay their loans at market rates. The growth and performance of micro finance institutions is a good pointer to the existence of a large unexploited saving mobilisation and utilisation potential in the rural areas. This is against the popular belief hitherto held by corporations that the poor could not save and that all they needed was credit. Besides, the belief by multinational banks' that offering financial services to the poor as unprofitable and, therefore, unsustainable does not hold water.

3.2 Recommendations
Arising from the above conclusions, the study recommends for the following measures to enhance rural financing and, therefore, improve access to financial services.

Innovative tailor-made products and services for the poors' demands: The experience of the village banks initiatives reveals that there exists savings mobilisation and utilisation potential among the poor. Commercial banks need to carefully design financial products that meet the banking needs of the poor. The poors' saving are 'small' and so are their loans. The success of

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[23] See K-Rep Development Agency Reports, Tegemeo Rural Finance Paper, 2004

FSA is based on local knowledge that enables them to mitigate the problem of adverse selection and moral hazard. There is need to entrust the society to screen and monitor borrowers. This works through peer pressure, social norms and one's fear of losing guarantors for subsequent loans, especially in-group lending. Besides the pricing structure of products, products flexibility, and reduced transaction costs, costs reduction measures like proximity to the poor and low cost organizational structure of these institutions is paramount.

Government incentive and policies geared towards rural banking: As the government hastens financial reforms that involve privatisation of hitherto government owned banks, there is need to put in place incentives to encourage rural financing by mainstream commercial banks. Effective rural financing needs to be complemented by increased investments, especially on rural infrastructure and human development to equip the would be 'potential investors' with necessary technical skills.

Institutional and regulatory measures: There is need to establish a favourable policy environment to facilitate proper functioning of rural financial institutions. In this regard, it is imperative that the banking regulation and the legal framework be adapted to be favourable to the needs of micro finance operations so as to ensure their financial sustainability. Implicitly, MFIs are of necessity inclined to convert to regulated institutions accepting public savings, similar to the banking institutions, a situation likely to subject them to banking regulations. This notwithstanding, an important point to note is that the micro finance industry has special features that call for the modification of banking regulations to accommodate them in terms of flexibility in minimum capital requirements, appropriate capital adequacy ratios, ownership structures, appropriate tax treatment, interest rate ceilings, portfolio risk evaluation and aggregate portfolio quality and loan loss provisioning. Mobilization of savings as loanable funds could be enhanced with the presence of a deposit protection facility for these village banks.

Linkage with the informal financial and formal financial institutions: Enhanced links of FSAs with the formal financial institutions would provide access to insurance services, transfer payments and term deposits. However, these links can only work sufficiently in a competitive environment and at a time when FSAs volume of transaction is high enough to offset concomitant transaction costs. Besides, FSAs could act as payment windows for banks albeit jeopardising their organisation status while the informal sector provides a ready feeder into FSAs membership because of their savings mobilization potential. Subsequently, FSAs links with commercial banks would provide an environment for products diversification and hence lead to greater scale and outreach levels of the poor. Furthermore, savings mobilization could be stimulated by increasing the deposit/savings interest rates if this linkage exists.

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Case Study 3: Poverty Alleviation in Rural Namibia through Improved Access to Financial Services[24]

Abstract

This paper analyses whether improved access to financial services can contribute to poverty alleviation strategies among the rural population in Namibia.

Using data from the FinScope Survey conducted in 2003 and the preliminary *Namibia Household Income and Expenditure Survey 2003/2004* report, a censored regression model was applied to financial service usage by household heads in Namibia using the monthly income for each head of a household as a proxy for poverty. An Ordinary Least Squares model was also applied to financial service usage by household heads in Namibia using the food consumption ratio in each of Namibia's 13 regions as a second proxy for poverty.

When income is used as a poverty measure, this paper found that improved access to financial services is associated with higher levels of income for the household head in rural areas. This relationship is consistent in an overall sample consisting of both urban and rural populations. In addition, a disaggregated analysis of household heads points out that several financial products are inferior goods, which are defined as those whose use decreases as income rises. These inferior goods include debit cards, garage or petrol cards and transaction or transmission accounts.

Finally, the use of informal micro lenders seems to be present among low-income households in rural areas. This relationship cannot be rejected conclusively even at higher levels of income. When the food consumption ratio is used as a poverty measure, this paper found that poor regions are associated with a higher probability of household heads that have never had access to financial services. Also, poor regions are associated with a lower probability of household heads that currently have access to financial services. Finally, access to financial services may not be a sufficient solution to alleviate poverty among those that are severely poor in Namibia.

The policy implication of this paper is that improved access to financial services can contribute to poverty alleviation among the poor in rural Namibia. However, when designing poverty alleviation strategies that focus on improving access to financial services in rural Namibia, it is important to understand how informal networks operate. This will avoid the danger of pushing for more formal alternatives that may erode the benefits derived by those accessing financial services from these informal providers and make them more vulnerable to the adverse effects of poverty. Unfortunately, improving access to financial services in not as potent when the households are severely poor.

1. Introduction and Background

Various non-economic factors have created a dual society characterised by inequality in Namibia. With the majority of those adversely affected by these non-economic factors residing in the rural areas, a poverty alleviation strategy is one approach that could be used to correct these imbalances.

Poverty alleviation is defined as reducing the fluctuations of income levels between poor and non-poor scenarios. It is not the same as poverty reduction, which is the process of moving households

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[24] Analysis by Jonathan Adongo and Mariana Deen-Swarray of the Namibian Economic Policy Research Unit

from a poor to non-poor scenario, permanently. Although, poverty alleviation can be criticised for not being as noble as poverty reduction it is an important first step.

This paper recognises that poverty alleviation is important to all individuals in a developing country context, including those in marginalised, urban areas. However, it focuses on the rural areas of Namibia because that is where the majority of the segment of the population that was previously disadvantaged resides.

One effective tool to alleviate poverty is increasing access to financial services. This increased access reduces poor households' vulnerability to risk caused by fluctuations between various poverty scenarios, which is one important factor that contributes to their breaking the vicious cycle of poverty.

This paper investigated whether a link exists between poverty alleviation in the rural areas of Namibia and increased access to financial services. Specifically, it tested two separate null hypotheses. The first was that there is no or at best a negative relationship between improved access to financial services and poverty measured by household heads' income. The second was that there is no or at best a positive relationship between improved access to financial services by household heads and poverty in each region measured by the food consumption ratio (FCR).

Following this introduction, which serves as Section one, the rest of this paper is organised into five other sections. Section two provides a brief background on poverty in the context of Namibia's rural population. Section three outlines issues and players in the provision of financial services in Namibia's rural areas. Section four describes the methodology used to achieve the objective of this paper. Section five then proceeds to present and discuss the results arising from an application of the methodology. Section six summarises the main conclusions and policy recommendations arising from this research effort.

Poverty has many dimensions, varies across time and from one society to the next. Economists often distinguish between absolute and relative poverty. Absolute poverty is defined in the Copenhagen Declaration as "a condition characterised by severe deprivation of basic needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information." It is exacerbated by a combination of low per capita incomes and highly unequal distribution of that income. Relative poverty is defined as the minimum economic, social, political and cultural goods needed to maintain an acceptable way of life in a particular society (Todaro, 2000).

Economically, poverty refers to a circumstance characterised by a lack of wealth, material goods and resources. Socially, it describes a state of social exclusion, dependency and the ability to live what is termed a "normal" life in society.

Other dimensions of poverty include poverty of access and power. The term poverty of access is often used to describe the lack of access to basic infrastructure and services. Poverty of power often relates to the lack of access to information, inhibiting the poor from fully participating in economic activities.

Measuring Poverty: The extent, location and characteristics of poverty need to be known if it is to be tackled effectively. This requires poverty to be measured, which is done in various ways.

One measure of poverty evaluates whether or not a person's consumption or income level is below an established minimum level necessary to meet basic needs. This minimum level is termed the "poverty line" and has mostly been measured in relation to money. According to the World Bank it represents those living below 1U$ or U$ 2 a day.

Another measure is poverty severity, which is the depth and distribution of poverty among individuals in any nation. This measure is captured by the poverty severity index that gives a weight to the poverty gap.[25]

Yet another measure is poverty incidence, which is often referred to as the poverty headcount index. It gives the percentage of the population living below the poverty line. The United Nations (UN) has developed a measure of poverty, termed the Human Poverty Index (HPI), which it presents in its *Human Development Report*.

Two national surveys have been conducted in Namibia to measure poverty based on the income measure. The first was conducted in 1993 and was titled the *Namibia Household Income and Expenditure Survey* (NHIES) (National Planning Commission, 1994). The second was conducted in 2004 and a preliminary report has been published that provides an updated analysis of poverty in Namibia (National Planning Commission, 2006).

The NHIES also uses the FCR to measure poverty. It is defined as the percentage of food and beverage consumption of the total household consumption, as a crude indicator of poverty (National Planning Commission, 2006). If FCR is more than 60% then a household is considered poor. If it is more than 80% then a household is considered severely poor. Based on the FCR profile in Namibia, Omusati has the highest number of poor people while Omaheke has the highest number of severely poor people. Also, rural areas have a higher percentage of poor and severely poor people compared to urban areas. This is illustrated in Table 1 below.

Table 1: Households by Food Consumption, Region and Urban/Rural Areas

Region	Food consumption ratio (%)				Sample Size
	80-100	**60-79**	**40-59**	**0-39**	
Caprivi	7.1	36.6	28.8	27.5	18,607
Erongo	0.4	5.3	19.6	74.7	27,713
Hardap	4.9	22.7	26	46.5	16,365
Karas	3.1	15.4	24.5	57	15,570
Kavango	8	42.4	29.1	20.4	32,354
Khomas	0.6	3	13	83.4	64,918
Kunene	11.2	25.7	27.5	35.6	13,365
Ohangwena	0.2	22.5	49.6	27.6	37,844
Omaheke	12.4	28	26.3	33.3	13,347
Omusati	1.8	45.4	33.9	18.9	39,248
Oshana	6.1	25.3	29.4	39.2	31,759
Oshikoto	6.1	40.9	26.5	26.5	31,871
Otjozondjupa	3.4	15.3	26.5	54.8	28,707
Namibia	3.9	24	27.3	44.9	371,668
Urban	0.6	6	18.3	75	150,533
Rural	6.1	36.2	33.4	24.3	221,136

Source: National Planning Commission (2006)

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[25] The poverty gap is defined as the sum of the difference between the poverty line and the actual income levels of all people living below that line (Todaro, 2000).

Poverty Reduction versus Alleviation: The achievement of poverty reduction or alleviation provides a measure of success of public policies and programmess and is essential for development in a country. Unsurprisingly, this goal is present in almost all development policy statements. Although they are closely linked, the two concepts are not exactly the same.

When the focus is on "income poverty", poverty reduction is often seen as the process of moving households from a "below poverty line position" to a stable "above poverty line" position (Dreze and Sen, 1989).

Poverty alleviation recognises that income levels fluctuate below and above the poverty line and is the process of reducing dramatic fluctuations in income levels. It is often associated with the minimising of relative poverty because this concept varies over time and from country to country.

Poverty in Namibia: In 2005, the UN categorised Namibia as a country of Medium Human Development, having a HPI rank of 60 and a value of 33%. This is an improvement from a HPI rank of 64 and a value of 37.7% in its 2004 report. The UN report further showed that 34.9% of the population in Namibia were living on less than USD 1 a day and 55.8% on less than USD 2 a day between 1990 and 2003. For a small country in terms of population, these figures are of great significance and show that poverty is indeed prevalent in the country. However, the UN indicator of poverty in Namibia provides only an aggregate estimate.

According to the 2001 Housing and Population Census report (National Planning Commission, 2003), Namibia's population stands at 1,830,330 and 67% of this overall population resides in the rural areas and are mainly traditional hunter-gatherers, herders and farmers and tend to depend largely on limited livestock grazing and marginal farming. From this category, farmers are the only segment that operates in a somewhat cash economy and farming was reported to be the main source of income for the rural areas (about 46%, as opposed to 2% in the urban areas).

In addition most rural inhabitants are self-employed. This is exhibited by findings that 70% of the households in urban areas depend on wages and salaries as their main source of income, as opposed to 23% in the rural areas (National Planning Commission, 2003).

Namibia's population is 51% female, 52% of whom reside in the rural areas. The rural demographic structure is illustrated in Figure 1 below. The distribution of men and women in rural areas is balanced. In addition, the rural areas have relatively more young people.

According to Todaro (2000), the most generalised perception about the poor is that they are "disproportionately located in rural areas, that they are primarily engaged in agricultural and associated activities and that they are more likely to be women and children than adult males". In Namibia, this perception is justified.

The effect of discriminatory, socio-political practices in Namibia's colonial history affected different regions, communities and cultures differently and can explain much of the disparities between the rural and urban populations. The literacy rate is often lower in rural areas where 25% lack the ability to read and write as opposed to only 10% in urban areas. The lack of a strong educational foundation and social capital when coupled with a lack of viable economic activities in a harsh, dry climate has resulted in decreasing per capita revenues for the rural population. This exacerbates poverty in Namibia's rural areas.
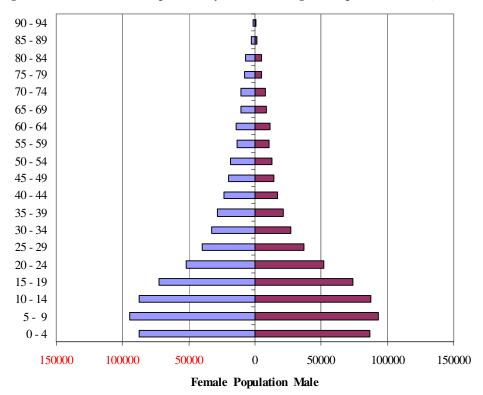
Figure 1: Namibia's Rural Population Pyramid (Housing and Population Census, 2001)

Despite these limitations the poor in Namibia are a viable market for financial service provision. In the urban areas, the value of cash loans provided by micro lenders to help individuals in smoothing their consumption needs was approximately 340.2 million Namibian dollars (NAD) in 2004. In the rural areas, the value of microfinance provided to help individuals meet their various needs was approximately NAD 1 million (Adongo and Stork, 2005). Although the value of the rural market is substantially less than the urban market this amount still demonstrates that a need exists among the rural population for financial services.

2.0 Financial Services in Rural Namibia

It is often argued that the poor are not without money, but rather lack the ability to accumulate assets, which is vital in wealth creation and breaking the poverty cycle. This is often attributed to the exploitation of the poor due to the lack of market information or the ability to use available information to increase their own incomes. From this perspective, the lack of money can be viewed as more of an indication of poverty rather than its cause.

Poverty alleviation strategies reduce poor peoples' vulnerability to external shocks. This allows them to plan for the future and obtain better nutrition, improved living conditions and health and education for their children.

Poverty alleviation is one strategy that can be used to increase the ability of the poor to accumulate assets. It can be achieved through increasing financial services, educating the masses to increase their access to information as well as promoting community-based systems to ensure that programs established to protect the poor do exactly that.

The focus of this paper is on assessing alleviating poverty by increasing access to financial services. These services can be used by the poor to create self-employment opportunities that allow them to generate income resulting in poverty reduction (Dreze and Sen, 1989).[26] Financial services also provide voluntary savings mechanisms, emergency consumption loans and relatively low-risk income generation activities that are unlikely to create indebtedness resulting in poverty alleviation (Hulme and Mosley, 1997).

2.1 The Importance of Access to Financial Services

Evidence has shown that the provision of financial services in a stable political environment and enabling macro economy is an important component of any effort to improve the livelihoods of the poor in any society. Policymakers and practitioners in Namibia have continued to show interest in increasing access to financial services due to their valued contribution to efforts aimed at alleviating poverty in the rural areas. This involves increasing access to savings, credit, insurance and remittance facilities.

2.2 Savings Facilities

Savings facilities have been shown to be useful in improving low-income household financial management. It enables these households to set aside funds that can be used to meet emergency consumption needs in future. This decreases the vulnerability of these households from avoidable shocks and increases their probability of engaging in riskier and higher yielding activities, which could have a positive impact on their incomes (Wright, 1999).

In addition, the safe and convenient savings facilities may enable some low-income households that save in non-cash forms to transform their non-financial assets into the relatively more liquid and high yielding asset that saving facilities represent. This is useful where poor households lack the collateral required by commercial banks to gain access to loans. The increase in savings allows these poor households to build financial assets that can be used as collateral (De Soto, 2000).

Women are among the poorest in many nations due to their often low earning capacity, meagre and unstable financial resources and inability to independently own property (in some countries), which hinders them from accessing credit and other financial services. Access to savings facilities provides women with financial assets in their own names (Robinson, 2003).

2.3 Credit Facilities

Flexible and convenient credit facilities allow poor households to borrow funds to cover emergencies resulting in smoothing and stabilisation of household consumption, which is crucial in reducing vulnerability.

In addition, credit facilities enable low-income households to keep as well as build their credit history and ratings, which is important for them when they eventually apply for loans from large financial institutions.

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[26] A poverty reduction strategy in rural areas that focuses on creating opportunities for self-employment is affected by adverse climatic conditions in Namibia because the rural population depends on the agricultural sector for its food and livelihood (with the exception of herders and hunters and gatherers). Therefore, the success of this poverty reduction strategy will depend on the ability of the rural population to diversify away from or complement their sources of income derived from agricultural activities.

2.4 Insurance Facilities

Insurance facilities enable the poor to protect themselves against various unforeseeable risks, which reduce their vulnerability.

2.5 Remittances

Remittance facilities lower the cost of payment transactions. The reduction in transaction costs frees up limited resources, which can be diverted to other pressing needs. The elderly are a vulnerable group in society. Pension remittances provided to this group assists them in meeting their needs when they are less able to generate a stable source of income and protects them from fluctuations between poverty and non-poverty states. In addition, remittances transferred to the poor in rural areas by their emigrant family members are a valuable source of income that can reduce vulnerabilities.

2.6 Financial Service Providers

Financial service providers in rural Namibia include banks, microfinance institutions, pension schemes and insurance companies.

2.7 Banks

Banks in Namibia are either privately or publicly owned. The privately owned banks include Bank Windhoek, First National Bank Namibia, NedBank Namibia and Standard Bank Namibia. The publicly-owned banks include the Agricultural Bank of Namibia (Agribank), the Namibia Post Office Savings Bank (NamPost) and the Development Bank of Namibia. While the private banks are regulated by the Bank of Namibia, through the *Banking Institutions Act No. 2 of 1998*, the public banks are regulated by their own independent statutes enacted by Parliament.

The financial services provided by these banks contribute to poverty alleviation efforts in rural areas by mostly focusing on debt financing solutions. This is mainly through the network of branches, agencies, automated teller machines and service and mobile centres that are spread throughout the country.

Although most of the banking network is concentrated in urban centres, efforts are being made to reach the rural population in response to pressure from the public and government and the continued pursuit of profit that can be generated from this untapped client base. This will have the positive effect of ensuring that banks are located close to the rural poor, which should enhance the relative ease of access to financial services.

However, the pace of the extension of banking networks into rural areas is limited by various constraining factors. These include:[27]

- Harsh, dry desert climate;

- Sparsely distributed rural population;

- High per unit costs of serving the rural poor due the relatively small size of each transaction;

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[27] For more information see Adongo, Stork and Hasheela (2005) and Adongo and Stork (2005a).

- Oligopolistic market structure that inhibits innovation due to limited competitive pressure;

- Limitations to implementing locally suited product innovations by South African parent owners;

- Bank regulation that restrains risky investments e.g. Basel II Capital Accord; and

- Conflicting objectives between the prudential protection of depositors' savings and increasing access to finance.

2.8 Microfinance Institutions

Microfinance institutions provide the full-range of financial services but on a smaller-scale. This is suited to the needs of the rural poor. In Namibia, microfinance institutions operating in the rural areas can be distinguished as informal or formal.

Informal microfinance institutions in Namibia are those that are not registered or governed by any legally mandated entity. They include informal groups, unregistered moneylenders and burial societies (FinMark Trust, 2003).

Due to the difficulty in establishing standards or enforcing legal provisions for non-compliance, informal microfinance institutions are less preferred to formal institutions. Fortunately, not much use is made of informal financial alternatives in Namibia. The FinScope survey conducted in 2003 shows that only 12% of the overall Namibian population use informal financial services (FinMark Trust, 2003).

Formal microfinance institutions in Namibia are governed by the Division of Co-operative Development in the Ministry of Agriculture, Water and Forestry (MAWF), the Namibia Financial Institutions Supervisory Authority and the Ministry of Trade and Industry (MTI) Steering Committee.[28]

As summarized in Table 2 below, formal microfinance institutions include micro lenders, commercial bank branches involved in the provision of microfinance, some non-governmental organisations (NGOs), savings and credit cooperatives and multi-purpose cooperatives providing microfinance.

Although microfinance represents a potent tool for use in any initiative that aims to alleviate poverty in rural areas in Namibia, most of these institutions are still in their pilot stages. In addition, there are several other constraints that limit the effectiveness of microfinance institutions in reaching the rural poor. These can be distinguished as either supply side or demand side constraints (Adongo and Stork, 2005b).

Supply side constraints in Namibia include:
- Lack of financial sustainability which can be partly attributed to the ceiling imposed by the *Usury Act of 1968* and mostly to the fact that most microfinance institutions are still in their pilot stages, have not fully embraced product and operational innovations that would promote cost reduction and because of Namibia's climate and population distribution characteristics;

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[28] MTI is involved to the extent that microfinance is a key component of its SME program.

- Lack of understanding of the financial needs of the rural poor due to their relative financial opacity, which is exacerbated by the lack of institutional capacity in adapting the credit and savings products to them; and

- Regulatory constraints such as the prohibition for NGOs that are directly involved in providing microfinance services in Namibia from mobilising savings to protect consumers from undue risk.[29]

Demand side constraints in Namibia include:
- Relative inexperience of the rural poor in interactions with formal financial service providers;

- Lack of adequate marketable assets or other forms of collateral when applying for credit to meet emergency needs; and

- Inherent riskiness of the market segment that creates reluctance by financial service providers to extend their networks to the rural poor.

Table 2: Microfinance Institutions in Namibia as at 2005

Institution	Governing Body
Micro lenders, Non-Governmental Organizations and Microfinance Commercial Bank Branches	Namibia Financial Institutions Supervisory Authority
Co-operatives [b]	Division of Cooperative Development, Ministry of Trade and Industry Steering Committee, Ministry of Youth, National Youth Service, Sports and Culture [c]
Small Business Credit Guarantee Trust Microfinance Scheme	Ministry of Trade and Industry
Non-Governmental Organizations	Funding agencies

Note: b. Co-operatives can be further separated into Savings and Credit Co-operatives and Multi-purpose Co-operatives involved in the provision of microfinance.

c. Co-operatives are regulated under the Co-operative Act of 1996

Source: Adongo and Stork (2005b).

2.9 Provident Institutions

Provident institutions in Namibia include medical aid funds, short-term insurance, life assurance and pension funds.

There were 482 Pension funds operating in Namibia in 2003. These included retirement annuities, private, administered and foreign funds (NAMFISA, 2003). Pension funds in Namibia provide retirement benefits to the elderly in rural areas. To the extent that these remittances reduce the

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[29] This highlights the dominant conflicting factor in financial service provision to the rural poor i.e. either to protect the consumer from the adverse effects of overwhelmingly high interest rates or high risk and efforts to increase access to financial services (Adongo & Stork, 2005b).

vulnerability of the elderly with no other source of income they contribute to poverty alleviation in rural areas of Namibia.

Insurance companies are also important in poverty alleviation initiatives in a country. To the extent that micro insurance can be extended to the rural poor, it can provide valuable protection against unforeseeable risks. Casualty insurance provided in flood-prone areas, such as the Caprivi in north-eastern Namibia, can alleviate poverty for subsistence farmers who solely rely on their crop to sustain their livelihood. Property insurance protects the rural poor from the effects of fire, theft of other unforeseen disasters. Finally, life assurance can protect the offspring of a deceased parent from the risk of being relegated to a desperate life characterised by dire poverty.

2.10 Financial Services Usage

The various financial service providers have provided access to their facilities at varying levels throughout Namibia. Figure 2 to 5 below illustrate varying levels of usage by region.

3. Pro-Rural Poor Financial Policy

To correct income inequalities resulting from non-economic factors attributed to the country's history and high unemployment that is most severe among women and the youth in rural Namibia, the Government has made improving the this population's livelihood a priority through various policies.

The MAWF currently has two programmess aimed at nurturing and supporting the livelihoods of the rural population in Namibia. Through the National Agricultural Credit Program it funds the loan portfolio of the Agribank, which then on-lends this to communal farmers in rural areas as well as provides funding for land restitution.

Figure 2: Number of Household Heads that have Never had Access to Financial Services
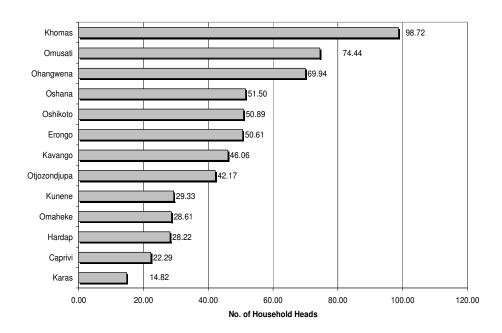
by Region

Figure 3: Number of Household Heads that Previously had Access to Financial Services by Region
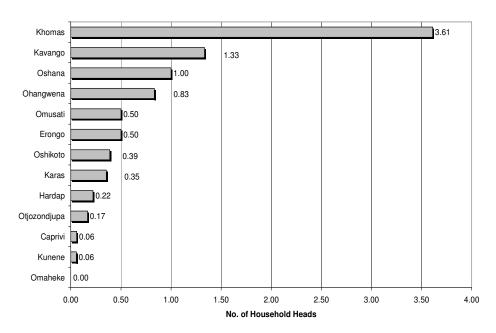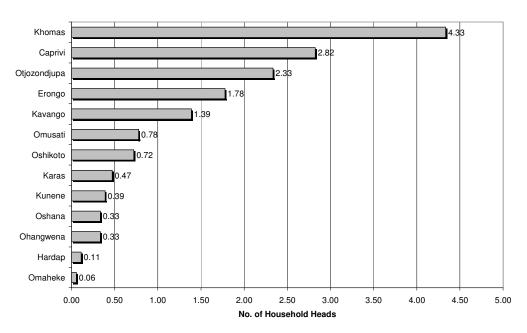

Figure 4: Number of Household Heads that Don't Have Access to Financial Services but another Household Member Does by Region
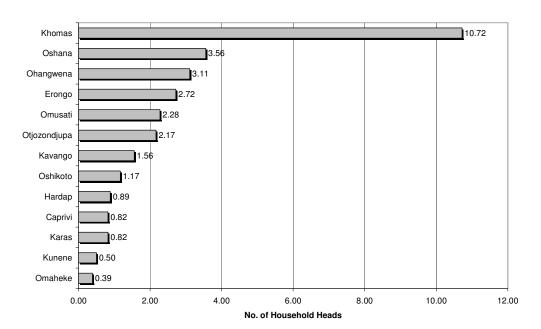
Figure 5: Number of Household Heads that Currently Have Access to Financial Services by Region

Through the National Agriculture Support Services Program, MAWF supports the creation of savings and credit cooperatives and multipurpose cooperatives involved in the provision of microfinance. These microfinance institutions help increase financial access and promote a savings culture among the rural population, which is specially suited to their needs (Adongo and Stork, 2005b). MAWF policies and programmes are aimed at poverty alleviation by reducing vulnerability from fluctuations that may expose the rural population to risk.

The MTI also supports the rural population through its Small Business Development Policy and associated programmes (Republic of Namibia, 1997), which have been updated in a new draft SME policy. The MTI mainly supports small entrepreneurs through the supply of public capital in the short-term with the intention that private financial service providers will enter the market segment in the long-term. To the extent that this policy aims to create self-employment opportunities for the rural population that will permanently move them to a non-poor state, it is more of a poverty reduction than poverty alleviation program.

Methodology: Data, Sampling and Estimation Technique

In this section we describe the sample, data, model and its associated variables and the procedure used to achieve the main objective of this paper. The data used in this report was drawn from the 2003 FinScope survey, which is representative of the Namibian population (FinMark Trust, 2003). FCR data was drawn from the preliminary 2003/2004 NHIES report (National Planning Commission, 2006). Qualitative data was represented by zero-one dummy variables and rankings where applicable.

The original FinScope survey data set consisted of 810 household heads. Where income was used as an indicator of poverty, the sample size reduced to 646 household heads, who reported that they had a source of income (the rest stated that they did not know or refused to answer). The

characteristics of the original 810 household heads are summarised in Table 3 below based on whether or not they are rural or urban.

Table 3: Characteristics of FinScope 2003 Survey Respondents

Location	Mean Age	Education	Mean Number of Household Members	Mean Sources of Income	Income below NAD 1000 (%)	Cell phone Ownership (%)
Rural	50	Low	5.9	7	80	10
Urban	37	High	5.1	5.3	50	42

Source: FinMark Trust (2003)

Hypothesis

The first null hypothesis tested in this paper was that improved access to financial services by household heads is not or is negatively linked to their income.

$$H_0 : \beta_i \leq 0$$
$$H_a : \beta_i > 0 \qquad (1)$$

Equation 1: Hypotheses based on income as a poverty measure

Where:

β_i is a composite vector of independent variables representing different levels of financial product usage.

The second null hypothesis tested in this paper was that improved access to financial services by household heads is not or is positively linked to the FCR in the region where they are located.

$$H_0 : \beta_i \geq 0$$
$$H_a : \beta_i < 0 \qquad (1)$$

Equation 2: Hypotheses based on the food consumption ratio as a poverty measure

Where:

β_i is a composite vector of independent variables representing different levels of financial product usage.

Model

A censored regression model was used to test the first set of hypotheses stated above that uses income as a measure of poverty because some of the respondents did not answer the question focusing on the cash income that household heads received in the previous month prior to administering the questionnaire while others claimed that they did not know.

Its general form is:

$$MY = f(l, fe, \varepsilon) \qquad (2)$$

Equation 3: General Model 1 for Exposure Index[30]

Where:

MY is a qualitative variable indicating the various categories of cash income that household heads received in the previous month prior to administering the questionnaire. The codes used are presented in Table 4 below.

Table 4: Incomes for Respondents Surveyed in 2003 by Rank

Last Month's Income	Code
Don't know or Refused	0
Up to NAD 1, 000	1
NAD 1,000 to NAD 4,999	2
NAD 5,000 to NAD 9,999	3
NAD 10,000 to NAD 19,999	4
NAD 20,000 or more	5

Source: FinMark Trust (2003)

l is a qualitative variable indicating whether the household is located in a rural or urban area. It is operationalised using zero-one dummy variables.[31]

fe represents an exposure index that is operationalised as the average of the levels of usage of the individual financial products in *f* described in Equation 4 below.

ε denotes the error term.

The disaggregated form of the model above was also used to conduct a more in-depth analysis of the link between specific financial products and cash income received by household heads in the previous month prior to administering the questionnaire. This is stated below as:

$$MY = f(l, f, \varepsilon) \qquad (3)$$

Equation 4: General Model 1 for Disaggregated Vector

Where:

l and ε are the same as in Equation 3 above.

f is a qualitative variable indicating the level of usage of various financial products including an ATM card, post office savings account, savings or transaction account, mortgage bond or housing loan, current or cheque account, debit card, credit card, garage card or petrol card, transaction or transmission account, fixed deposit account, vehicle finance, bank loan, call account, personal overdraft facility, business overdraft facility, loan from formal microlender, loan from informal microlender, membership of a savings group, NGO loan or savings account, store loan account and co-operative loan or savings account, respectively.

The codes used to represent the different levels of the usage of the financial products listed in the paragraph above were modified from those used in the 2003 FinScope survey to enable the

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[30] For the specific form of this model see Appendix A.
[31] This paper includes households in urban areas to control for sample selection bias.

utilisation of the statistical technique chosen to obtain the results that are analysed in the next section. These adapted codes are presented in Table 5 below.

Table 5: Usage of Financial Services in Namibia in 2003

Financial Product	Code [a]
Don't know or Not Answered	0
Never had	1
Used to have	2
I don't have it but others in the household have	3
I have it now	4

Note: a The codes have been modified from the 2003 FinScope Survey

Source: FinMark Trust (2003)

Two ordinary least squares (OLS) regression models were used to test the second set of hypotheses stated above that uses the FCR as a measure of poverty.

The general form of the first regression model is:
$$FCR_p = f(fe, \varepsilon) \qquad (3)$$

Equation 5: General model 2 for poor household's exposure Index[32]

Where:
FCR_p indicates a FCR of between 60% and 80% for each of the 13 regions in Namibia.

fe represents an exposure index that is operationalised as the average of the levels of usage of the individual financial products in f described in Equation 4 above.
ε denotes the random error term.
The general form of the second regression model is:
$$FCR_{sp} = f(fe, \varepsilon) \qquad (3)$$

Equation 6: General model 2 for severely poor households' exposure Index[33]

Where:
FCR_{sp} indicates a FCR of above 80% for each of the 13 regions in Namibia.

fe represents an exposure index that is operationalised as the average of the levels of usage of the individual financial products in f described in Equation 4 above.
ε denotes the random error term.

Limited Dependent Variables (LIMDEP) version 7.0, which is an econometric software, was used to test the two sets of hypotheses stated earlier in this section by applying the OLS technique.

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[32] For the specific form of this model see Appendix A.
[33] For the specific form of this model see Appendix A.

Where income was used as a proxy for poverty, OLS was applied to first to the aggregated financial usage exposure index and then to a disaggregated vector of variables capturing financial product usage for the overall respondent sample. Then the same model was tested on the lowest quintile of the sample respondents with income of NAD 1,000 or below, who represented the poor.[34] The three processes were repeated for a sub-sample consisting of only the rural population to determine if there were any differences in this group because this was the target for this study.

The results obtained from applying the methodology presented in this section and an associated discussion is presented below.

5. Results and Discussion

The methodology described in the previous section was first applied to the first set of hypotheses, which uses income as a measure of poverty. It was then applied to the second set of hypotheses that uses FCR as a measure of poverty. This section presents the application of these results and discusses these findings.

5.1 Income as a Poverty Measure

Model 1 was applied to the aggregated financial usage exposure index for the overall sample and for a sub-sample consisting of respondents residing in the rural areas. The sub-sample analysis was important to determine if there were any differences between the results obtained for the overall sample and that of the rural population, which was the focus of this paper. The results are presented in Table 6 below.

Table 6: Regression Results for Financial Usage Exposure Index

Variable	Coefficient		Standard Error		p-value	
	Overall	Rural	Overall	Rural	Overall	Rural
Constant	-0.113394	-0.3069898	0.090152648	0.12741693	0.2085	0.016
fe *	1.043102588	1.111956501	0.073568677	0.12028271	0.0000	0.000
Overall: Log-likelihood Function = - 501.64444						
Rural Sub-Sample: Log-likelihood Function = - 554.0794						

Note: * significant at the 5% level; ** significant at the 10% level

The coefficient for the financial usage exposure index fe is positive both for the overall sample consisting of both urban and rural respondents and for the sub-sample consisting solely of the rural respondents. These results reject the null hypothesis that improved access to financial services is not or is negatively linked to higher income.

The interpretation of these findings is that a higher income is related to a higher exposure to financial services. However, the results do not enable us to discern whether it is the higher financial exposure that results in higher income or vice versa. This would require a causality analysis. However, because of the absence of time series data on poverty in Namibia this will have to be deferred until an adequate data series has been generated from future FinScope surveys.

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[34] Strictly speaking, the standard definition of poverty based on income is receiving USD 1 or 2 a day. However, since there was no other alternative the paper used this as a general indicator.

Model 1 was then applied to the disaggregated vector composed of various financial products for the overall sample and for a sub-sample consisting of rural respondents. The results are presented in Table 7 below.

Table 7: Tobit Regression Results for Disaggregated Vector

Variable	Coefficient		Standard Error		p-value	
	Overall	Rural	Overall	Rural	Overall	Rural
URB	0.5967284	N.A	0.081729133		0.0000	
RUR	0.4879117212	N.A.	0.070957089		0.0000	
ATM	0.1239636197	0.1941161022	0.020178705	0.029576528	0.0000	0.0000
POSAV	0.05148086707	0.08196640698	0.016767892	0.022716289	0.0021	0.0003
BNKSAVTR	0.03682482162	0.06164780501	0.018692937	0.030086159	0.0488	0.0405
MRGHSE	0.06062729214	0.001494772803	0.028693636	0.071637917	0.0346	0.9834
CURRCHK	0.1607067531	0.1199348246	0.025896051	0.045355386	0.0000	0.0082
DBTC	-0.1053750103	-0.176776943	0.038755092	0.079286459	0.0065	0.0258
CRTC	0.07553912333	-0.03804418976	0.028693272	0.057632008	0.0085	0.5092
GARCPETC	-0.2037039326	0.2741150611	0.060702345	0.16098580	0.0008	0.0886
TRNSTMS	-0.1198479781	-0.1519857235	0.028378471	0.059501981	0.0000	0.0106
FXDEP	0.01520100515	-0.02220777281	0.023364905	0.038978648	0.5153	0.5689
VEHFIN	0.2151799962	0.1820527857	0.04666221	0.10594725	0.0000	0.0857
BNKLOAN	0.01947079821	0.1539712137	0.032948287	0.076155255	0.5546	0.0432
CALLAC	-0.0219858432	-0.1326819719	0.038173116	0.081254587	0.5646	0.1025
OVDRAFTP	0.1387475422	0.1207963787	0.033718387	0.064546474	0.0000	0.0613
OVDRAFTB	0.0120453564	-0.02347869319	0.047267712	0.076349081	0.7989	0.7584
MICLN	0.05501322815	-0.05555137975	0.049167523	0.14757851	0.2632	0.7066
INFMICLN	-0.1221615411	-0.1690649061	0.058728282	0.16280740	0.0375	0.2991
INFSAVCLB	0.03357278918	0.04279511251	0.052822266	0.088603312	0.5251	0.6291
NGOLNSAV	0.08164106443	0.3423725943	0.043235218	0.10027538	0.0590	0.0006
STRACC	0.02006746379	0.11386126	0.01954022	0.032213406	0.3044	0.0004
SACCOLNSV	0.01096065538	-0.01007683392	0.050712652	0.091814461	0.8289	0.9126
OTH	-0.0159616633	-0.03055356844	0.074681549	0.07867487	0.8308	0.6978
Overall: Log-Likelihood Function						
Rural Sub-Sample: Log-Likelihood Function = -171.63						

Note: * significant at the 5% level; ** significant at the 10% level. N.A. is used for not applicable. The constant in this regression is dropped to avoid perfect multicollinearity.

Rather than focusing on each individual financial product we will discuss those negatively related to higher income and are significant at least at the 10% level.

First in this category is the debit card. From the data, it seems that as incomes increase this financial product becomes less desirable in both the overall sample and rural areas. Therefore,

improving access to financial services may be important using this product at the very low levels of income where the rural poor are found but should include a strategy to move household heads to other financial products as their consumption needs increase.

Second is the garage card or petrol card. From the data, this also becomes less desirable as income increases both in the overall sample and in the rural areas. This could be because as more income is received the desire to purchase consumer items such as petrol can be easily done through cash.

Third is the transactions or transmissions account. From the data, this product also becomes less and less desirable as income increases both in the overall sample and in the rural areas. This can be explained by the fact that individuals with higher incomes are better able to manage their household finances than those in the lower income segment. Therefore, the need for a transactions or transmission account is replaced by the need for financial products that are more targeted towards wealth creation e.g. fixed deposit accounts, which although has the expected positive sign is not significant even at the 10% level.

Fourth is the micro loan from informal (unregistered) sources. This financial service seems to be significantly less desirable in the overall sample only. For the rural population we cannot reject the null hypothesis that use of informal micro loans is significantly equal to or less than zero. Therefore, it seems that in the rural areas, the informal micro lender is still an important financial service provider even with higher incomes.

Based on Model 1, which focuses on income as a measure of poverty, there is evidence that improved access to financial services has an important role to play in poverty alleviation efforts in rural Namibia. However, because of the importance of existing financial services offered by informal micro lenders these need to be understood before alternatives are pushed that may make the rural population accessing financial services through these informal sources more vulnerable.

5.2 Food Consumption Ratio as a Poverty Measure

Model 2 was applied to the aggregated financial usage exposure index among poor regions in Namibia. The results are presented in Table 8 below.

Table 8: Regression Results for Financial Usage Exposure Index among the Poor

Variable	Coefficient	Standard Error	p-value
Constant	-0.03458198382	1.2833580	0.9792
$\ln nh$ *	0.8879172928	0.37442385	0.0451
$\ln uth$	-0.1055182616	0.21744121	0.6405
$\ln ohh$	-0.04574938864	0.18955442	0.8154
$\ln ihn$ **	-0.8192166676	0.42850893	0.0923

Note: * significant at the 5% level; ** significant at the 10% level

The coefficient for the financial usage exposure index, fe, for household heads that have never had access to financial services in poor regions is positive and significant at the 5% level. These results reject the alternative hypothesis that improved access to financial services by household heads is negatively linked to the FCR in the poor region where they are located. The interpretation of this finding is that there is evidence in Namibia that poor regions are associated with a higher probability of household heads that have never had access to financial services.

The coefficient for the financial usage exposure index, fe, for household heads that currently have access to financial services in poor regions is negative and significant at the 10% level. These results reject the null hypothesis that improved access to financial services by household heads is not or is positively linked to FCR in the poor region where they are located. The interpretation of this finding is that there is evidence in Namibia that poor regions are associated with a lower probability of household heads that currently have access to financial services.

Model 2 was then applied to the aggregated financial usage exposure index among severely poor regions in Namibia. The results are presented in Table 9 below.

Table 9: Regression Results for Financial Usage Exposure Index among the Severely Poor

Variable	Coefficient	Standard Error	p-value
Constant	1.889080129	2.5021338	0.4719
$\ln nh$	0.01094344090	0.69713362	0.9879
$\ln uth$	0.1837519429	0.21605867	0.4198
$\ln ohh$	0.2072676273	0.35750835	0.5780
$\ln ihn$	-1.352768362	0.74833599	0.1083

None of the coefficient for the financial usage exposure index, fe, for household heads in severely poor regions is significant even at the 10% level. The interpretation of this finding is that in Namibia access to financial services may not be a sufficient solution to alleviate poverty among those that are severely poor.

Based on Model 2, which focuses on FCR as a measure of poverty, there is evidence that poor regions in Namibia are associated with a higher probability of household heads that have never had access to financial services and a lower probability of household heads that currently have financial services. Model 2 also indicates that improving access to financial services may not be a sufficient solution to alleviate poverty among the severely poor. However, the results do not enable us to discern whether it is the higher financial exposure that results in a lower FCR or vice versa. This would require a causality analysis. However, because of the absence of time series data on poverty in Namibia this will have to be deferred until a data series has been generated from future FinScope surveys.

6. Conclusion

This paper focused on analysing whether improved access to financial services could contribute to poverty alleviation strategies among the rural population in Namibia. Using data from the FinScope Survey conducted in 2003 and the preliminary NHIES 2003/2004 report, an empirical methodology was adapted to achieve this main objective. This methodology used income and FCR as a measure of poverty.

When income is used as a poverty measure, improved access to financial services is associated with higher levels of income for the household head in rural areas. This relationship is consistent in an overall sample consisting of both urban and rural populations. In addition, a disaggregated analysis of household heads points out that several financial products are inferior goods, which are defined as those whose use decreases as income rises. These inferior goods include debit cards, garage or petrol cards and transaction or transmission accounts. Finally, the use of informal

micro lenders seems to be present among low-income households in rural areas. This relationship cannot be rejected conclusively even at higher levels of income.

When FCR is used as a poverty measure, poor regions are associated with a higher probability of household heads that have never had access to financial services. Also, poor regions are associated with a lower probability of household heads that currently have access to financial services. Finally, access to financial services may not be a sufficient solution to alleviate poverty among those that are severely poor in Namibia.

The policy implication of this paper is that improved access to financial services can contribute to poverty alleviation among the poor in rural Namibia. However, when designing poverty alleviation strategies that focus on improving access to financial services in rural Namibia, it is important to understand how informal networks operate. This will avoid the danger of pushing more formal alternatives that may erode the benefits derived by those accessing financial services from informal providers and make them more vulnerable to the adverse effects of poverty. Unfortunately, improving access to financial services in not as potent when the households are severely poor.

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Appendix A

The specific form of model 1 for the overall sample used in this paper is:

$$MY_i = \beta_0 + \beta_1 l + \beta_2 fe + \varepsilon_i$$

Equation 7: Specific form of Model 1 for overall sample

Where:

MY is a qualitative variable indicating codes of the various amounts of the household head's cash income for the previous month prior to administering the questionnaire.

l is a qualitative variable indicating whether the household is located in a rural or urban area. It is operationalised using zero-one dummy variables.

fe represents an exposure index that is operationalised as the average of the levels of usage of the individual financial products in f

ε denotes the error term.

i denotes each household head; for $i = 810$ in overall sample and $i = 422$ for rural sample.

The specific form of model 1 for the disaggregated vector of variables used in this report is stated below:

$$\begin{aligned}
MY_i = {} & \beta_0 + \beta_1 URB + \beta_2 RUR + \beta_3 ATM + \beta_4 POSAV + \beta_5 BNKSAVTR + \beta_6 MRGHSE \\
& + \beta_7 CURRCHK + \beta_8 DBTC + \beta_9 CRTC + \beta_{10} GARCPETC + \beta_{11} TRNSTMS + \beta_{12} FXDEP \\
& + \beta_{13} VEHFIN + \beta_{14} BNKLN + \beta_{15} CALLAC + \beta_{16} OVDRAFTP + \beta_{17} OVDRAFTB \\
& + \beta_{18} MICLN + \beta_{19} INFMICLN + \beta_{20} INFSAVCLB + \beta_{21} NGOLNSAV + \beta_{22} STRACC \\
& + \beta_{23} SACCOLNSV + \beta_{24} OTH + \varepsilon_i
\end{aligned}$$

Equation 8: Specific form of Model 1 for disaggregated vector

Where:[35]

MY is a qualitative variable indicating codes of the various amounts of the household head's cash income for the previous month prior to administering the questionnaire.

URB indicates that the household head is located in an urban area.

RUR indicates that the household head is located in a rural area.

ATM denotes access to an atm card.

$POSAV$ denotes access to a post office savings account.

$BNKSAVTR$ denotes the access to a bank savings or transaction account.

$MRGHSE$ denotes the holding of a mortgage or housing loan from a bank.

$CURRCHK$ denotes access to a current or checking account.

$DBTC$ denotes access to a debit card.

$CRTC$ denotes access to a credit card.

$GARCPETC$ denotes access to a garage or petrol card.

$TRNSTMS$ denotes access to a transaction or transmission account.

$FXDEP$ denotes use of a fixed deposit account.

$VEHFIN$ denotes access to vehicle financing facilities.

$BNKLN$ denotes access to a bank loan.

$CALLAC$ denotes access to a call account.

$OVDRAFTP$ denotes access to a personal overdraft facility.

$OVDRAFTB$ denotes access to a corporate overdraft facility.

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[35] A correlation matrix of the variables indicated the absence of severe multicollinearity between the variables.

MICLN denotes access to loans from formal (registered) microlender.

INFMICLN denotes access to loans from informal microlender.

INFSAVCLB denotes access to an informal savings club e.g stokvel or motshelo.

NGOLNSAV denotes access to loans or savings facilities from a NGO.

STRACC denotes access to a store credit account.

SACCOLNSV denotes access to loan or savings facilities offered by a savings and credit cooperative.

OTH denotes other financial services.

ε_i denotes the error term.

The specific form of model 2 used in this paper for poor regions is:

$$FCR_p = \beta_0 + \beta_1 nh_i + \beta_2 uth_i + \beta_3 ohh_i + \beta_4 ihn_i + \varepsilon_i$$

Equation 9: Specific form of Model 2 for poor regions

Where:

FCR_p indicates a FCR of between 60% and 80% for each of the 13 regions in Namibia.

nh represents household heads that have never had access to financial services.

uth represents household heads that used to have access to financial services.

ohh represents household heads that don't have access to financial services but other members of their household do.

ihn represents household heads that currently have access to financial services.

ε denotes the error term.

The specific form of model 2 used in this paper for severely poor regions is:

$$FCR_{sp} = \beta_0 + \beta_1 nh_i + \beta_2 uth_i + \beta_3 ohh_i + \beta_4 ihn_i + \varepsilon_i$$

Equation 10: Specific form of Model 2 for severely poor regions

Where:

FCR_{sp} indicates a FCR of above 80% for each of the 13 regions in Namibia.

nh represents household heads that have never had access to financial services.

uth represents household heads that used to have access to financial services.

ohh represents household heads that don't have access to financial services but other members of their household do

ihn represents household heads that currently have access to financial services.

ε denotes the error term.

Appendix B

Table 10: Descriptive Statistics for Overall Sample

Variable	Mean	Standard Deviation
MY	1.1605	0.8577
URB	0.479	0.49987
RUR	0.52099	0.49987
fe	1.12565	0.447
ATM	2.2506	1.3993
POSAV	1.8185	1.2804
BNKSAVTR	1.9543	1.45357
MRGHSE	1.1185	0.9118
CURRCHK	1.1901	1.0097
DBTC	0.979	0.67687
CRTC	1.1235	0.9125
GARCPETC	0.891358	0.49527
TRNSTMS	1.0346	0.8431
FXDEP	1.25679	1.04567
VEHFIN	0.94321	0.5939
BNKLN	1.127161	0.834887
CALLAC	0.95556	0.6214
OVDRAFTP	1.05185	0.78759
OVDRAFTB	0.91235	0.51765
MICLN	0.92469	0.55635
INFMICLN	0.90988	0.5002
INFSAVCLB	0.9	0.512996
NGOLNSAV	0.95679	0.56635
STRACC	1.5012	1.2172
SACCOLNSV	0.91852	0.5246
OTH	0.04568	0.317

Note: The number of observations for the overall sample is 810.

Table 11: Descriptive Statistics for Rural Sample

Variable	Mean	Standard Deviation
MY	0.91469	0.7406
ATM	1.6943	1.2209
POSAV	1.5829	1.156
BNKSAVTR	1.604	1.2567
MRGHSE	0.8886	0.5422
CURRCHK	0.98815	0.79628
DBTC	0.8673	0.4789
CRTC	0.9123	0.61985
GARCPETC	0.82701	0.40299
TRNSTMS	0.8744	0.5976
FXDEP	1.12559	0.914834
VEHFIN	0.8697	0.42997
BNKLN	0.936019	0.541118
CALLAC	0.86256	0.47259
OVDRAFTP	0.93839	0.628685
OVDRAFTB	0.8863	0.5031
MICLN	0.85071	0.4181
INFMICLN	0.8602	0.4041
INFSAVCLB	0.87441	0.51658
NGOLNSAV	0.90758	0.405999
STRACC	1.175356	0.93877
SACCOLNSV	0.87441	0.4476
OTH	0.05687	0.3468
fe	0.9753	0.36256

Note: The number of observations for the rural sample is 422

Table 12: Descriptive Statistics for Food Consumption Ratio Variables

Variable	Mean	Standard Deviation
$\ln FCR_{sp}$	1.08348994	1.32160335
$\ln FCR_{p}$	3.01136603	0.810068277
$\ln nh$	3.72231603	0.528901404
$\ln uth$	-0.846327368	1.19877456
$\ln ohh$	-0.408023103	1.27296698
$\ln ihn$	0.448148308	0.907074108