FACTORS DETERMINING ADOPTION OF BANKING FINANCIAL SERVICES AMONG THE FISHING COMMUNITIES IN MBITA DISTRICT, KENYA

BY

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ABSTRACT

The fishing communities has been viewed as among the most risky groups to provide financial services to, yet the exact nature and extent of the prevailing challenges hindering the adoption of financial services or attributed to this riskiness is not known. This study was conducted to examine the factors determining adoption of banking financial services among the fishing communities in Mbita District, Kenya. Specifically the study Determines the extent to which financial education affects adoption of banking financial services among the fishing communities in Mbita District; establish the influence of socio-cultural networks on adoption of banking financial services among the fishing Communities in Mbita District; determine the extent to which the nature of fishers financial needs affect adoption of banking financial services by the fishing communities in Mbita District and determine the effect of growth in financial on adoption of banking financial services by the fishing communities in Mbita. The study was conducted through explanatory survey; data was collected using structured questionnaires based on 5 point likert scale and interview responses from 384 fisher folks and 10 officers from financial institutions randomly selected from the accessible population within the 5 landing beaches in the district. Secondary data from financial institutions around these beaches was also soughted. With the aid of Statistical Package for Social Sciences (SPSS), the data was analyzed using correlation, regression and descriptive analysis. Bar graphs and tables were used to present the data. The findings of the study were: Financial education (β=-.193, t=-2.953, $p<0.001$), Financial Education with sig of .001 had a strong significance to adoption of financial services and was thus statistically significant. This implies that Financial Education determines the adoption of financial services, Socio-cultural networks (β=.359, t=5.129, $p<0.001$),with sig of .001 had also a strong significance to the adoption of financial services. This implies that Socio-cultural factors affect the adoption of financial services and lastly on the development of financial markets, (β=.324, t=4.383, $p<0.000$). Financial markets with sig of .000 had a strong significance to adoption of financial services and was thus statistically significant .The study therefore recommends: Financial Institutions in Mbita District should proactively initiate financial education and extensive advertising of their products and services to the fishing communities to help them fully adopt banking and other financial services that will help them save, invest and expand their fishing businesses. There is also need to sensitize the fishing communities on the negative socio-cultural networks that hinder them from adopting the financial services towards a positive culture that encourages savings, entrepreneurial skills and investments. Financial institutions should develop their financial market that fits on the needs and the nature of the fishing communities. They should also review their working policies to conform their products and services to suit the unique needs of the fishing communities and make those products and services cheaper for the fishing communities. The study contributed significantly to the existing literature in the area of adoption of financial services among the fishing communities and further research.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Fishing is known to be one of the oldest occupations of mankind and in Lake Victoria; it has been largely practiced at Artisanal levels (Omwenga *et al.*, 2004). According to Ikiara (1999) cited in Omwenga *et al* (2004), the commercialization of Lake Victoria fishery has been increasing since late 1790's and this has yielded substantial benefits to the Kenyan economy in terms of foreign exchange earning, income earning to the owners of fish processing and animal feeds manufacturing factories, tax income to the government, fisher incomes and creation of employment opportunities. Omwenga*et al* (2004) noted that despite this fact poverty amongst the fisher folk remains high. Why the fisher folk remain in perpetual poverty puzzles the researcher. Results of the studies done by Omwenga*et al* (2004) revealed that most fishers being in remote areas with few educational facilities have little access to vital knowledge .However Omwenga failed to note that the commercialization of fishing in lake Victoria was hindered by the financial education of the fishermen among the fishing community thus no major economic benefit realized.

In theory fishers of Lake Victoria are regarded as the 'poorest' group of people in all sectors of the economy. Looking at the way they live, the way they look, assets they own, saving habits and their family sizes one wonders, when one enters the beach and look at the fishers, most of them look weak, poorly dressed, drink and live in poor housing structures. They have many dependants, wives, orphans, widows to feed (Omwenga*et al,* 2004). On further critique of (Omwenga*et al,* 2004) he was quick to point out that most of the fishermen in lake Victoria are poor but he failed to highlight on the socio cultural networks of these fishermen that hinder them to adopt financial service which could change their economic status and this assertion is supported by AUSAID (2010) which indicates that financial services are increasingly being seen as important to poverty reduction and achievement of the millennium development goals. By borrowing, saving or buying insurance the poor can plan for their future beyond the short term. They can build assets and invest in education and health. Financial services can also help them cope in times of need and hardship. Beyond this, the adoption of financial services can promote social inclusion and build self confidence and empowerment, in particular among women. While significant progress has been made in encouraging the adoption of financial services by the poor there is still a lot to be done. For many poor people, finding a way out of poverty is limited by their inability to borrow or save money.

Financial services have failed to adequately reach poorer populations for a number of reasons: including inadequate infrastructure, perceptions that lending to the poor is too risky to be commercially viable, inhibiting regularly and legal environment and limited understanding and awareness of financial services by the poor.

Mutua and Oyugi (2007) citing Asenso–Okyere*et al* (1993) and Yaron (1997) reveal that promotion of efficient, sufficient and widely accessible rural financial services (rural banking) is key into achieving proper growth and poverty reduction goals. This is because adoption of financial services plays critical role in helping the poor widen their economic opportunities, increase their asset base and diminish their vulnerability to external shocks. Kibaara (2006) also foster the same argument. Access to credit and adoption of financial services has the potential to make a difference between grinding poverty and economically secure life. To the fisher folk in particular, this access was to help them access opportunities that have the potential to transform their lives. However, Mutua and Oyugi (2007), and. Kibaara (2006) failed to note the nature of fishers financial needs especially in the rural fishing communities as most of these financial services offered by various financial institutions are tailor made to suit the urban populous where there market is big. Therefore improving access and building inclusive financial systems is a goal that is relevant to economies at all levels of development both in rural and urban. The challenge of better adoption means making financial services available to all, thereby spreading equality of opportunity and tapping the full potential in an economy, this research sought to establish the nature and the various needs of the fishermen that hinder them to access the financial services.

The fishing communities has largely been viewed as among the most risky groups to provide financial services to but the exact literature on the nature and extent of the prevailing challenges is lacking. Though quite a lot has been and is being done to address these challenges among rural poor in general, the fisheries sector has not received the much needed attention. This provides crucial gaps in the knowledge base regarding the adoption of financial services among the fishing communities.

This exclusion acerbates the challenge of living in perpetual poverty and makes it difficult for the government to achieve its developmental goals as desired. This is because adoption of financial services plays 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 contact enforcement, inadequate regulatory framework and dependence of the poor on seasonal agricultural, activities, which negatively affect adoption of financial services.

The adoption dimension of financial development has been overlooked mostly because of serious data gaps in this area. It is from this background that the study was conceived. It is evident that a comprehensive understanding of factors that determines the adoption of banking financial services within the context of the fishing communities was examined in detail and a credible report was provided to policy makers and financial institutions in order to serve the rural poor adequately and in a sustainable manner.

1.2 Statement of the Problem

The adoption of financial services to the Rural poor fishing communities is still a challenge, though a significant progress has been made in encouraging adoption of financial services to the rural poor fishing communities, there is still a lot to be done. In spite of the importance of saving account, 77% of Kenyan household have no access to a bank account. For many poor people, finding a way out of poverty is limited by their inability to borrow or save money, a case that fits well the fisheries sector. In a recent research conducted on the Growth, Finance and the Triple Bottom line in Kenya's Fisheries Value Chain identified certain salient general aspects of finance in the fisheries value chain in Kenya which apply to all fish species. They include: enormous cash flows circulating on the beach which is both inefficient and insecure;

"unbanked" value chain actors because of socio-cultural factors; weak financial structure making the value chain actors to highly depend on informal sources of finance which are unreliable, inadequate and expensive; poor business management skills as many do not know how to use proper costing and pricing and to keep financial records; weak group organization, that is, workers behave individualistically because group organizations are weak and badly managed; and lastly, vertical power imbalances (governance) on the beaches which create viscous cycles of debt. This imperfect situation in the fisheries reveals that financial services have failed to adequately reach these poorer population for a number of reasons including inadequate infrastructure; perceptions that lending to the poor is too risky to be commercially viable; inhibiting regulatory and legal environment and limited understanding and awareness of financial services by the poor. In conclusion this study sought to examine the factors determining adoption of banking financial services among the fishing communities in mbita district and hope that these findings are useful to fishing communities, the financial institutions in decision making and as a basis for subsequent research academicians in the fishing industry.

1.3 Objectives of the Study

1.3.1 General objective

The main objective of this study is to establish factors determining the adoption of banking financial services among the fishing communities in Mbita District, Kenya.

1.3.2 Specific Objectives

Specifically the study seeks to:

(i) Determine the extent to which financial education affects adoption of banking financial services among fishing communities in Mbita District, Kenya.

(ii) Establish the influence of socio-cultural networks on adoption of banking financial services among fishing communities in Mbita District, Kenya

(iii) Determine the extent to which the nature of fishers' financial needs affect adoption of banking financial services by the fishing communities in Mbita District, Kenya.

(iv) Determine the growth of adoption on banking financial services by the fishing communities in Mbita District, Kenya

1.4 Research Hypothesis

The study will test the hypotheses that:

$H_0$1: There is no significant relationship between financial education and adoption of banking financial services among the fishing communities.

$H_0$2: Socio-cultural networks do not have any significant influence on adoption of banking financial services among the fishing communities.

$H_0$3: There is no significant relationship between fishers' financial needs and adoption of banking financial services among the fishing communities

$H_0$4: Level of development of financial markets does not have any significant influence on the adoption of banking financial services among the fishing community.

1.5 Significance of the Study

This study is significant to various stakeholders in Kenya in a number of ways;

First, the fishing industry is underexploited and this research is useful to the fishing communities in Mbita district considering that majority of fishermen do not have access to bank accounts and it added to the understanding of the dynamics of the changing financial services. The private sector/financial institutions also gained an insight about market opportunities and in particular the types of products that suit newly identified un-served and underserved population.

On the socio-cultural networks the research is useful in helping in the formation of group dynamics for easy penetration of financial services among the fishing communities. Finally, this study provides very useful information on the impacts of access to financial services on growth and poverty reduction and further research work.

1.6 Scope of the Study

This study was conducted to establish and document the factors determining adoption of financial services among the fishing communities in Mbita District. Specifically the study was: To determine the extent to which financial education affects adoption of banking financial services among the fishing communities in Mbita District, to establish the influence of socio-cultural networks on adoption of banking financial services among the fishing communities in Mbita District, to determine the extent to which the nature of fishers' financial needs affect adoption of banking financial services by the fishing communities in Mbita District and to determine the effect of growth in financial on adoption of banking financial services by the fishing communities in Mbita District. It involved boat owners, crew members, gear owners, boat renters, fish processors, traders and distributors and other members of the fishers' households who are basically employed or small-scale farmers. It also targeted financial institutions closer to the beaches. The study particularly sought to examine the extent to which financial education, socio-cultural networks, nature of fishers' financial needs and Development of financial markets determines adoption of banking financial services among the fishing communities in Mbita District.

1.7 Conceptual Framework

In this study, the conceptual framework was developed in order to understand clearly the concept of banking financial services in relation to the poor communities particularly the fisher folk and the barriers to its access.

The emphasis on the fight against poverty is universally agreed on in such policies as the United Nations Millennium Development Goals (MDGs) and 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, the financial sector policy affects poverty both directly and indirectly. The direct way that the financial policy can influence the poor's income generation and income stabilization (poverty reduction) is by increasing access to financial services (Mutua and Oyugi, 2007).

In the study, the researcher conceptualized the following independent variables as the factors that determine adoption of banking financial services among the fishing community as financial education, socio-cultural networks, nature of fishers' financial needs, and level of Growth of financial markets and the dependent variable is level of adoption of banking financial services. The intervening factors are education level, government policy, economic and environmental situations.

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Figure 1.1 represents the relationship between these factors (independent variables) and the access to banking financial services (dependent variable).

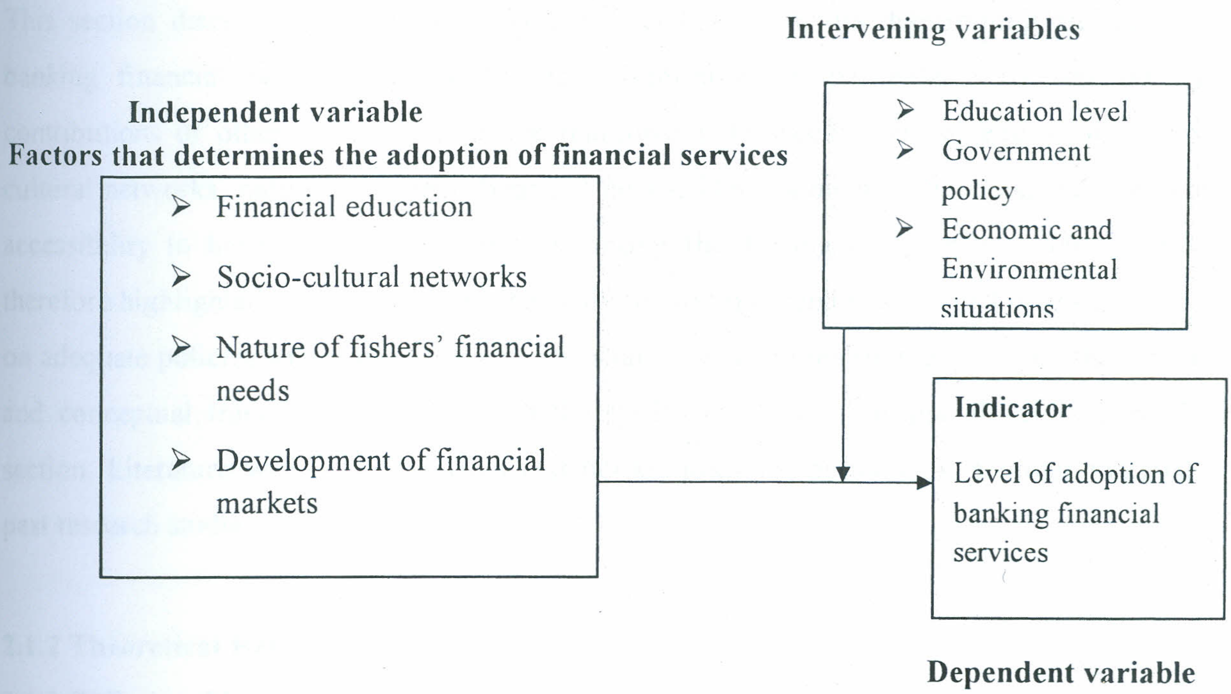

Figure 1.1 A Self conceptualized framework for the factors determining adoption of banking financial services

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This section discusses the reviewed literature related to factors determining adoption of banking financial services among fishing communities. It particularly focuses on the contributions of other researchers on the relationship between financial education, socio-cultural networks, nature of fishers' financial needs, Development of financial markets and accessibility to banking financial services among the fishing communities. This section therefore highlighted critical issues of the study in summary and made conclusions basically on adequate policies to expand access to financial services in the rural areas. The theoretical and conceptual frameworks upon which the study was based are also developed in this section. Literature was borrowed from text books, journals, periodicals, seminar materials past research studies and internet search.

2.1.2 Theoretical Review

2.1.3 Diffusion Theory

This study used the diffusion theory as argued by Rogers (2003), also known as the diffusion of innovations theory. This is a theory concerning the spread of innovation, ideas, and technology through a culture or cultures. The theory has been extensively studied by sociologists, psychologists, and anthropologists. Diffusion theory states that there are many qualities in different people that cause them to accept or not to accept an innovation. There are also many qualities of innovations that can cause people to readily accept them or to resist them (Rogers, 2003).

According to diffusion theory, there are five stages to the process of adopting an innovation. The first stage is knowledge, in which an individual becomes aware of an innovation but has no information about it. Next is persuasion, in which the individual becomes actively interested in seeking knowledge about the innovation. In the third stage, decision, the individual weighs the advantages and disadvantages of the innovation and decides whether or not to adopt it.

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After the decision comes implementation, in which the individual actually does adopt and use the innovation. Confirmation is the final stage. After making adopting the innovation, the individual makes a final decision about whether or not to continue using it based on his own personal experience with it. These same stages apply, to varying degrees, to groups of people in addition to individuals (Rogers, 2003; Levy, 2005).

In considering the adoption of financial services by rural fisher folk, financial education, social cultural networks, development of financial markets and nature of financial needs are some of the considerations hypothesized by this study to constitute the factors that affect the adoption.

2.2 The Fishing Community and its unique characteristics

Fishing is known to be one of the oldest occupations of mankind and in Lake Victoria; it has been largely practiced at Artisanal levels (Omwenga *et al.*, 2004). "Artisanal fishing" refers broadly to small, underdeveloped, and often severely impoverished fishing communities whose immediate survival depends on their ability to continue benefiting from local fisheries that in many cases are centuries old. These communities are highly significant in human, economic, and environmental terms. The artisanal fishing sector - regardless of any technical debate over its precise definition provides direct employment to tens of millions of people, and indirect employment to tens of millions more (many of them women involved in fish processing). Artisanal fishing comprises 90% of all fishing jobs worldwide, approximately 45% of the world's fisheries, and nearly a quarter of the world catch. They also provide critical income and edible protein to hundreds of millions across the globe (UNEP, 2005).

According to Ikiara (1999) cited in Omwenga *et al* (2004), the commercialization of Lake Victoria fishery has been increasing since late 1790's and this has yielded substantial benefits to the Kenyan economy in terms of foreign exchange earning, income earning to the owners of fish processing and animal feeds manufacturing factories, tax income to the government, fisher incomes and creation of employment opportunities. Omwenga*et al* (2004) noted that despite this fact poverty amongst the fisher folk remains high. Why the fisher folk remain in perpetual poverty puzzles the researcher. Results of the studies done by Omwenga*et al*

(2004) revealed that most fishers being in remote areas with few educational facilities have little access to vital knowledge and information.

World Bank (2000) cited in Mutua and Oyugi (2007) indicated that 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. In theory fishers of Lake Victoria are regarded as the 'poorest' group of people in all sectors of the economy. Looking at the way they live, the way they look, assets they own, saving habits and their family sizes one wonders, when one enters the beach and look at the fishers, most of them look weak, poorly dressed, drink and live in poor housing structures. They have many dependants, wives, orphans, widows to feed (Omwenga*et al,* 2004). But while governments universally recognize the developmental challenges facing many artisanal fishing communities, there has been less emphasis—and perhaps even less agreement - on the need for attention to the sustainability of artisanal fishing practices (UNEP, 2005).

2.3 Aspects of Finance in the Fisheries Value Chain in Kenya

USAID (2008) in their analysis of finance in the fisheries value chain in Kenya, discussed how developing growth strategies for this value chain, with its complex structure, unique social fabric and direct relationship to a fragile environment, demand that the triple bottom line of economic, social, and environmental issues be taken into account. USAID (2008) identified certain salient general aspects of finance in the fisheries value chain in Kenya which apply to all fish species. These include:

(i) Enormous cash flows: The annual landed value (at ex-vessel price) is estimated at Ksh. 8 billion (US$ 100 million) at least half of which is paid out in cash on the beach by the boat owners or boat renters to the fishing crews (hired labor). This has led to a situation that is both inefficient and insecure.

(ii) "Unbanked" value chain actors (socio-cultural factors): Value chain actors, especially upstream in the value chain, are characterized by low financial literacy levels and largely operate outside of the formal finance system. The lack of a savings culture is probably the single–most important constraint to growth of the fish value chain. Historically, the fishing communities have shown little interest in saving because of the perception that there is always fish to catch if they need money. Furthermore, the fishermen typically spend large amount of their earnings on alcohol and prostitutes, both of which are in ample supply on the beaches. As a result, HIV/AIDS is wide-spread in the communities along the shores of Lake Victoria, destroying households and creating the most vulnerable and poorest sub-populations in Kenya.

Weak financial structure: Apart from cash transactions, trade credit is wide-spread. Value chain actors are highly dependent on informal sources of finance which are unreliable, inadequate, and highly expensive. Options to save money through formal bank accounts are for most fisherfolk a costly and time-consuming boat trip away. In the last few years, commercial banks have begun to develop fish sub-sector specific loan products and to bring them closer to the beaches. While they are clearly changing the dynamics, formal finance institutions face an uphill battle, as they are perceived by most value chain actors as cumbersome and high-risk options.

(iii)Poor business Management skills: Value chain actors throughout the value chain (with the exception of the IFPs) do not (know how to) use proper costing and pricing methods in their business operation. Financial records are not kept. As a result profitability is likely low or negative, thus effectively blocking growth of the MSMEs.

(iv)Weak group organization: Throughout the value chain, actors behave individualistically. Groups are formed mostly to provide entry points for larger buyers (IFPs) and government and donor programs. There are Beach Management Units (BMUs) on all the beaches and many associations and cooperative societies for fisher folk, fish traders and fishmongers, but this are weak and badly managed. Especially at the level of the fisher folk, there are few if any economies of scale and market power is low, leaving them at the mercy of the potentially exploitative practices of the fish traders.

(v) Vertical power imbalances (governance): Overall, vertical power imbalances result from the well – capitalized larger traders initiating a wave of supplier credit that ripples

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through the value chain and creates buyer dependency (viscous cycles of debt). On the beaches, the imbalance between low fish supplies and many women traders trying to secure this supplies has led to the jaboya system of fish-for-sex whereby the women are forced to pay an "in-kind" premium on top of cash. Vertical power imbalances play out strongly in the Nile perch channel. The dominant players in this value chain are the IFPs who via their buying agents exert market power over the fisher folks They also create dependencies by providing equipment on (low-cost) credit to boat owners, which puts the latter in a debt position and locks them in. The greatest dependencies however play out in the artisanal fish processing channel where governance mechanisms keep the small processors of Nile perch offal in a highly dependent position with little or no room for upgrading and growth.

2.4 Role of banking financial services in the fisheries value chain in Kenya

Mutua and Oyugi (2007) note that the emphasis on the fight against poverty is universally agreed on in such policies as the United Nations Millennium Development Goals (MDGs) and equally, financial sector policy objectives are set with the goal of poverty reduction. They argue that although the sole provision of sustainable financial services is not a panacea for poverty reduction, the financial sector policy affects poverty both directly and indirectly. The direct way that the financial policy can influence the poor's income generation and income stabilization (poverty reduction) is by increasing access to financial services. Christen *et al* (1995), Otero and Rhyne (1994) cited in Mutua and Oyugi (2007) also argued that increasing the scale of operations would also increase the absolute number of the poor people reached.According to Kibaara (2006) rural financial services refer to all financial services extended to agricultural and non agricultural activities in rural areas; these services include money deposit/savings, loans, money transfer, safe deposit and insurance. Demanders/beneficiaries of banking financial services are mainly households, producers, input-stockists/suppliers, traders, agro–processors and service providers. She continues to states that banking financial services help the poor and low income households increase their income and build assets that allow them to mitigate risk, smoothen consumption, plan for future, increase food consumption, invest in education and other life circle needs. Access to credit and financial services has the potential to make a difference between grinding poverty and economically secure life. Kodhek (2006) cited in Kibaara (2006) asserts that in spite of the importance of saving account, 77% of Kenyan household have no access to a bank account.

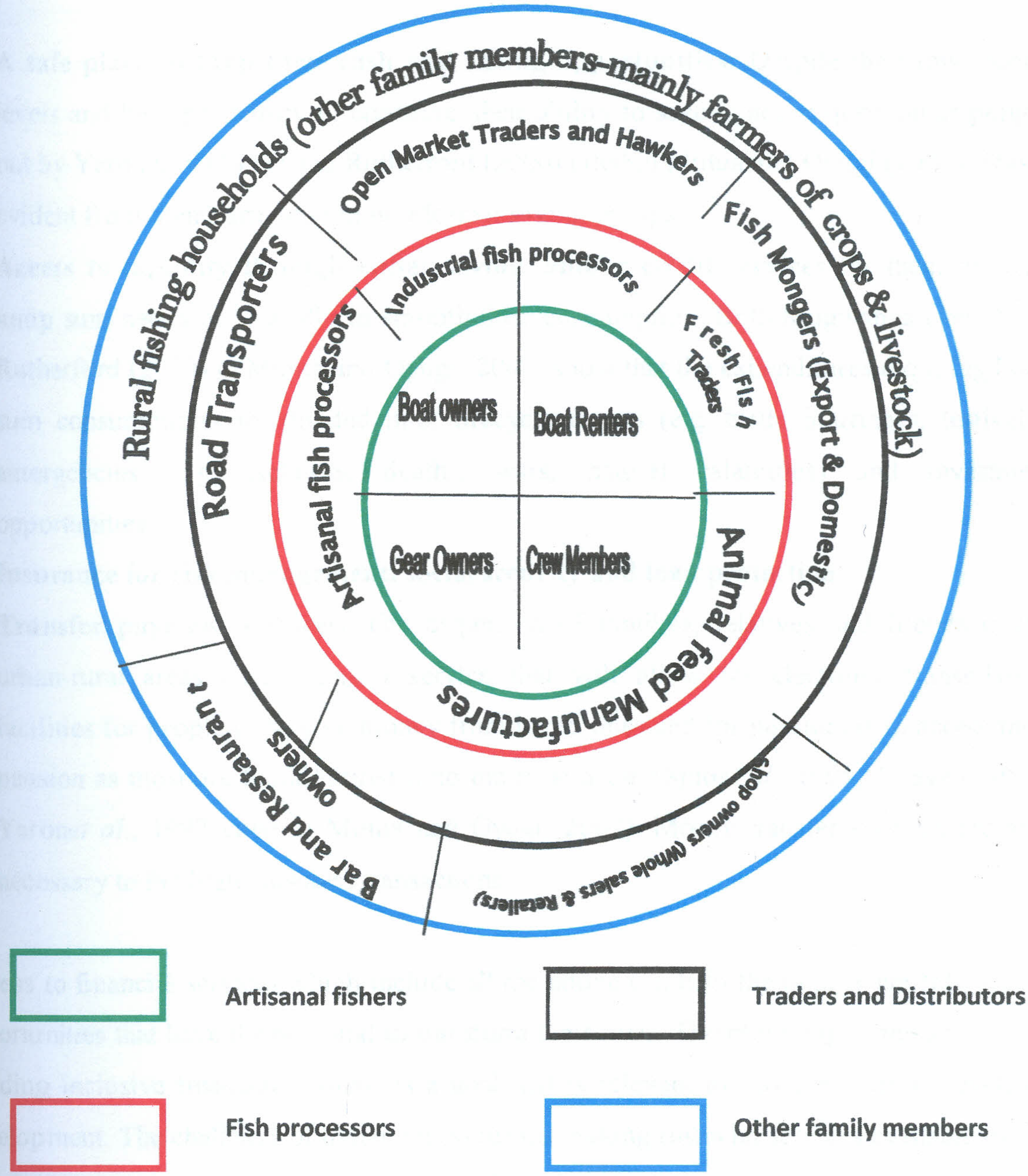

Figure 2.1: The Environment for the Fisher folk

All the Artisanal fishers, Fish processors, Traders and Distributors and Other family members of the fishers as illustrated in the figure 2.1 above, require or demand financial services just like those other people across the socio-economic spectrum. Mutua and Oyugi (2007) outline these needs as:

(i) **A safe place to keep their cash and saving opportunities:** Despite their low income levels and high propensity to consume, their ability to save is not in question as pointed out by Yaron*et al* (1997) and Rutherford (2000) cited in Mutua and Oyugi (2007). This is evident from their participation in informal saving groups.

(ii) **Access to liquidity through either saving, and/or credit services** for them to cover lump sum needs or basically to smooth their consumption. Both Mugwanga (1999) and Rutherford (2000) in Mutua and Oyugi (2007) show that the expenditures requiring lump sum consumptions are divided into; lifecycle events (e.g. birth, marriages, festivals), emergencies (e.g. sickness, deaths, wars, natural calamities) and investment opportunities.

(iii)**Insurance for risk management, social security and loan protection**

(iv)**Transfer payment services:** The dispersion of families, relatives and friends in the urban-rural areas 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 cited in Mutua and Oyugi, 2007). Money transfer services are also necessary to facilitate business transactions.

Access to financial services which include all the above can help the poor fisher folk access opportunities that have the potential to transform their lives. Therefore improving access and building inclusive financial systems is a goal that is relevant to economies at all levels of development. The challenge of better access means making financial services available to all, thereby spreading equality of opportunity and tapping the full potential in an economy. The challenge is greater than ensuring that as many people as possible have access to basic financial services. It is just as much about enhancing the quality and reach of credit, savings, payments, insurance and other risk management products in order to facilitate sustained growth and productivity especially for small and medium enterprises (Mutua and Oyugi, 2007).

Financial service providers in the rural areas are basically divided into formal and informal financial services providers. However this study was focused on the financial service providers which have well-developed rural banking operations. A study conducted by Mutua and Oyugi (2007) on the Poverty Reduction Through Enhanced Rural Access To Financial Services In Kenya, found out that only 5 commercial banks out of 41 had well developed rural banking operations. These include KCB, Co-operative Bank, Equity Bank, K-Rep Bank and Family Finance Building Society (now called Family Bank). They also found out that due to the closure of most banks in the late 1990's citing insolvency problems alternatives to the mainstream banks came up to serve the poor. They include: SACCOs, NGO-MFIs, KPOSB and the recent model known as Financial Service Associations (FSAs)/village Banks. FSAs/Village Banks were established in 1997, with an effort to reach the poorest of the poor. FSAs 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.

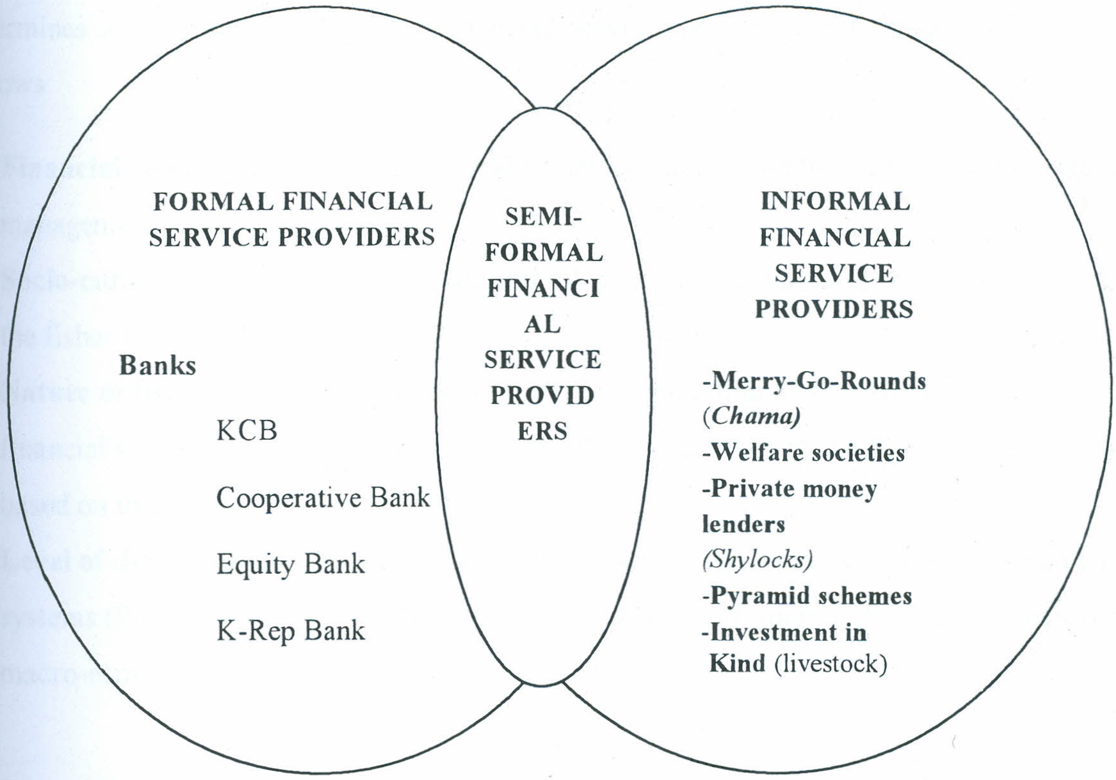

Figure 2.2: The link between financial service providers in the rural areas

Despite the presence of both formal and informal financial institutions in the rural areas, a significant percentage of the rural people do not have access to financial services (Mutua and Oyugi, 2007). A study conducted by Microfinance House Ltd, FSD Kenya (2008), revealed that poor people in the rural areas with relatively more barriers to access save at home (in tins/boxes), with MFIs or SACCOs near them and in kind (sheep, goats, chicken, cows and cereals) and to a very limited extent banks, MFIs and ASCAs or ROSCAs.

According to AUSAID (2010), financial services have failed to adequately reach poorer population for a number of reasons including inadequate infrastructure; perceptions that lending to the poor is too risky to be commercially viable; inhibiting regulatory and legal environment and limited understanding and awareness of financial services by the poor. Pearce, CGAP (2003), Kibaara (2006), Mutua and Oyugi (2007) also agree that rural banking program in Kenya has been hampered by lack of infrastructure meant for upgrading technology; lack of appropriate micro finance legislation and to a large extent lack of a deliberate rural financing policy in Kenya.

In view of the foregoing literature, the researcher identifies among others, the factors that determines accessibility to banking financial services among the fishing communities as follows:

(i) **Financial education:** Lack of basic and functional education in financial and business management skills.

(ii) **Socio-cultural networks:** Socio –cultural influence on savings and investments among the fisher folk.

(iii) **Nature of fishers' financial needs:** Limited understanding and awareness by the financial service providers, about the financial service needs of the fishing community based on their socio-economic habits.

(iv) **Level of development of financial markets:** Lack of well-functioning rural financial systems (Poor financial sector development) as a result of unfavorable legal, political and macro-economic environment for rural finance.

2.5 Factors Determining the Adoption of Banking financial services Among the Fishing Community

2.5.1 Financial Education

In many cases, education and training are taken to mean attending a school/institute. Shuindu and Omulando (1992) cited in Kitainge (2009) define education as the comprehensive exposure to opportunities and challenges in life aimed at achieving an all round preparation of individuals for the challenges and roles awaiting them as members of the society. Similarly training is viewed as a particular education towards a known goal. It is a focused education within the education and training system. Thus education and training entail the realization of certain individual and societal ideals within national and international perspectives (Kitainge, 2009).

Basic education refers to the elementary formal education necessary to provide individual with a general knowledge and the minimum of the skills necessary for taking a place in society and for seeking further knowledge. Functional education on the other hand is a specific kind of education mostly referred to as formal training in a specific area to equip individuals with necessary skills to handle and manage any operations effectively. Functional education provides individuals with the ability to be self reliant and to awaken their interest in the subject area.

According to Omwenga*et al* (2004), education being one of the most important indicator of poverty shows that literacy level amongst fishers is high where 60.9% of fishers had attained primary levels of education, 38% secondary education level, 0.5% had attained university level while 0.6% had not gone to school. But this is only basic education; there is need for functional education where financial management, business management and entrepreneurial skills are taught. For the purpose of this research, we shall study financial education.

FSD Kenya (2008) reveal that financial education teaches the knowledge, skills and attitudes that people can use to adopt good money management practices for earning, spending, savings, borrowing and investing. On an individual level, the lack of financial education/literacy makes poor more susceptible to the devastation caused by emergencies, over–indebtedness, overzealous retailers or fraudulent schemes. Through financial literacy households are able to use scarce resources more effectively, choose the financial services and products that best meet their needs and shift from reactive to proactive decision making. Informed decision to budget save and borrow carefully will enhance financial stability, ability to plan for the future and family welfare. FSD Kenya (2008) also indicate that on an institutional level the lack of financial literacy generates misinformation and mistrust of financial service providers. In promoting financial literacy, financial institutions can better meet client demand, gain competitive advantage, foster informed consumers and enhance their standing as good corporate citizens. Financial literacy is a win–win proposition for clients and institutions. Informed consumers make better clients, who in turn represent reduced risk for financial institutions and contribute to a stronger bottom line. On a market level informed consumers play a developmental and monitoring role in the market, weeding out bad practices and providers. Informed clients are better able to put pressure on financial institutions for appropriately priced and transparent services. Financial education imparts knowledge and skills that lead to behavior change (FSD Kenya, 2008).

Recent financial education program evaluations examined the relationship between financial education, knowledge gain, and behavior change. In general, the literature provides evidence that financial education generally results in positive financial outcomes. The Trans Theoretical Model of change (TTM) which is based on the work of Prochaska (1979) and Prochaska and Diclemente (1983) cited in Lyons (2005); which integrates major psychological themes into a theory of behavior change has been applied to explain the changes in financial behavior which has been positive.

The researcher therefore hypothesizes that there is no significant relationship between financial education and level of access to banking financial services among the fishing communities.

2.5.2 Socio-Cultural Networks

Bettman's (1998) theory of constructive consumer choice argues that consumer often do not have well defined preferences when they make decisions and instead they may construct them on the spot, when needed (Bettman, 1979; Slovic, 1995; Tverksy, Sattath and Slovic, 1988 cited in Laurel Jackson, undated). Further, he argues that consumers in the process of constructing their choice preferences draw from strong contextual influences. Contextual influences can be further defined as *socio-cultural influences* (Briely and Aaker, 2006 cited in Jackson, undated) and *culture* is defined as including the knowledge, beliefs, art, morals, customs, language and habits and perceptions of the social environment shared by members of society (Triandis, 1972 cited in Jackson, undated). Decision making about financial dealings for poor consumers is dependent on the context of the interactive nature of informal social networks within family and groups and close knit communities (Jackson, undated).

Ardjosoediro and Neven, USAID (2008) points out those value chain actors in the fisheries in Kenya, especially upstream in the value chain are characterized by low financial literacy and largely operate outside of the formal finance system. The lack of savings *culture* is probably the single most important constraint to growth of the fish value chain. They argue that historically, the fishing communities have shown little interest in saving because of the perception that there is always fish to catch if they need money. They note that furthermore, the fishermen typically spend a large part of their earning in alcohol and prostitutes, both of which are in ample supply on the beaches. As a result HIV/AIDS is widespread in the communities along the shores of Lake Victoria, destroying household and creating the most vulnerable and poorest sub population in Kenya.

Empirical evidence suggests that the existing culture and tribal dynamics between fishermen and women makes it difficult for *Omena* value chain traders to access and control financial resources. For example the strong existence of *Jaboya* practices – also known as sex for fish trade - limits the ability of those women to expand their business. To help improve the value chain dynamics, KARF is encouraged to work closely with local banks and MFIs to assist in product development targeting *Omena* processors and traders. Although banks and MFIs are beginning to target the fishing communities, more work could be done to enhance product offering (Rostal, USAID, 2009). The informal nature of fishing, fishers' nomadic lifestyle and their informal groupings makes it absolutely difficult to access financial services from the providers because they are viewed as a risky category to serve.

The researcher therefore hypothesizes that Socio-cultural networks do not have any significant influence on level of access to banking financial services among the fishing communities.

2.5.3 Nature of Fishers' Financial Needs

One of the constraints that hinder effective and efficient financial service delivery is lack of proper understanding and awareness of the financial services needs of the fishing community based on their social network. Financial service providers have demonstrated this fact in literature. For example the strengthening the Kenya ***Omena*** fish chain study conducted in June 2009, on the current usage of rural finance resources, services and products by USAID (2009), revealed that financial institution demonstrated a lack of understanding regarding the ***Omena*** business cycle, a lack of knowledge about the return on investment and the capacity of individual to repay. As a result the***Omena*** processors and traders have very limited option in terms of obtaining finance to upgrade and improve their drying systems. NEPAD (2004) agrees that there is limited information on or understanding of the rural household as a potential consumer of financial services targeted at them.

One of the many reasons for the limited access to financial services in the case of the poor as noted by World Bank Policy Research Report (2008) is that the poor may not have any body in their social network who understands the various services that are available to them. NGOs and MFIs are falling short of their objectives for significant market penetration into poor communities because of lack of understanding of financial decision making process in poor communities by basing their product and service offering on "western" perceptions of customer needs and providing narrow and conventional suites of financial product. NGOs and MFIs are missing the mark with regard to the appropriateness of product offering and consequently need to focus on gaining insight into the consumer behaviorss of their customers, specifically the manner in which poor customer reach their financial decisions .

Rural households and small entrepreneurs have specific needs which may vary from those of urban clients. An institution thus has to offer a variety of financial products and flexible services that are adapted to rural clients, simply products tailored to their needs (Inforesouces, 2008). IFAD (2009) suggests that the financial realities of the poor rural women and men need to be understood in order for the promotion of rural finance to succeed. IFAD (2009) says credit is not always the answer. Savings are often more important to client than other financial services. They enable the poor households to withstand shocks to their income and mitigate the effect of emergencies and crises. IFAD (2009) concludes that access to secure saving services also promotes financial discipline.

The researcher therefore hypothesizes that there is no significant relationship between fishers' financial needs and level of access to banking financial services among the fishing communities.

2.5.4 Growth of Financial Markets

World Bank Policy Research Report (2008) confirms that financial markets and institutions exist to mitigate the effects of information asymmetries and transaction costs that prevent the direct pooling and investment of society savings. Financial institutions help mobilize savings and provide payments services that facilitate the exchange of goods and services. In addition, they produce and process information about investors and investment projects to enable efficient allocation of funds; to monitor investments and exert corporate governance after those funds are allocated; and to help diversity, transform and manage risk. When they work well, financial institutions and markets provide opportunities for all market participants to take advantage of the best investments by channeling funds to their most productive uses, hence boosting growth, improving income distribution, and reducing poverty.

When financial institutions and markets do not work well, opportunities for growth are missed, inequalities persist and in the extreme cases, costly crises follow. Without inclusive financial systems, poor individuals and small enterprises need to rely on their personal wealth or internal sources to invest in education, become entrepreneurs, or take advantage of promising growth opportunities. Modern development theories increasingly emphasize the key role of access to finance. Earlier theories of development postulated that arise in short term inequality was an inevitable consequence of the early stages of development. Financial sector reforms that promote broader access to financial services need to be at the core of the development agenda. Indeed if financial market frictions are not addressed, redistribution may have to be endlessly repeated, which could result in damaging disincentives to work and save (World Bank Policy Research Report, 2008; OECD, 2006).

Financial sector is all wholesale, retail, formal and informal institutions in an economy offering financial services, to consumers, businesses and other financial institutions. It includes everything from banks, stock exchange, and insurers, to credit unions, microfinance institutions to money lenders. Financial sector is said to develop if the number and variety of financial institutions and services may increase; the amount of funds intermediated by the financial sector may increase; the efficiency, competitiveness or regulatory environment of the sector may improve or particularly important from a poverty reduction perspective, when more of the population may gain access to financial services (DFID, 2004).

Kenya's financial market still remains thin in the rural areas, as most financial institutions are concentrated in urban, peri-urban areas 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 (Mutua and Oyugi, 2007). According to USAID (2008), apart from cash transactions, trade credit is wide-spread in the fisheries value chain in Kenya. Value chain actors are highly dependent on informal sources of finance which are unreliable, inadequate and highly expensive. Options to save money through formal bank accounts are for most fisher folk a costly and time consuming boat trip away. Most value chain actors perceive formal finance institutions - that have come closer to the beaches – as cumbersome and high risk options.

A precondition for the development of rural financial systems is stable political and macro-economic environment. Uncertainty about the future political situation of a country and its economic development, particularly inflation, are unfavorable conditions for investments. Moreover, policy makers should give clear signals in favor of rural development, especially the development of inclusive financial institutions in rural areas (World Bank Policy Research Report, 2008). The study continues to note that rural areas generally lack legal environments enabling a sound development of the financial system and the economy. In more concrete terms, land tenure and property rights are frequently unclear, the administration is slow and inefficient, law enforcement is costly and slow, and the court system lacks transparency and efficiency. Any measures to improve these aspects will help to promote rural financial systems.

Like Mutua and Oyugi (2007), IFAD (2009) confirms that an enabling and conducive policy environment is a pre-requisite for an efficient financial system and effective rural development and poverty reduction. IFAD (2009) suggests that at the macro-level, a number of factors are particularly important for preventing systematic risk. They include the development of a national microfinance or rural finance policy or strategy, deregulation of interest and exchange rates, liberalization of agricultural prices and foreign trade, establishment of a legal system that protects property and land use rights and ensures due legal process, and support of autonomous financial institutions and regulatory authorities. This should be done in the context of prudential regulation and supervision - the structuring of financial institutions' actions according to a set of rules and norms that ensure the protection of depositors' money, a safe and sound financial system and a competitive financial market structure (FAO, 2001).

NEPAD (2004) also confirms that poor infrastructure and a sparse population density, coupled with low per capital incomes of many rural households have made traditional models for service delivery too expensive relative to expected returns for the private sector to invest.

A recent study by Tegemeo Institute Egerton University cited in NEPAD (2004) found out that the average distance to any form of financial institution for Kenyan households is 20KM, with distances of over 100KM in more poorly served areas.

The researcher therefore, hypothesizes that the level of Development of financial markets does not have any significant influence on the level of access to banking financial services among the fishing communities.

2.6 Research Gap Identified

The literature review defines rural financial services as all financial services extended to agricultural and non agricultural activities in rural areas; including money deposit/savings, loans, money transfer safe deposit and insurance (Kibaara, 2006). Lack of adoption of banking financial services has been recognized by many researchers as a major constraint to economic development and very little work has been done to promote access to financial services in rural Kenya particularly in lower potential areas; western lowlands, eastern lowlands and the arid and semi arid districts (NEPAD, 2004).

Adoption of financial services – financial inclusion – implies an absence of obstacles to the use of these services, whether the obstacles are price or non price barriers to finance (World Bank Policy Research Report, 2008). Research has revealed that promotion of efficient, sufficient and widely accessible banking financial services (rural banking) is key into achieving proper growth and poverty reduction goals (Mutua and Oyugi, 2007). While this is true, many barriers exist to this access and in the context of the fisheries sector; the researcher identifies these barriers as financial education, socio- cultural, nature of fishers' needs and financial systems development. Offering financial services to the fishing community has got specific challenges related to sector- specific risks and to other specific characteristics of the fish farming activities such as socio- cultural limitations in the value chains.

It is important to note with concern that there is very little research on financial services targeted at the fishing communities in Kenya. Thus a lot of research is required to provide an adequate data in this field. Promoting broader access to financial services, however, has received much less attention despite the emphasis it has received in theory. The adoption dimension of financial development has been over looked mostly because of serious data gaps in this area (World Bank Policy Research Report, 2008). World Bank Policy Research Report (2008) explains that adoption is not easy to measure and that is why systematic indicators of adoption to different financial services are not readily available. Adoption has many dimensions: services need be available when desired and products need to be tailored to specific needs; the prices for these services need to be affordable, including all the non-price costs such as having to travel a long distance to a bank branch, and most importantly, it should make business sense, translate into profits for the producers of these services, and therefore be available on the continuous and suitable basis (Finance and Private Sector Development Team, 2007).

Analytical work collecting and using in depth household and the enterprise information on adoption of and use of financial services is necessary to understand the concept of financial services and to design better policy interventions. Better data and analysis will help researches assess which financial services - saving, credits, payments, and insurance - are most important in achieving development outcomes for both households and firms. Indeed, household surveys are often the only way to get detailed information on who uses which financial services from which types of institutions, including informal ones (World Bank Policy Research Report, 2008).

This proposed study intends to provide a better understanding of the concept of financial services offering in the fisheries sector through detailed survey of the population by providing current information on which services are relevant to the community and which financial delivery channels are most appropriate in the context thus filling the research gap identified.

2.7 The Ideal Situation in Sustainable Financial Adoption

Based on the above conceptual framework, three levels of action can be identified to enable an ideal financial services access situation in the fisheries sector.

(i) Individual households/stakeholders participation:

These include all beneficiaries of the financial services; men and women, young people and indigenous people. Education plays a critical role here and is critical to successful rural finance investments. Savings should be adequately secured and any risks clearly noted. Financial literacy can also help to educate clients on the benefits and risks of financial services. In this way they will determine the balance between their social and economic concerns.

(ii) Financial service providers participation:

These include all financial service provides with well-developed structures offering savings and deposits, credit, insurance and money transfer services. They should understand their clients/fisher folks in their social set up. They should understand the group's affiliation to their culture and come up with products that suit them most. Other than credit, other kinds of support such as safety nets, asset transfers or non financial services may be more appropriate. Other needs may be met by insurance which might not be well known to them.

(iii)Government participants:

There should be a sound infrastructure of financial markets which is essential to an inclusive financial system. This will reduce transaction costs, improve sector information and market transparency, increase outreach and access to refinancing for member institutions and enhance skills across the sector. An enabling and conducive policy environment is a perquisite for an efficient financial system and effective rural development and poverty reduction. Therefore vital regulation, supervision and oversight functions for the rural sector are crucial for the evolution and stability of financial systems.

To illustrate the above ideal situation diagrammatically, the graph by IFAD (2009) on the inter linkages among the three levels (micro level, meso level and macro level) of interventions of the financial sector is adopted.

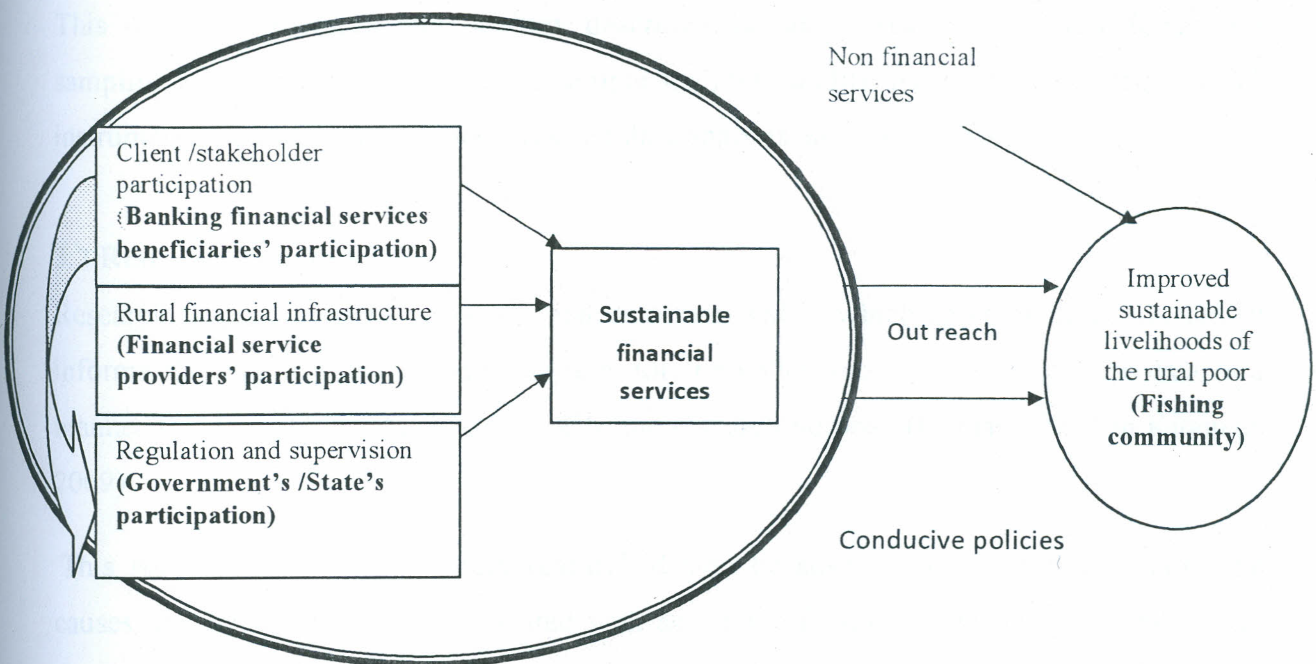

Figure 2.3: An Ideal framework for adoption to sustainable financial services

Source: Adapted from IFAD (2009)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section of research methodology describes the study area, the research design, the sampling and sampling technique, the sample size, the validity and reliability of the research instruments, data collection procedures and data analysis and presentation.

3.2 Research Design

Research design is simply a conceptual structure within which research is conducted. It informs the arrangement of the conditions for the collection and analysis of the data in a manner that aims to combine relevance to the research purpose (Kothari, 2003 in Kitainge, 2009).

This study employed explanatory research design because it identified and explains the causes and effects of factors associated with adoption of banking financial services among the fishing community in Mbita district, Kenya. Anderson (2004) argues that the purpose of an explanatory study is to explain a situation or problem, usually in the form of causal relationships. The focus is on "Why?" and "how?". Explanatory research as noted by Marlow (2007) is found in the social work literature and according to White (1999), explanatory research strives to build theories that explain and predict natural and social events. Theory building requires the development of a collection of related and testable law-like statements that express casual relationships among relevant variables. The ultimate goal of explanatory research is the control of natural and social events. Typical objectives for explanatory research include explaining why some phenomenon occurred, interpreting a cause and effect relationship between two or more variables, and explaining differences in two or more groups' responses.

3.3 The Study Area

The study was conducted in Mbita District, Kenya. It is located in the south-western part of Kenya along Lake Victoria. It borders Bondo Sub County to the north across the lake, Homa Bay Sub County to the east, Migori Sub County to the south and Lake Victoria to the west. It is located between longitude 34°E and 34°"E and latitudes 0°20"S and 0°52"S. (Suba District Strategic Plan, 2005).The District covers an area of 1,062.6 km² exclusive of water surface (Kenya Population and Housing Census, 2009). The District comprises sixteen islands, the biggest in size being Mfangano and Rusinga. The water mass covers an area of 1,190 km² (Suba District Strategic Plan, 2005).The researcher chooses this area because the region has got several beaches and has been leading in fish production because of its richness in marine stock (Suba District Strategic Plan, 2005). Mbita District borders Uganda and Tanzania making it a hub of cross border businesses. Mbita District has got a strong population of indigenous people comprising of the Luo, the Suba amongst other tribes like Kuria who carry out their businesses in the region (Mhando, UNESCO, 2008).

3.4 Target Population

The target population comprised of 42,035 of the fishermen of Mbita district, from the five divisions, Population report (2011), and the 10 financial services providers in the district.

Table 3.1: Target Population

Divisions	Male Population			Female Population			Total Population		
	Actual	Fishing (40%)	Target (49%)	Actual	Fishing (40%)	Target (49%)	Actual	Fishing (40%)	Target (49%)
Mbita	30,559	12,224	**5,990**	32,415	12,966	**6,353**	62,974	25,190	**12,343**
Lambwe	10,873	4,349	**2,131**	11,442	4,577	**2,243**	22,315	8,926	**4,374**
Central	18,477	7,391	**3,621**	19,416	7,766	**3,806**	37,893	15,157	**7,427**
Gwassi	31,762	12,705	**6,225**	33,399	13,360	**6,546**	65,161	26,064	**12,771**
Mfangano	13,510	5,404	**2,648**	12,610	5,044	**2,472**	26,120	10,448	**5,120**
Total	**105,181**	**42,073**	**20,615**	**109,282**	**43,713**	**21,420**	**214,463**	**85,785**	**42,035**

Source: Suba Population Report (2011)

3.5 The Sample and Sampling technique

The idea of 'sample' is linked to that of 'population'. Population refers to all the cases. A sample is a selection from the population (Robson, 2002). In this study a sample was drawn from the target population comprising of Artisanal fishers, Fish processors, Traders and Distributors and other family members of the fisher folk within Mbita District, Kenya, using simple random sampling technique. First, the population was divided into four categories known as strata as indicated above using simple stratified sampling technique. Then from each stratum, equally randomized sample was obtained separately to ensure that each element was equally represented. The samples from each stratum were combined to form a complete sample from the whole population. The beaches which participated in the study were selected through simple random sampling technique.

Simple random sampling method permits confident generalization from a sample to a larger population (Patton, 2002). Walliman (2007) notes that simple random sampling is used when the population is uniform and has similar characteristics in all cases while simple stratified sampling should be used when cases in the population fall into distinctly different categories (strata).

3.5.1 Sample Size

In this study, Fischer's formula (Cochran, 1992; Gay and Airasian, 2003; Mugenda and Mugenda, 1999; Kothari, 2004) was used to obtain a representative sample. The probability of success of the study variable was set at 95% confidence interval and a sampling error of 5%. The 50% proportion was used after failing to get a measure of level of access from similar past study. Therefore the sample (n) size was determined using the Fischer's formula below:

$$\mathbf{n = z^2(pq)/d^2}$$

where:

n - is the desired sample size of the target population.

z - is the standard normal deviation at the required confidence level (z-score for a 95% confidence interval in a normal distribution table is 1.96).

p - is the sample proportion in the target population estimated to have the characteristics being measured (the proportion of the fishing community accessible to banking financial services).

q - is the complement of p (1-p).

d - is the level of statistical significance set and in the study, it is 5% or 0.05 sampling error.

Therefore, substituting in the formula above, the most conservative sample size (n) needed for the study will be:

$n = 1.96^2 (0.5 \times 0.5) / 0.05^2 = 384.16$

n = 384 Respondents

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Table 3.2: Distribution of the sample across the district

Divisions	Male Population			Female Population			Total Population		
	Actual	Proportion	Sample Size	Actual	Proportion	Sample Size	Actual	Proportion	Sample Size
Mbita	30,559	$\frac{30,559}{214,463} \times 384$	55	32,415	$\frac{32,415}{214,463} \times 384$	58	62,974	$\frac{62,974}{214,463} \times 384$	113
Lambwe	10,873	$\frac{10,873}{214,463} \times 384$	19	11,442	$\frac{11,442}{214,463} \times 384$	20	22,315	$\frac{22,315}{214,463} \times 384$	39
Central	18,477	$\frac{18,477}{214,463} \times 384$	33	19,416	$\frac{19,416}{214,463} \times 384$	35	37,893	$\frac{37,893}{214,463} \times 384$	68
Gwassi	31,762	$\frac{31,762}{214,463} \times 384$	57	33,399	$\frac{33,399}{214,463} \times 384$	60	65,161	$\frac{65,161}{214,463} \times 384$	117
Mfangano	13,510	$\frac{13,510}{214,463} \times 384$	24	12,610	$\frac{12,610}{214,463} \times 384$	23	26,120	$\frac{26,610}{214,463} \times 384$	47
Total	**105,181**	$\frac{105,181}{214,463} \times 384$	188	**109,282**	$\frac{109,28}{214,463} \times 384$	196	**214,463**	$\frac{214,463}{214,463} \times 384$	384

The study employed simple random sampling in succession in nearly all stages which include selection of the participating locations, selection of the participating beaches and selection of the study respondents from the selected areas.

3.6 Data Collection

3.6.1 Types and Sources of Data

This study used primary data gotten from questionnaires and interview schedules. Primary data is direct and raw data that is original from the field of study.

3.6.2 Data Collection Instruments

Questionnaires, interviews and observations were used to collect relevant data for accurate research outcomes.

3.6.2.1 The Questionnaires

The questionnaires were administered to the beneficiaries and providers of financial services. A questionnaire is a set of questions written down and generally answered in writing in the same sheet of paper (Wadsworth, 1997). It can be posted or handed in to the people for them to fill it out themselves. In the study, the researcher used self administered questionnaires as they are economical in terms of time and efforts.

Questionnaires have been selected because of their advantages thus: they are inexpensive, free from bias of the researcher; respondents have time to give well thought out answers; the researcher is able to reach respondents who are unapproachable and the fact that questionnaires can make use of large samples thereby making the results dependable and reliable.

3.6.2.2 Interview Schedule

Interviews were administered alongside the questionnaires. Robson (2002) defines an interview as a conversation with a purpose. According to Gall *et al.* (2005) the main advantage of interviews is their adaptability. A well trained interviewer can alter the interview situation at any time in order to obtain the fullest possible response from the individual. Kothari (2003) says that an interview has the strength of obtaining more information and in greater depth. It was administered to the 10 credit managers of financial institutions

3.6.2.3 Observation Schedule

The researcher was guided by an observation schedule along the beaches to record various economic activities and behavior pattern of the population under study through direct observation. Gall *et al.* (2005) defines direct observation as a process involving "collecting data while an individual is engaged in some form of behavior or while an event is unfolding". According to Gall *et al.* (2005) direct observation tends to yield more data about particular variables than can be obtained from questionnaires and interviews. It is an appropriate technique of getting at "real life" in the "real world" (Robson, 2002).

3.7 Data Collection Procedure

Data was collected using self administered questionnaires, interviews and observations. The researcher prepared two sets of simple structured questionnaires and administer them in person to the two categories of respondents – the beneficiaries and providers of banking financial services. An introduction letter from Maseno University, School of Business and Economics and a brief note from the researcher was attached to every questionnaire to give confidence to the potential respondents. The questionnaire beard closed and open-ended questions based on 5 point likert scale. Closed ended questions in the questionnaire will help to standardize and quantify responses from the research. The open-ended questions in the questionnaire ensured that an in-depth data that is detailed and explorative of all aspects of the variable(s) under study was obtained. This yielded very useful information for this study and future studies. It also took care of the human nature of the respondent of wanting to express their personal views and feeling important as a participant of the research

An enquiry through open-ended interview was made alongside the questionnaires. Participants were asked relevant questions as per the interview schedule to which they shall respond according to the best of their knowledge. The researcher shall also directly observe the various economic activities and behavior patterns in the study locations.

3.8 Reliability and Validity Testing of Research Instruments

A valid instrument is one whose content is relevant to the purpose of the study. According to Mugenda and Mugenda (1999) validity refers to the accuracy and meaningfulness of inference, which are based in the research results attained from the analysis of the phenomena under the study. To test for validity of the study the instruments was reviewed by experts in the field from Maseno University. The lectures in the School of Business and Economics, Maseno University read through the research instruments to determine content validity.

Reliability refers to the level to which the measuring instruments provides consistent results (Kothari,2004).Statistically, the reliability was tested by the use of Cronbach's alpha (1951) which is a general formula for scale reliability based on internal consistency. Cronbach's alpha (α) gives the lowest estimate of reliability that can be expected for an instrument (Lehman *et al.*, 2005). The formula for coefficient alpha is:

$$\alpha = \frac{n}{n-1}\left(1 - \frac{\Sigma Vi}{Vtest}\right)$$

Where:

- n = number of questions
- Vi = variance of scores on each question
- $Vtest$ = total variance of overall scores (not %'s) on the entire test

Cronbach's alpha reliability coefficient normally ranges between 0 and 1. The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale i.e. the higher the score, the more reliable the generated scale is. A score of 0.70 or greater is generally considered to be acceptable (Lehman *et al.*, 2005).

3.9 Data Analysis and Presentation Procedures

Quantitative data was analyzed using descriptive statistics in form of percentages, frequencies and means to summarize the data. Qualitative data obtained from interview schedules was transcribed, organized into categories, sub categories and themes as they

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shall emerge from the field and presented in prose form and peoples quoted words according to the themes and objectives of the study. The Social Package for Statistical science (SPSS) software aided in data analysis. Descriptive analysis was carried out to summarize the data using frequencies, percentages, mean and standard deviation among others. Additionally both Pearson's correlation and Regression analysis was used to test for relationship between the independent variables and the dependent variable.

Regression Model

$$AD = \beta_0 + \beta_1 (FE) + \beta_2 (SCN) + \beta_3 (NFN) + \beta_4 (DFM) + e$$

Where the variables are defined as:

AD- Adoption

FE- Financial Education

SCN- Socio-Cultural Networks

NFN- Nature of Financial Needs

DFM-Development of Financial Markets

e - Error term

β – Constant factor

3.10 Ethical Consideration

The respondent's participations in this research were voluntarily; there was no coercion or deception during or after research process. An informed consent was obtained. Confidentiality and anonymity of the respondents was exercised. Potential harm to the respondents such as psychological emotional and embarrassment was minimized.

An academic fraud which involves the intentional misinterpretation of what has been done was also minimized significantly. This includes making up data and or results or purposefully forward conclusion that are not accurate.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter deals with data analysis, presentation, interpretation and discussion of the findings of this study. This chapter is divided into the following sections: General characteristics of the respondents; the extent to which financial education affects adoption of banking financial services among fishing communities in Mbita District Kenya; establish the influence of socio-cultural networks on adoption of banking financial services among fishing communities in Mbita District Kenya, the extent to which the nature of fishers 'financial needs affects adoption of financial services by fishing communities in Mbita District and determine the effect of growth in financial on adoption of banking financial services among fishing communities Mbita District.

4.2 General characteristics of the Respondents

The study was informed by Mbita fisher folk who are critical in establishing the factors determining adoption of financial services among the fishing communities in Mbita district, Kenya. There were 384 respondents comprising of fisher folk. All the targeted respondents gave their responses in all questions asked. Respondents were asked to give general information regarding their background.

4.2.1 Gender and Age Distribution of Respondents

The respondents were asked to give their gender and age distribution. The response is as seen in table 4.1

Table 4.1 Gender of Respondents * Age of Respondents Cross tabulation

			Age of Respondents					
			18-25 years	26-35 years	36-45 years	46-55 years	Over 55 Years	Total
Gender of Respondents	Male	Count	26	83	96	34	22	261
		% within Age of Respondents	66.7%	68.6%	65.3%	68.0%	81.5%	68.0%
		% of Total	6.8%	21.6%	25.0%	8.9%	5.7%	68.0%
	Female	Count	13	38	51	16	5	123
		% within Age of Respondents	33.3%	31.4%	34.7%	32.0%	18.5%	32.0%
		% of Total	3.4%	9.9%	13.3%	4.2%	1.3%	32.0%
Total		Count	39	121	147	50	27	384
		% within Age of Respondents	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	10.2%	31.5%	38.3%	13.0%	7.0%	100.0%

From table 4.1 it is evident that majority at 68.0% were male while only 32.0% were female. This indicates that fishing at Mbita District was male dominated. This is in agreement with David (2005) who noted that fishing in Nyanza region is male dominated with the females staying at home doing household chores or selling small wares in the market.

On age, majority at 38.3% were aged between 36-45 years, followed by 31.5% between 26-35 years, 12.0% between 46-55 years, 10.2% between 18-25 years and only 7.0% were aged above 55 years. This is an indication that majority of respondents were adequately exposed to issues of determinants of adoption of banking financial services, having created the impression from their ages that they were mature enough to comprehend the issues involved in financial services adoption.

4.2.2 Level of Education and Work Experience

Education is important for the acquisition of necessary skills and competencies for proper work. Further, the respondents had served for varied number of years as fishermen. The result is as seen in Table 4.2.

Table 4.2 Highest Level of Education Attained * Number of Years Worked Cross tabulation

			Number of Years Worked				
			Below 5 years	5-10 years	10-15 years	Above 15 years	Total
Highest Level of Education Attained	Primary	Count	8	15	25	17	65
		% within Number of Years Worked	17.0%	23.1%	22.7%	10.5%	16.9%
		% of Total	2.1%	3.9%	6.5%	4.4%	16.9%
	Secondary	Count	15	20	35	76	146
		% within Number of Years Worked	31.9%	30.8%	31.8%	46.9%	38.0%
		% of Total	3.9%	5.2%	9.1%	19.8%	38.0%
	Certificate	Count	8	11	12	38	69
		% within Number of Years Worked	17.0%	16.9%	10.9%	23.5%	18.0%
		% of Total	2.1%	2.9%	3.1%	9.9%	18.0%
	Diploma	Count	10	12	22	16	60
		% within Number of Years Worked	21.3%	18.5%	20.0%	9.9%	15.6%
		% of Total	2.6%	3.1%	5.7%	4.2%	15.6%
	Degree	Count	6	7	16	15	44
		% within Number of Years Worked	12.8%	10.8%	14.5%	9.3%	11.5%
		% of Total	1.6%	1.8%	4.2%	3.9%	11.5%
Total		Count	47	65	110	162	384
		% within Number of Years Worked	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	12.2%	16.9%	28.6%	42.2%	100.0%

From table 4.2 it is evident that majority at 38.0% were secondary school certificate holders, 18.0% were certificate holders, 16.9% had primary school certificate, 15.6% were diploma holders and 11.5% were degree holders. This is an indication that the fisher folk had basic education. It further implies that there had been efforts by the respondents to further their studies. As a result the respondents who had secondary education and above were more knowledgeable compared to the others. Moreover, the fact that majority of the respondents had secondary school qualification and above implies that they were qualified to reliably answer questions about determinants of adoption of banking financial services among fishing community living in Mbita District.

On their experience, majority at 42.2% had worked for more that 15 years, 28.6% had fished for between 10-15 years, 16.9% had fished for between 5-10 years and only 12.2% had fished for less than 5 years. This implies that majority of respondents were fairly experienced. The level of experience indicated above is significant because Nelson and Wambugu (2008) argue that the credibility of the information gathered in any study is informed by the many years of the respondents' service to the organization. The experience proves the validity and reliability of the information obtained. Their skills, knowledge and expertise had been tested for a long period hence their perception on the matter under study had been influenced by their experience. From the table you would notice that the respondents seeking higher education was proportionate with the number of years worked, basically, implying a need to improve on education as years go by.

4.2.3 Household Income Per day

The respondents were asked about their household income per day to ascertain the level of income generated mainly from fishing. The result is as seen in figure 4.1.

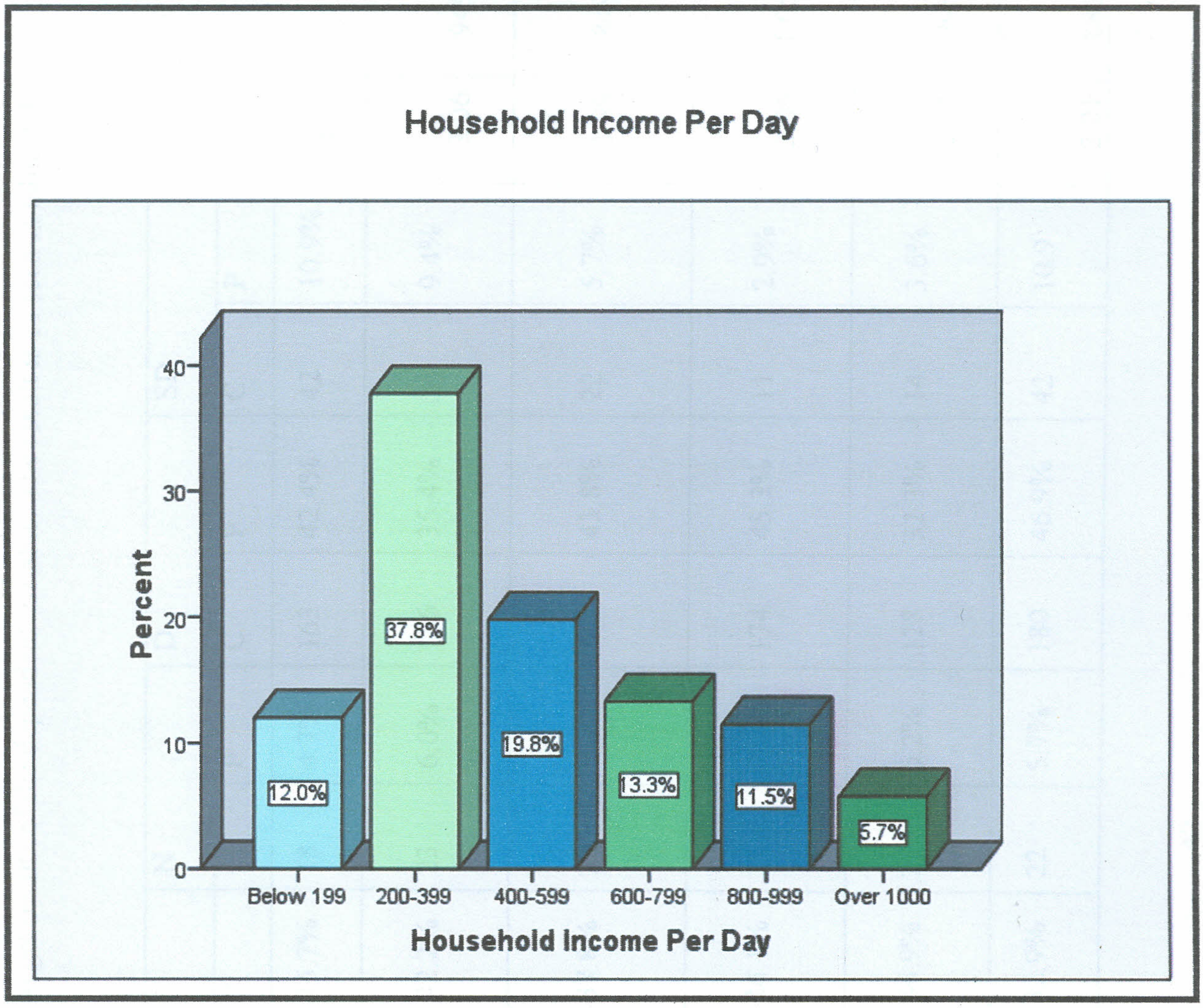

Figure 4.1 Household Income Per day

From Figure 4.1 it is clear that majority at 37.8% earned between 200-399 Kshs per day followed by 19.8% who earned between 400-599 Kshs. They were then followed by 13.3% who earned 600-799 Kshs per day, 12.0% earning below 199 Kshs, 11.5% between 800-999 Kshs and only 5.7% over 1000 Kshs. This implies that the fishermen had an average return from fishing per day which would imply a lack of saving culture and consequently adoption of financial services by the fishing community in Mbita District.

4.3 Adoption of Financial Services

Part of the study was to look into the adoption aspect to get results of the dependent variable. The result is as seen in table 4.3.

Table 4.3 Adoption of Financial Services

	SA		A		N		D		SD		Mean	StD
	C	P	C	P	C	P	C	P	C	P		
I operate a bank account	24	6.2%	137	35.7%	18	4.7%	163	42.4%	42	10.9%	3.79	.8401
Adoption of financial services has enabled me to manage my money well	27	7.0%	162	42.2%	23	6.0%	136	35.4%	36	9.4%	3.06	.9492
Adoption of financial services made me to expand business and exploit entrepreneurial opportunities	28	7.3%	114	37.8%	21	5.5%	168	43.8%	22	5.7%	3.89	.8491
There is no need of using banking services as they don't benefit me	48	12.0%	131	34.1%	22	5.7%	174	45.3%	11	2.9%	2.06	1.054
I face difficulties in obtaining banking because I don't meet certain standards	38	9.9%	180	46.9%	24	6.2%	128	32.3%	14	3.6%	2.04	.9987
I have full adopted banking financial services	13	3.1%	127	32.9%	22	5.7%	180	46.9%	42	10.9	2.01	.8861

From table 4.3 it is clear that majority at 53.3% disagreed with the assertion that they operated a bank account. Only 41.9% agreed and 4.7% were undecided. This implies that adoption of financial services was not in full force because such an adoption needs an engagement with banks starting with bank account opening which is not the case. Rogers (2003) in arguing for diffusion theory said that, there are five stages to the process of adopting an innovation. The first stage is knowledge, in which an individual becomes aware of an innovation but has no information about it. Next is persuasion, in which the individual becomes actively interested in seeking knowledge about the innovation. In the third stage, decision, the individual weighs the advantages and disadvantages of the innovation and decides whether or not to adopt it. After the decision comes implementation, in which the individual actually does adopt and use the innovation. Confirmation is the final stage. From the result here it seems nothing much has been done on knowledge, persuasion, decision, implementation and confirmation to allow the fishermen to adopt financial services.

On whether adoption of financial services had enabled them to manage their money well, 49.2% agreed, 44.8% disagreed, and 6.0% were undecided. This implies that for the significant number of people who had engaged in adoption of financial services, the process had helped in effective money management. Lyons (2005) argued that financial services are earmarked for among other issues, proper money management while inculcating in a business community the necessity of saving and money investment.

When the respondents were asked if adoption of financial services made the fishing community to expand business and exploit entrepreneurial opportunities, 49.5% disagreed, 45.1% agreed and only 5.5% were undecided. While the difference is significantly small, it can be implies that financial services were not being used to diversify or expand the fishing business. In an interview with the financial services managers, they noted that most fishermen who used financial services used it mainly to save their money or to get small loans that went to their children education and not necessarily business expansion. This assertion is agreed to by Kibaara (2006) and Marczyk et al (2005) who both noted that even with the folks who had adopted financial services and particularly in rural areas, because of lack of exposure on the functions of such financial institutions, many simply only withdrew and deposited cash.

When the respondents were then asked if there was then need of using banking services as they benefited them, 48.2% agreed, 46.1% disagreed and 5.7% were undecided. This implies that majority did not see the benefits of the financial services they were engaged in and significant others who did not have bank accounts also felt that there was no benefits. This result asserts that because of lack of sufficient financial education to rural fisher folk, most of the fishermen shied away from adopting financial services because they did not see its benefits.

On whether the fishing community faced difficulties in obtaining banking because they didn't meet certain standards 57.8% agreed, 36.6% disagreed and 6.2% were undecided. This implies that adoption of financial services in Mbita District and particularly the fishing community was hampered by certain banking bottlenecks. David (2005) argues that standards and norms that are never meant to conform to unique needs of targeted clients greatly hampers adoption of financial services and such standards should be relooked to remain attractive to prospective clients in the rural places.

Lastly when the respondents were asked if they had full adopted banking financial services, 57.8% disagreed, 36.0% agreed and 5.7% were neutral. This implies that the fishermen had not fully embraced the requirements and status of full adoption to financial services. AUSAID (2010) indicates that financial services are increasingly being seen as important to poverty reduction and achievement of the millennium development goals. By borrowing, saving or buying insurance the poor can plan for their future beyond the short term. While significant progress has been made in encouraging the adoption of financial services by the poor there is still a lot to be done. Majority adults are still excluded from the financial services market.

4.4 Extent to Which Financial Education Affects Adoption of Rural Financial Services

According to David (2005), financial education is a strong determinant of adoption of financial services particularly to the rural fishing community. The first objective of this study was to determine the extent to which financial education affects adoption of banking financial services among the fishing community in Mbita District, Kenya. The results are as seen in table 4.4.

Table 4.4 Extent to Which Financial Education Affects Adoption of Financial Services

	SA		A		N		D		SD		Mean	StD
	C	P	C	P	C	P	C	P	C	P		
I am trained in good money management (e.g. setting financial goals, making and using a budget) which makes me interact well with financial institutions	30	7.8%	41	10.7%	29	7.6%	237	61.7%	47	12.2%	3.18	.8134
I am well exposed to financial institutions and how they work based on systems and procedures	38	9.9%	60	15.6%	34	8.9%	216	56.2%	36	9.4%	3.28	.8235
I am trained in savings and investments (entrepreneurial) skills which makes me interact well with financial institutions	33	8.6%	46	12.0%	34	8.9%	241	62.8%	30	7.8%	2.67	.8734
There are workshops and seminars done for us to improve our understanding of financial services and its importance.	35	9.1%	50	13.0%	36	9.4%	227	59.1%	36	9.4%	2.47	1.117

From table 4.4 it is clear that majority at 73.9% disagreed that they were trained in good money management (e.g. setting financial goals, making and using a budget) which made them interact well with financial institutions. Only 18.5% agreed and 7.6% were undecided. This implies that there was lack of financial education to spur adoption to financial services. Nelson and Wambugu, FSD

Kenya (2008) reveal that financial education teaches the knowledge, skills and attitudes that people can use to adopt good money management practices for earning, spending, savings, borrowing and investing. On an individual level, the lack of financial education/literacy makes poor more susceptible to the devastation caused by emergencies, over–indebtedness, overzealous retailers or fraudulent schemes.

When asked if they were well exposed to financial institutions and how they worked based on systems and procedures, 65.6% disagreed, 25.5% agreed and 8.9% were undecided. This is an indication that the fishing community was unaware of the systems and procedures used in financial services and were therefore basically illiterate on issues financial. Recent financial education program evaluations examined the relationship between financial education, knowledge gain, and behavior change. In general, the literature provides evidence that financial education generally results in positive financial outcomes. The Trans Theoretical Model of change (TTM) which is based on the work of Prochaska (1979) and Prochaska and Diclemente (1983) cited in Lyons (2005); argue that if financial institutions educated its potential clients, both in general workings of banks, systems and procedures, adoption of such services would inevitably increase.

When asked whether they were trained in savings and investments (entrepreneurial) skills which made them interact well with financial institutions, 70.6% disagreed, 20.6% agreed and only 8.9% were undecided. This further implies that there was a lack of education to help the fishing communities in mbita District to invest their earnings. Through financial literacy households are able to use scarce resources more effectively, choose the financial services and products that best meet their needs and shift from reactive to proactive decision making. Informed decision to budget save and borrow carefully will enhance financial stability, ability to plan for the future and family welfare. Nelson and Wambugu, FSD Kenya (2008) also indicate that on an institutional level the lack of financial literacy generates misinformation and mistrust of financial service providers.

Lastly when the respondents were asked if there were workshops and seminars done for them to improve their understanding of financial services and its importance, 68.5% disagreed, 22.1% agreed and 9.4% were undecided. This implies that there was basically no effort on the part of existing financial institutions in Mbita district to help educate the fishing community on financial matters which consequently hampered the full adoption of financial services by the targeted fishermen. The exposure to financial systems and procedure was highly reliable shown by the mean of 3.28.

4.5 Influence of Socio-Cultural Networks on Adoption of Rural Financial Services

The second objective sought to find out how socio-cultural networks influenced adoption of rural financial services among the fishing community. The results are as seen in table 4.5

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Table 4.5 Influence of Socio-Cultural Networks on Adoption of Rural Financial Services

	NE		LSE		SE		LE		VLE		Mean	StD
	C	P	C	P	C	P	C	P	C	P		
Lack of a savings culture has hampered my adoption of the banking financial services	27	7.0%	36	7.8%	76	19.8%	191	49.7%	39	10.2%	2.66	.7981
Preference to spending money as soon as it is earned has hindered adoption of banking financial services	36	9.4%	42	10.9%	76	19.8%	191	49.7%	39	10.2%	3.05	.8732
My nomadic lifestyle has made it difficult for adoption of banking financial services	40	10.4%	47	12.2%	79	20.6%	184	47.9%	34	8.9%	2.70	1.047
My Perception and those of others about my career usefulness has made me not to bother adopting banking financial services	28	7.3%	34	8.9%	95	24.7%	178	46.4%	49	12.8%	2.04	.8005
Inappropriate external networking with friends and relatives has hampered my adoption of banking financial services	28	7.3%	32	8.3%	77	20.1%	196	51.0%	51	13.3%	3.07	.7005
Lack of an entrepreneurial culture has hampered my adoption of banking financial services	32	8.3%	44	11.5%	82	21.4%	195	50.8%	31	8.1%	2.87	.9421
Starting up enterprises without adequate prior preparation has hampered my adoption of banking financial services	27	7.0%	62	16.1%	100	26.0%	45	11.7%	150	39.1%	3.16	.8082
Heavier household financial burden has barred my adoption of banking financial services	30	7.8%	40	10.4%	79	20.6%	185	48.3%	50	13.0%	2.86	.9421

From table 4.5 it can be seen that majority at 59.9% to a large extent agreed that lack of a savings culture had hampered their adoption of the banking financial services. Only 20.3% said to a less extent and 20.6% said to some extent. This implies that the socio-cultural factor that is lack of saving culture hampers adoption of financial services. Ardjosoediro and Neven, (2008) points out those value chain actors in the fisheries in Kenya, especially upstream in the value chain are characterized by low financial literacy and largely operate outside of the formal finance system. The lack of savings *culture* is probably the single most important constraint to growth of the fish value chain. They argue that historically, the fishing communities have shown little interest in saving because of the perception that there is always fish to catch if they need money.

When the respondents were asked if preference to spending money as soon as it was earned especially on leisure and luxuries had hindered adoption of banking financial services, 59.9% said yes, to a large extent, 21.3% said to a less extent and 19.8% said to some extent. This is an indication that the fishing community was majorly engaged in hand-to-mouth mentality of using as soon as they earned. USAID (2008) noted that note that the fishermen typically spend a large part of their earning in alcohol and prostitutes, both of which are in ample supply on the beaches. As a result HIV/AIDS is widespread in the communities along the shores of Lake Victoria, destroying household and creating the most vulnerable and poorest sub population in Kenya.

On whether their nomadic lifestyle had made it difficult for adoption of banking financial services, 56.8% said to a large extent, 22.6% said to a less extent and 20.6% said to some extent. This is an indication that the fishing community exhibited some nomadic lifestyle that then made them to shy away from using financial services in one permanent area. Rostal, (2009) had argued that the informal nature of fishing, fishers' nomadic lifestyle and their informal groupings makes it absolutely difficult to access financial services from the providers because they are viewed as a risky category to serve.

When asked if perception and those of others about their career usefulness had made them not to bother adopting banking financial services, 59.2% said to a large extent, 16.2% said to a less extent and 24.7% said to some extent. This implies a situation where the fishing community

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was made to perceive that their career was not useful to warrant full or significant adoption of financial services to help them. Such a situation was admitted by financial managers interviewed who said that inadvertently some fishermen were meant to believe that they for instance were not credit worthy hence making many of them not to adopt financial services.

When the respondents were later asked if inappropriate external networking with friends and relatives had hampered adoption of banking financial services, 64.3% said to a large extent, 15.6% said to less extent and 20.1% said to some extent. This implies that there was peer pressure among the fisher folk which seemingly discouraged potential clients from adopting financial services. IFAD (2009), had also argued that external networking among family and friends significantly influenced the level of adoption of potential client as most illiterate would be financial service users depend on referrals from those perceived to have an experience with the service.

When the respondents were asked if lack of an entrepreneurial culture had hampered adoption of banking financial services, 58.9% said to a large extent, 19.8% said to a less extent and 21.4% said to some extent. This is an indication that the fishing community appreciated their lack of entrepreneurial culture negatively influenced adoption of financial services. Info resources, (2008) had noted that in business communities that lacked the spirit to grow and make more money, financial services adoption suffered greatly.

When asked if starting up enterprises without adequate prior preparation had hampered adoption of banking financial services, 50.8% said to a large extent, 23.1% said to a less extent and 26.0% said to some extent. This implies that preparation was not being done well in advance to help the fishing community to adopt banking financial services. David (2005) mentioned seeking of information about a banks services, appraisal of how much a person earns and consequently how much to save, what monies are needed to invest as some of the aspects that a potential client needs to take into consideration before engaging in effective banking financial services.

Finally the respondents were asked if heavier household financial burden had barred adoption of banking financial services, 51.3% said to a large extent, 18.2% said to a less extent and 20.6% said to some extent. Heavy household burden coupled with low income from fishing leaves the families with little to save or invest. Mutua, and Oyugi, (2007) in a study done in rural areas and the inhabitants' relationship with financial service also found out that heavy household budgets left very little to save or invest. Having prior preparation before adopting financial services was reliable with a mean score of 3.16.

4.6 Effect of Development of Financial Markets on Adoption of Rural Financial Services

The third objective sought to find out how the level of development of financial markets affects adoption of rural financial services among the fishing community. The results are as seen in table

Table 4.6 Effect of Development of Financial Markets on Adoption of Financial Services

	SA		A		N		D		SD		Mean	StD
	C	P	C	P	C	P	C	P	C	P		
There are many financial institutions that offer the services I need	42	10.9%	83	21.6%	24	6.2%	208	54.2%	27	7.0%	2.42	.6126
With my small earnings I can still get a financial service provider that will offer me financial products and services cheaply	45	11.7%	86	22.4%	25	6.5%	209	54.4%	19	4.9%	2.65	1.001
I am able to easily save money in any bank, MFI or any other financial institutions without any infrastructural problem	45	11.7%	88	22.9%	26	6.8%	196	51.0%	29	7.6%	2.53	.9498
The financial services available are adequate to meet my financial needs	46	12.0%	85	22.1%	28	7.3%	213	14.8%	47	55.5%	2.40	.8495

From table 4.6 it is clear that majority at 61.2% disagreed that there were many financial institutions that offer the services needed. Only 32.5% agreed and 6.2% were undecided. This implies that the financial market was perceived as narrow and therefore not sufficient to cover the financial services needs of the fishing community.

World Bank Policy Research Report (2008) confirms that financial markets and institutions exist to mitigate the effects of information asymmetries and transaction costs that prevent the direct pooling and investment of society savings. Financial institutions help mobilize savings and provide payments services that facilitate the exchange of goods and services. However, where they are not well connected such lofty goals are not achieved.

When asked if with small earnings one can still get a financial service provider that will offer financial products and services cheaply, 59.4% disagreed, 34.1% agreed and 6.5% were undecided. This implies that the fishermen who got a not so attractive income per day perceived the financial services available as expensive beyond their reach. This is made even worse considering that Kenya's financial market still remains thin in the rural areas, as most financial institutions are concentrated in urban, peri-urban areas 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.

When asked if they were able to easily save money in any bank, MFI or any other financial institutions without any infrastructural problem, 58.6% disagreed, 34.6% agreed and 6.8% were undecided. This implies that since the financial institutions were considered as few, getting access to them physical was a challenge. It further implies that financial education on potential clients to tell them of mobile banking among other problematic infrastructural helping agents was not done. Finally, when the respondents were asked if the financial services available were adequate to meet clients financial needs, 58.6% disagreed and 34.1% agreed and 7.3% were undecided. This result simply confirms what was said that when financial institutions and markets do not work well, opportunities for growth are missed, inequalities persist and in the extreme cases, costly crises follow. Without inclusive financial systems, poor individuals and small enterprises need to rely on their personal wealth or internal sources to invest in education, become entrepreneurs, or take advantage of promising growth opportunities. Financial sector reforms that promote broader access to financial services need to be at the core of the development agenda. Indeed if financial market frictions are not addressed, redistribution may have to be endlessly repeated, which could result in damaging disincentives to work and save (World Bank Policy Research Report, 2008; OECD, 2006).

4.7 Correlation Analysis

As part of the analysis, Pearson's Correlation Analysis was done on the Independent Variables and the dependent variables. Summative scales were used to run both regression and correlation. The results is as seen on Table 4.7

Table 4.7 Correlations

		Adoption	Financial Education	Socio Cultural Factors	Markets
Adoption	Pearson Correlation	1	.654**	.546**	.607**
	Sig. (2-tailed)		.000	.000	.000
	N	384	384	384	384
Financial Education	Pearson Correlation	.654**	1	.747**	.215**
	Sig. (2-tailed)	.000		.000	.000
	N	384	384	384	384
Socio Cultural Factors	Pearson Correlation	.546**	.747**	1	.294**
	Sig. (2-tailed)	.000	.000		.000
	N	384	384	384	384
Markets	Pearson Correlation	.607**	.215**	.294**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	384	384	384	384

**. Correlation is significant at the 0.01 level (2-tailed).

Pearson correlation analysis was conducted to examine the relationship between the variables. The measures were constructed using summated scales from both the independent and dependent variables. As cited in Wong and Hiew (2005) the correlation coefficient value *(r)* range from 0.10 to 0.29 is considered weak, from 0.30 to 0.49 is considered medium and from 0.50 to 1.0 is considered strong. However, according to Field (2005), correlation coefficient should not go beyond 0.8, to avoid multicollinearity. Since the highest correlation coefficient is 0.701 which is less than 0.8, there is no multicollinearity problem in this research (Table 4.7). All the independent variables had a positive correlation with the dependent variable with financial education having the highest correlation of ($r=0.654$, $p< 0.00$) followed by development of financial markets with a correlation of ($r=0.607$ $p< 0.00$) and finally Socio-cultural factors with a correlation of ($r=0.546$ $p< 0.00$). This indicates that all the variables are statistically significant at the 99% confidence interval level 2-tailed. This shows that all the variables under consideration have a significant relationship with the dependent variable.

4.8 Regression Analysis

Since the measures that are used to assess the primary constructs in the model are quantitative scales, regression analysis can be used to achieve this end. Regression analyses are a set of techniques that can enable us to assess the ability of an independent variable(s) to predict the dependent variable(s). As part of the analysis, Regression Analysis was done. The results is as seen on Table 4.8, 4.9 and 4.10

Table 4.8 Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.872[a]	.818	.811	.196

a. Predictors: (Constant), Financial Education, Socio-cultural factors, Financial Markets

b. Dependent Variable: Adoption of financial services

From table 4.8 it is clear that the R value was .872 showing a positive direction of the results. R is the correlation between the observed and predicted values of the dependent variable. The values of R range from -1 to 1.

The sign of R indicates the direction of the relationship (positive or negative). The absolute value of R indicates the strength, with larger absolute values indicating stronger relationships. Thus the R value at .872 shows a stronger relationship between observed and predicted values in a positive direction. The coefficient of determination R^2 value was 0.831. This shows that 83.1 per cent of the variance in dependent variable (Adoption of financial services) was explained and predicted by independent variables (Financial Education, Socio-cultural factors, Financial Markets).

Table 4.9 ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	232.743	3	46.046	94.491	.000[a]
	Residual	12.888	227	.644		
	Total	245.630	230			

a. Predictors: (Constant), Financial Education, Socio-cultural factors, Financial Markets

b. Dependent Variable: Adoption of financial services

The F-statistics produced (F = 94.491.) was significant at 5 per cent level (Sig. F< 0.00), thus confirming the fitness of the model and therefore, there is statistically significant relationship between Financial Education, Socio-cultural factors, Financial Markets, and Adoption of financial services.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.667	.361	.287	7.675	.000
	Financial Education	.157	.065	.193	2.593	.001
	Socio-cultural	.339	.064	.359	5.129	.001
	Financial Market	.296	.065	.324	4.383	.000

a. Dependent Variable: Adoption of financial services

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From table 4.10, the t-value of constant produced (t = 7.008) was significant at .000 per cent level (Sig. F< 0.05), thus confirming the fitness of the model. Therefore, there is statistically significant relationship between Financial Education, Socio-cultural factors, Financial Markets and merit and Adoption of financial services.

Financial Education with sig of .001 had a strong significance to Adoption of financial services and was thus statistically significant. This implies that Financial Education affected Adoption of financial services. According to Nelson and Wambugu, FSD Kenya (2008) reveal that financial education teaches the knowledge, skills and attitudes that people can use to adopt good money management practices for earning, spending, savings, borrowing and investing. On an individual level, the lack of financial education/literacy makes poor more susceptible to the devastation caused by emergencies, over–indebtedness, overzealous retailers or fraudulent schemes. Socio-cultural factors with sig of .001 had a strong significance to Adoption of financial services and were thus statistically significant. This implies that Socio-cultural factors affect Adoption of financial services. This is in agreement with USAID (2008) that noted that the fishermen typically were guided by socio-cultural factors such as lack of saving culture, traditions and lack of entrepreneurial culture among others in deciding whether to adopt financial services or not.

Lastly, development of financial markets with sig of .000 had a strong significance to Adoption of financial services and was thus statistically significant. IT recruitment strategy has become commonplace because it offer foolproof and allows an effective means to recruit. World Bank Policy Research Report (2008) confirms that financial markets and institutions exist to mitigate the effects of information asymmetries and transaction costs that prevent the direct pooling and investment of society savings. Financial institutions help mobilize savings and provide payments services that facilitate the exchange of goods and services. However, where they are not well connected such lofty goals are not achieved.

Thus, the following hypotheses:

H_O1: There is no significant relationship between financial education and adoption of banking financial services among the fishing community.

H_O2: Socio-cultural networks do not have any significant influence on adoption of banking financial services among the fishing community.

H_O3: There is no significant relationship between fishers' financial needs and adoption of banking financial services among the fishing community.

H_O4: Level of development of financial markets does not have any significant influence on the adoption of banking financial services among the fishing community; are all rejected.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter contains a summary of findings, the conclusions drawn and the recommendations made thereof. It finally offers the suggestions for further research.

5.2 Summary of Findings

The first hypothesis stated there is no significant relationship between financial education and adoption of rural financial services among the fishing communities. Financial education had the highest correlation of($r= 0.654$ $p< 0.00$). Further, financial education with ($\beta=.193$, $t=-2.953$, $p<0.001$) had a strong significance to adoption of financial services and was thus statistically significant. This implies that Financial Education affected Adoption of financial services. According to Nelson and Wambugu, FSD Kenya (2008) reveal that financial education teaches the knowledge, skills and attitudes that people can use to adopt good money management practices for earning, spending, savings, borrowing and investing. On an individual level, the lack of financial education/literacy makes poor more susceptible to the devastation caused by emergencies, over–indebtedness, overzealous retailers or fraudulent schemes.

The second stated that Socio-cultural networks do not have any significant influence on adoption of rural financial services among the fishing communities. Socio-cultural networks had a correlation of ($r=0.546$ $p< 0.01$). Socio-cultural networks with ($\beta=.359$, $t=5.129$, $p<0.001$), had a strong significance to adoption to financial services and was thus statistically significant. This implies that Socio-cultural factors affect Adoption of financial services. This is in agreement with USAID (2008) that noted that the fishermen typically were guided by socio-cultural factors such as lack of saving culture, traditions and lack of entrepreneurial culture among others in deciding whether to adopt financial services or not.

The third hypothesis stated that the level of growth of financial markets does not have any significant influence on the adoption of rural financial services among the fishing communities. Level of development of financial markets had a correlation of ($r=0.607$, $p< 0.00$). Level of development of financial markets with ($\beta=.324$, $t=4.383$, $p<0.000$) had a strong significance to adoption to financial services and was thus statistically significant. World Bank Policy Research Report (2008) confirms that financial markets and institutions exist to mitigate the effects of information asymmetries and transaction costs that prevent the direct pooling and investment of society savings. Financial institutions help mobilize savings and provide payments services that facilitate the exchange of goods and services.

5.3 Conclusion

Based on the objectives and findings of the study, the following are the conclusions:

Based on the first objective, the fishing communities was not trained in good money management and was not well exposed to financial institutions and how they worked based on systems and procedures. Moreover, they were not trained in savings and investments (entrepreneurial) skills which made them interact well with financial institutions. Lastly, there were no workshops and seminars done for them to improve their understanding of financial services and its importance. This is in agreement with reviewed literature (David, 2005; Nelson and Wambugu, FSD Kenya (2008) who argued that there is little financial education in rural areas which has hampered adoption of banking financial services. It can therefore be concluded that there is significant relationship between financial education and adoption of rural financial services among the fishing communities.

Based on the second objective, lack of a savings culture had hampered the fishing communities' adoption of the banking financial services. Preference to spending money as soon as it was earned especially on leisure and luxuries had hindered adoption of banking financial services. Moreover, their nomadic lifestyle had made it difficult for adoption of banking financial services. Again, negative perception and those of others about their career usefulness had made them not to bother adopting banking financial services. Inappropriate external networking with friends and relatives and lack of an entrepreneurial culture had hampered adoption of banking financial services. Further, starting up enterprises without adequate prior preparation had hampered adoption of banking financial services. Finally heavier household financial burden had barred adoption of banking financial services. The conclusion is supported by USAID (2008) that noted that the fishermen typically were guided by socio-cultural factors which hindered their adoption of financial services. It can therefore be concluded that there is significant relationship between social cultural networks and adoption of rural financial services among the fishing communities.

Based on the third objective, there were not many financial institutions that offer the services needed and with small earnings the fishing communities could still not get a financial service provider that offered financial products and services cheaply. Further, they were not able to easily save money in any bank, MFI or any other financial institutions without any infrastructural problem. Finally, the financial services available were not adequate to meet client's financial needs. This is supported by World Bank Policy Research Report (2008) which confirms that financial markets and institutions exist to mitigate the effects of information asymmetries and transaction costs that prevent the direct pooling and investment of society savings. It can therefore be concluded that there is significant relationship between level of growth of financial markets and adoption of rural financial services among the fishing communities.

5.4 Recommendations of the Study

Based on the objectives and conclusions this study recommends;

Financial Institutions in Mbita District should proactively initiate financial education and extensive advertising of their products and services to the fishing communities to help them fully adopt banking and other financial services that will help them save, invest and expand their fishing businesses.

The fishing communities should be sensitized on the importance of adopting financial services to help them shun negative socio-cultural networks that hinder them from adopting the services. The sensitization will help them develop a positive culture towards saving, entrepreneurial skills and investments.

Financial institutions should develop their financial market to get sufficient members of the fishing communities. They should also review their working policies to conform their products and services to suit the unique needs of the fishing communities while making those products and services cheaper for the rural communities.

5.5 Suggestions for further research

This study proposes that further research be done in the following areas:

1. Effect of banking policy on adoption of financial services in rural fishing communities
2. Factors influencing Financial services innovation in the banking sector

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