INFLUENCE OF MOBILE BANKING ON GROWTH OF MICRO FINANCE INSTITUTIONS IN KENYA

Maurice Onzere Ala
Jomo Kenyatta University of Agriculture
KENYA

Dr. Patrick Karanja Ngugi
Jomo Kenyatta University of Agriculture
KENYA

CITATION: Ala, M. O. & Ngugi, P. K. (2013). Influence of mobile banking on growth of Micro Finance Institutions in Kenya. *International Journal of Social Science and Entrepreneurship*, *1* (2), 132-151.

ABSTRACT

MFIs in the developing world are increasingly deploying the use of mobile banking to increase growth. The pace of transformation in the MFI sector has speeded up with more MFIs realizing the potential of using the mobile banking in their service delivery. However, there are only a handful of studies on the effect of mobile banking on growth of micro finance institutions. A population of 360 management staff was identified from three levels of management, which included top management, middle level and lower management. The study used both primary and secondary data. The questionnaire included both structured and unstructured questions. The questionnaire was administered through the drop and pick method to the top, middle and lower managers in the MFIs. The study found out that regulatory requirements influences the growth of MFI to strengthen the governance and internal control structures ; that the profitability and growth of MFIs has led to commercialization and integration of MFIs into the formal financial sector ; that the specialized equity funds help compensate for the lack of private sector representation on MFI boards; that the growth of MFIs tend to have a strong interest in overseeing both the commercial and social objectives; that the growth of MFIs provides sustained access to multiple sources of capital. The study recommends the regulatory authorities to strengthen the governance and internal control structures; integrate of MFIs into the formal financial sector; offer specialized equity funds to help compensate for the lack of private sector representation on MFI boards.

Key words: *Branch Network, Convenience , Security, Mobile banking and Satisfaction.*

Introduction

During the last few decades the phenomenon of MFIs has gained unprecedented importance on a world wide scale due to being regarded as a sustainable source of finance, new employment, innovation and economic growth (Morales, Gualdron & Roig, 2005). MFIs and innovation are of fundamental importance to our economy as they spur economic growth and wealth creation (Barringer & Ireland, 2008). The wireless industry is one of the most dynamic and growing industry in the world economy today. There is a shift from the 'sit and search' internet to 'roam and receive' Mobile environment. In Kenya the uptake of mobile phones has been unprecedented with 80% of Kenyan population now covered by Mobile networks. Kenya has seen a tremendous increase in the number of telephone subscriptions, from a Mobile subscription of: 23,000 in 1995, 1,187,100 in 2002 which is 78.7%, 11,440,199 in 2007 which amount to 97.7% of total telephone subscriptions respectively. Mobile Phone services have enhanced the value of a product or service in such a tremendous way. In general 'mobile' means "fully portable, real-time access to the same information, resources, and tools that, until recently, were available only from the desktop" (Shanker, O'Driscoll, & Reibstein, 2003). Recent developments in mobile technology have enabled users to convert their handsets from plain tools of communication to more composite m-commerce gadgets.

KPMG International (2009) notes that mobile phones are being used as ideal alternative to personal computers and the challenge is for the network operators to provide services that is trustworthy and has added value for the consumers. The growing convergence of use for mobile services to network operators, manufacturers of these devices, content providers, financial services providers, and demand by consumers has applied pressure on the industry in general (Karjaluoto, 2002). It therefore means that the evolution of mobile banking will be following the internet banking. Mobile banking services allows transacting of financial transactions using mobile phones and other related devices, where they are able to make transfers between bank accounts and view account balances or settle bills. The customers are able to access online banking, while at the same time receiving full range of banking operations (Alam, 2003).

There has been rapid growth in technological developments, which as a result has brought opportunities to institutions providing or offering financial services through use of channels that have multiple electronic options (Laukkanen & Pasanen, 2007). Mobile phone is one such channel which financial service providers use to serve their consumers, those providers who have adopted use of such channels have gained mileage in this direction thereby increasing numbers of their customers and making cost

savings in the process. Due to increased competition, commercial banks have had to make the right choice in the mix of what to adopt of the processes together with which new development strategies to adopt in order to sustain growth and improve the returns to investors (Alam, 2003). Previously, literature has tended to focus much on general financial services instead of zeroing more on specifically the banking services.

Mobile banking applications are continuously being developed and have now become banks' favourite channels for offering banking services. According to Coelho (2003), one of the main strategies for growth and a major focus for mobile network providers and the banking industry, is the mobile banking and the potential it offers in providing various services. For instance, the mobile banking applications would enable offering of real-time 2-way data transmission, banking services, among other services (Daniel, 1999).

Mobile banking services has enabled facilitation and movement of money from the banking institutions to the poor members of the society in the rural and urban centres at transactions costs that are much cheaper than those offered by commercial banks, which in the process has enabled the banks to reach the unbanked resulting in tremendous growth in the banking industry (Jenkins, 2008). The easy access and availability of the mobile phone and its convenience in size and use has brought additional value and created opportunities to both mobile service providers and customers, among others. Commercial banks are now able to reach many more new customers than before while at the same time providing them with banking services at their convenience anywhere in the country, while existing and new customers are enjoying the increased security and affordability of the services and devices (Jenkins, 2008).

Statement of the Problem

A member of the CGAP (2009) recently identified administrative costs, especially transaction costs, as the primary cause of high MFI interest rates, particularly in rural and disconnected markets. Mobile banking presents an opportunity to reduce transaction costs by replacing costly labor with less expensive, automated technology and decreasing transportation costs associated with disbursing loans and collecting payments (CGAP, 2009). A recent study by the Clinton Foundation estimates that mobile money may reduce transaction costs for MFIs by up to 80 percent. By the end of 2010, Almost half (47.5%) of all Kenyan adults own a mobile phone (up from 26.9% in 2006), with the rate of ownership rising to 72.8% in 11urban areas (up from 52.3% in 2006) and 80.4% in Nairobi (up from 63% in 2006) (Kenya Financial Survey, 2009). Further, 52% received money in 2009 compared to 16.5% in 2006.

The most popular means of money transfer being M-PESA, is now used by 39.9% of all adults in Kenya. 26% of all M-PESA users also save money on their phones. One in six users, store value in their phone for use while travelling; M-PESA is perceived as the least risky by 26.2% of respondents, least expensive (31.7%), fastest (64.3%), easiest to get (47.8%) means of money transfer (Kenya Financial Survey, 2009). The annual number of payment transactions rose to exceed that of Western Union globally and now accounts for about 58% of the number of electronic payments in Kenya. The system allows users to send or withdraw money at over 23,000 retail outlets compared with approximately 1,000 bank branches (CBK, 2010). The potential for reaching providers of such services as health insurance, savings and MFIs has increased substantially since the advent of mobile banking in Kenya (Jack & Suri, 2010). In the introduction of mobile banking by most MFIs, Safaricom, in particular evidently increased the number of subscribers from 9 million subscribers in 2009 to 12 million subscribers in 2011. The number of mobile transactions of MFIs rose from 27% in 2008 to 51% in December 2011. This is because the mobile service provider's M-PESA is the most popular and widely networked mobile money service (Financial Sector Deepening, 2011).

Previous studies have revealed the potential of mobile network technologies for banking purposes (Pousttchi, 2003; Taga and Karlson, 2004; Speedfacts online Research, 2001). Most of these studies were conducted in developed countries and thus may not reflect the impact on the success and growth of different business environments and in particular the MFIs in a developing country like Kenya. Many studies have been carried out locally on MFIs for example; Oriaro (2001) carried an assessment on the suitability of a regulatory framework for operations of MFIs in Kenya. Magiri (2002) investigated relationships between credit models used by MFIs in Kenya and the attainment of outreach. Ratemo (2004) carried a study on USAID strategy for development of MFIs in Kenya and the expectations of funded institutions. Ogindo (2006) carried a study on an assessment of performance of MFIs in Kenya. Wanjohi (2008) investigated competitive strategies and positioning within a changing business environment adopted by MFIs in Kenya. Mwindi (2002) studied the relationship between interest rates charged by MFIs and performance of micro and small enterprises in Nairobi. However, there are no existing studies that have been done to find out the influence of using mobile banking on the growth of these MFIs. This study will seek to fill this gap by investigating the influence of mobile banking on the growth of MFIs.

1.3. Research objectives

This research project comprised a general objective as well as specific objectives.

1.3.1 General objective

The main objective was to investigate the influence of mobile banking on growth of micro finance institutions.

1.3.2 Specific objectives

i. To establish the influence of regulatory framework on growth of MFIs.
ii. To determine how convenience and security influences the growth of MFIs.
iii. To determine how access to financial services influences growth of MFIs.
iv. To investigate the effect of mobile banking on customer satisfaction hence growth of MFIs?

1.4 Justification of the Study

This research will be carried out on MFIs and will form a basis and provide a clearer understanding to the providers of mobile banking services of the effects these services have had in the markets.

The main mobile phone services providers, like Safaricom, Orange, Yu and Airtel, can also make use of this study to better understand the markets and enable them face challenges better and resolve any bottlenecks that may affect the users, which will in the process encourage use of mobile banking in the Kenyan market, and increase the numbers of users. The lessons learnt will assist the service providers tailor their products, focus on the right target market in order to better serve the intended clients.

This research will also be valuable to researchers as it can be used as a basis on conceptual and empirical research in the future, and a result help to validate future findings and refine future studies after carrying out sufficient research from information and data collected on experiences observed and studied in this study.

Literature Review

Regulatory Framework

Eisenmann, Parker, and Van Alstyne, (2009) carried out a study that showed that mobile users who are young are easier to adopt mobile banking than older users since they value time and convenience better than older users. Age is a major factor in mobile banking as younger users learn how to transact more easily than the older age and hence more users are likely to come from younger age.

Karjaluoto, Mattila and Pento (2002), carried a study on the factors underlying attitude formation towards online banking in Finland and found that the better educated population and the wealthier ones use mobile

banking services than the rest of the population. The findings fit well with "early adopter" findings (Laukkanen & Lauronen 2005). There has not been much research done in the developing world on mobile banking since these systems are still new and evolving.

According to a recent Consultative Group to Assist the Poor (CGAP) survey which involved 152 MFIs, it was realized that Sub-Saharan Africa, South Asia and East Asia and the Pacific have the greatest number of MFIs using manual systems and spread sheets (roughly20%). Banks and Rural Banks reported to mostly using manual systems (roughly 10%). The remaining systems are off-the-shelf or custom built. This lack of branch network can potentially increase costs for MFIs (CGAP, 2009)

Convenience and Security

According to a study conducted by Njenga (2009) on Mobile phone banking usage experiences in Kenya, availability of multiple outlets across the country implies more points of contact with customers as opposed to the traditional banking hall set up. He also found that the flexible operating hours of the M-Banking agents leaves them with greater opportunities to satisfy banking requirements that may arise at any time. He also found that although the mobile phone balances may seem low, the fact that there are balances proves that there is storage which can be perceived as acceptance of deposits. This is a significant indication of the high value placed on the convenience associated with the use of the mobile payment services.

Another study conducted by Omwansa (2009) in Kenya found that a lost or stolen mobile phone does not mean catastrophe as no one can access an M-Pesa account without a correct personal identification number (PIN). He further found that in a country where majority of people have no bank accounts, mobile banking provides both convenience and safety. Omwansa also found that in a mobile environment, perceived security of mobile banking transactions is necessary as one of the primary concerns for users. He noted that safety represents no delay, no transaction incompleteness and no private information disclosure during payment transactions. Mobile baking includes confidentiality, authentication, data integrity and non-repudiation (Omwansa, 2009).

Access to Financial Services

A recent Financial Access study (Kenya, 2009) undertaken jointly by the Central Bank of Kenya and Financial Sector Deepening, identified that only 22.6% of the total population aged 18 years an above have access to formal financial services i.e. from the banks, Post Bank and insurance products. The study

further identified the fact that 32.7% are financially excluded from the formal financial sector, though it was a decrease from 38.4% in 2006.With almost half (47.5%) of all Kenyan adults owning a mobile phone, this presents a great opportunity for financial service providers to partner with mobile phone service providers in the provision of financial services (Kenya, 2009).

According to a study by Karjaluoto (2002), low fees, time savings and freedom from time and place have been found to be the most important elements of internet banking. Other factors contributing to its use include user-friendliness of the service, speed of service delivery (Karjaluoto, 2002), convenience and compatibility with lifestyle (Gerrard & Cunningham, 2003), while complexity of a service, perceived financial cost of a product or service, ignorance of electronic services and security risk are found to inhibit the use of the service (Black, et al., 2002). Karjaluoto (2002) also found that the manner in which service is delivered is part of process quality, which depends on the fit between service style of the contact person and the participation style However, contrary to previous studies, the findings of Karjaluoto (2002) showed that security concerns are not among the greatest obstacles to adopting mobile phone banking.

Lovelock (2001) conducted a study on the issue of customers' attitude that vary in regard to their readiness to evolving technology. The study found that the drivers of growth in online banking were a combination of convenience provided to those with easy internet access, the availability of secure, high standard online banking functionality, cost savings and the necessity of banking services.

From a small experiment of delivery of credit by Grameen Bank, microfinance has grown dramatically not only in the provision of credit but also a wide range of financial services ranging from savings to insurance for the low income people. However, it was found that despite the exponential growth experienced in the last couple of years as well as the growing success in reaching the unbanked, many low income households still continue to lack access to formal or semi-formal financial services (Kohen, Hopkins, & Lee, 2008).

A recent survey that was undertaken by CGAP in conjunction with GSM Association (GSMA) - a global trade association for the mobile communications industry and McKinsey - a global management consulting firm—to measure the global market for financial services delivered via mobile phones (mobile money) in 147 developing countries, notes that 1 billion people do not have a bank account but do have a mobile phone. The survey notes that by 2012that number will grow to 1.7 billion, making mobile phones a direct conduit to nearly half of the world's unbanked.

A study in Ethiopia by Demirguc-Kunt, (2007) based on household surveys from 1994 to 2000 demonstrated that access to financial services caused a statistically significant reduction in five of seventeen determinants of poverty. A similar multi-country study by Beck & Demirguc-Kunt, (2007) demonstrated how access to financial services encourages social mobility across generations, thereby leading to poverty reduction in the long run.

Customer Satisfaction

The degree of satisfaction by consumers which has been studied widely has been mostly due to motives and attitudes of consumers (Mahajan, 1994). According to McColl-Kennedy and Schneider (2000), consumers demographic, the way they behave towards various mobile banking technologies and motivation towards using various banking technologies as well as their individual acceptance are some of the factors that predetermine the satisfaction of each user of mobile banking or internet, as established from a study carried out on how consumer adopt to mobile banking and their satisfaction.

Zift (2006) carried a study that showed that many users of mobile phones were not aware of the existence of mobile banking services being offered by MFIs while others found online bank sites being complex as the reasons why consumers were reluctant to take advantage of mobile banking services. Daniel (1999) investigated a model of trust from consumers who are in India where he found the antecedents of trust being 'opportunistic behaviour', 'communication' and 'shared values', with the last two being quite significant and important as they influence consumers trust and commitment.

Black, et al., (2002), study showed that consumers' attitude on mobile banking acceptance and the manner in which they behave depends on whether consumers are computer literate or had prior knowledge on technologies, where prior experience with computers had more impact on the use mobile banking, while consumers who were satisfied with the existing delivery channels seemed to want to keep to their current banking services. In addition, references made by those already using mobile banking services including family members or other groups, influenced consumers' attitudes towards acceptance, in addition to whether they are dissatisfied with the banking services they are already using.

According to a study conducted by Daniel (1999), many consumers who were dissatisfied with the services they were presently getting switched to electronic mobile services from the usual and normal traditional services, due to poor service received at MFIs' branch offices, competent staff availability including branch opening hours which they found inconvenient and the speed at which they received

service at the bank halls. Black, et al, (2002) notes that those consumers who adopted mobile bank services early and who utilize the online banking heavily were found to be more satisfied than the later adopters. In addition, literature established that there was preference by consumers for service delivery through multi-channels than through single channel, which calls for mobile network providers to improve all channels rather than isolating some and concentrating on only one of them (Merwe, 2001).

Satisfaction is defined as an emotional post-consumption response that may occur as the result of comparing expected and actual performance (disconfirmation), or it can be an outcome that occurs without comparing expectations (Oliver, 1996). While satisfaction itself is an emotional construct, its antecedents or drivers can be either emotional or cognitive, depending on the situation. Oliver (1996) proposed five models of satisfaction and its antecedents, three of which result from disconfirmation of expectations and can be labelled evaluative-based satisfaction. The remaining two depict satisfaction as an outcome of non-rational processes that can be labelled emotion-driven.

Conceptual Framework

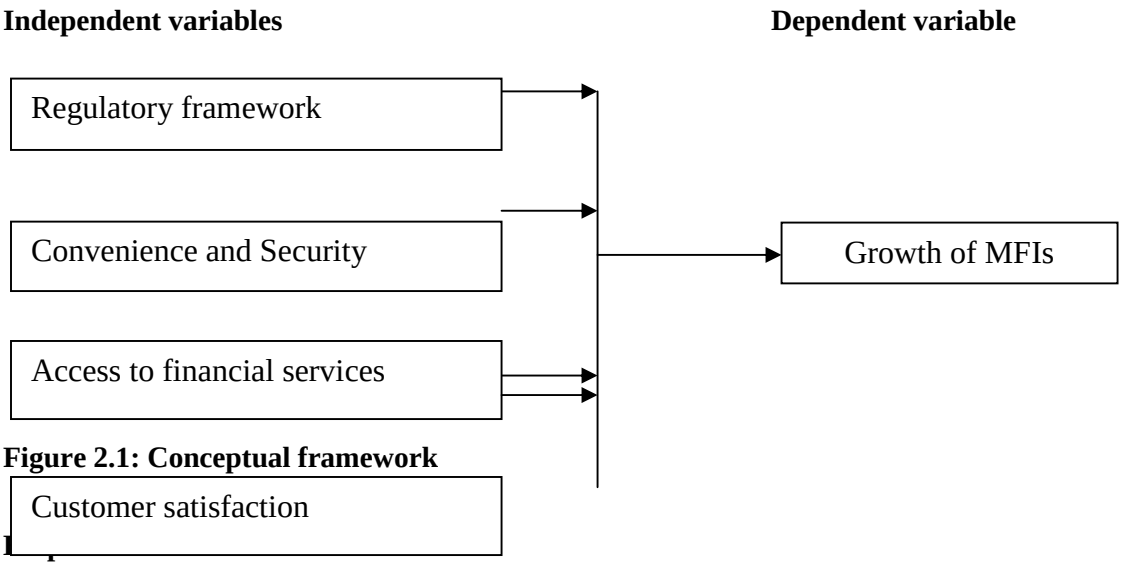

Figure 2.1: Conceptual framework

Karjaluoto, Mattila and Pento (2002), carried a study on the factors underlying attitude formation towards online banking in Finland and found that the better educated population and the wealthier ones use mobile banking services than the rest of the population. However, the study was carried out in European country thus a developing country like Kenya cannot reflect the same situation.

Njenga (2009) conducted a study on Mobile phone banking usage experiences in Kenya. He found that the flexible operating hours of the M-Banking agents greatly enhance convenience and security. This is a

significant indication of the high value placed on the convenience associated with the use of the mobile payment services. However, the study failed to enrich the analysis, therefore future research should attempt to further explore the influencing of mobile banking on growth of MFIs.

Demirguc-Kunt, (2007) carried a study in Ethiopia based on household surveys from 1994 to 2000 demonstrated that access to financial data caused a statistically significant reduction in five of seventeen determinants of poverty. However, the study was a household survey thus; the results may not be applicable to the growth of MFIs. Daniel (1999) investigated a model of trust from consumers who are in India where he found the antecedents of trust being 'opportunistic behaviour', 'communication' and 'shared values', with the last two being quite significant and important as they influence consumers trust and commitment. However, the study was carried out in India thus the results may not be applicable to a developing country like Kenya.

2.6 Research Gap

Considerable research has been carried on mobile banking, mobile money and MFIs. However, a clear picture of the relationship between mobile banking and growth of MFIs has not emerged from previous studies. Limited and contradictory findings have resulted from the different units of analysis, different-measures of growth, limited theory base and reliance on cross-sectional methods. The existing body of knowledge is not sufficient enough to explain the influence of mobile banking on growth of micro finance institutions.

Research Design and Methodology

This study adopted an exploratory research design to investigate the influence of Mobile banking on the growth of MFIs. To investigate this relationship quantitative research approach was employed. Accurate, valid and reliable conclusions will be drawn by engaging descriptive analysis (Weill, 1992). To ensure a more complete approach to empirical research, longitudinal data will be collected in a sequence so as to track the magnitude of change that will have taken place. The main focus of the study was the quantitative part of the research exploring relationships between dependent (growth of MFIs) and independent variables (branch network, convenience and security, access to finance and customer satisfaction). A population of 360 management staff was identified from three levels of management which included top management, middle level and lower management.

Results of the findings and discussion

The study found that regulatory requirements influences the growth of MFI to strengthen the governance and internal control structures; that the profitability and growth of MFIs has led to commercialization and integration of MFIs into the formal financial sector; that the specialized equity funds help compensate for the lack of private sector representation on MFI boards; that the growth of MFIs tend to have a strong interest in overseeing both the commercial and social objectives; that the growth of MFIs provides sustained access to multiple sources of capital; that growth gives MFIs necessary comfort to plan and go for network expansion as well as increase outreach and scope of microfinance services; that the growth leads to increased access to capital markets, but also the transfer of ownership to private investors with strong vested interests.

The study also found that that convenience and security of mobile banking affects the growth of MFIs; that convenience and security of mobile banking affects the growth of MFIs to a very great extent, and that the institutions have written guidelines on convenience and security of mobile banking.

The study further found that access to financial services affects the growth of MFIs; that access to financial services through mobile banking affects the growth of MFIs to a great extent; that capital requirements affects access to financial services to a very great extent; that sources of capital/loans affects access to financial services to a great extent; that regulation of the sector affects access to finance to a great extent; that deposit mobilization affects access to finance to a great extent; that market rates affects access to finance to a great extent. the study also found that MFIs are able to have adequate collaterals to obtain credit lines/wholesale funds from commercial banks; that the growth of MFIs enables them to raise finances through deposit mobilization; that the asset growth enables ability to source finance more rapidly and increased leverage; that the growth of MFIs enables it them to access capital markets as needed for loan portfolio expansion at a reasonable cost; and that the branches growth have made the MFIs eligible to mobilize public savings to finance their operations.

Conclusions

The study concludes that regulatory requirements influences the growth of MFI to strengthen the governance and internal control structures; that the profitability and growth of MFIs has led to commercialization and integration of MFIs into the formal financial sector; that the specialized equity funds help compensate for the lack of private sector representation on MFI boards.

The study also concludes that that convenience and security of mobile banking affects the growth of MFIs; that convenience and security of mobile banking affects the growth of MFIs largely, and that the institutions have written guidelines on convenience and security of mobile banking.

The study further concludes that access to financial services affects the growth of MFIs; that access to financial services through mobile banking affects the growth of MFIs to a great extent; that capital requirements affects access to financial services to a very great extent; that sources of capital/loans affects access to financial services to a great extent; that regulation of the sector affects access to finance to a great extent; that deposit mobilization affects access to finance to a great extent; that market rates affects access to finance to a great extent. the study also concludes that MFIs are able to have adequate collaterals to obtain credit lines/wholesale funds from commercial banks; that the growth of MFIs enables them to raise finances through deposit mobilization; that the asset growth enables ability to source finance more rapidly and increased leverage; that the growth of MFIs enables it them to access capital markets as needed for loan portfolio expansion at a reasonable cost; and that the branches growth have made the MFIs eligible to mobilize public savings to finance their operations.

Recommendations

The study recommends the regulatory authorities to strengthen the governance and internal control structures; integrate of MFIs into the formal financial sector; offer specialized equity funds to help compensate for the lack of private sector representation on MFI boards.

The study also recommends MFIs to ensure convenience and security of mobile banking through written guidelines on convenience and security of mobile banking.

The study further recommends that financial inclusion policy capital/loans be made available to MFIs. The study also recommends that MFIs acquire adequate collaterals to enable them obtain credit lines/wholesale funds from commercial banks; MFIs could also raise finances through deposit mobilization;

The study further recommends that efficient customer satisfaction for growth of MFIs; that mobile banking should also reduce duration of service delivery and increase convenience.

References

Alam, Ian (2003) 'Innovation Strategy, Process and Performance in the Commercial Banking Industry' *Journal of Marketing Management*, 19, pp 973-999

AMFI Report (2005) *A Newsletter of the Association of Mutual Funds in Kenya* Vol: IV. Issue : IV

Barringer, B.R. & Ireland, R.D. (2008). Entrepreneurship: Successfully launching new ventures, Pearson Prentice Hall.

Barney, J. B. (2001) Resource-based theories of competitive advantage: A ten-year retrospective on the resourcebased view. *Journal of Management, 27: 643-650.*

BeckT., Demirguc-Kunta, A.(2007)"Reaching out: Access to and use of banking services across countries," *Journal of Financial Economics* 85(1): 234-266.

Black, N.J., Lockett, A., Ennew, C., Winklhofer, H McKechnie, S. (2002): "Modelling consumer choice of distribution channels: an illustration from financial devices", *International Journal of Bank Marketing*, Vol. 20 No.4, pp.161-73.

Bogdan, R. C & Biklen, S. K. (2003) *Qualitative Research for Education: An introduction to Theories and Methods (4th ed.).* New York: Pearson Education group. (pp. 110-120).

Britton, D., McGonegal, S. (2007), *"The Digital Economy Fact Book"*, (9th ed.), The Progress Freedom Foundation, Washington, DC,

Bryman, A. and Bell, E. (2007) *Business Research Methods*, Second Edition, Oxford: Oxford University Press.

Central Bank of Kenya (2008) *Survey on Bank Charges and Lending Rates* http://www.centralbank.go.ke/downloads/bsd/Survey2009.pdf

Central Bank of Kenya CBK (2004), *Regulation and supervision of microfinance institutions in Kenya*: Draft. Nairobi Central Bank of Kenya, Bank Supervision Department.

Central Bank of Kenya CBK Report, (2010) *Regulation and supervision of microfinance institutions in Kenya*: Draft. Nairobi Central Bank of Kenya, Bank Supervision Department

CGAP. (2009, March). 2008 *Microfinance Technology Survey. 2008 Microfinance Technology Survey . CGAP*: http://www.cgap.org/p/site/c/template.rc/1.26.10622/

Clayton . m. Christensen (1997) *The Innovator's Dilemma*. Harvard Business Press.

Chris Nicholson, "In poorer nations, cellphones help open up micro financing," *New York Times*, July 9, 2007, http://www.nytimes.com/2007/07/09/business/worldbusiness/09micro.html (accessed November 30, 2009).

Coelho, F., Easingwood, C. (2003), "Multiple channel structures in financial services: a framework", *Journal of Financial Services Marketing, Vol. 8 No.1, pp.22-34.*

Cooper & Schindler, (2003*),* 'Sampling frames', *Journal of Financial Services Marketing*, Vol. 8 No.1, pp.22-34.

Daniel, E (1999), "Provision of Electronic banking in the UK and the republic of Ireland. *International', journal of banking marketing"*. Vol. 17 (2) pp 72-82

Deborah B. Prof. (2009) Director of the International Transactions Clinic, *University of Michigan Law School, December 14.*

Demirguc-Kunt, A. (2007). *Finance and economic development: Evidence, indicators and policy choices* (World Bank Development Research Department).

Dijk, J.A.G.M.. van (2003). Outline of a Multilevel Theory of the Network Society, *In press.*

Dodge, P. (2003). "The Landfall of Hurricane Dennis in Louisiana: *A Summary of Cooperative Data Collection Efforts*", 11th International Conference on Wind Engineering, Lubbock, TX,

Dondo, A. (2001). Microfinance in Kenya: An overview. K-Rep Occasion paper No. 33, Nairobi, Kenya, K-Rep.

Eisenmann, T. R., Parker, G., and Van Alstyne, M. W. 2009. "Opening Platforms: How, When and Why?" in Platforms, Markets and Innovation, A Gawer (ed.), Northampton, MA: Edward Elgar, pp. 131-162.

Everitt, B.S. (2002) *The Cambridge Dictionary of Statistics*, CUP. ISBN 0-521-81099-X

Financial Sector Deepening (2011). 9th research colloquium. Fairview Hotel, Nairobi.

Gatamah, K. (2001). "*The status of corporate governance in Africa*, Commonwealth Consultative Forum".

Griffin, Em. (2007) A First Look At Expectancy Theory. 6th ed. New York: McGraw Hill,.

Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P. and Kyriakidou, O. (2004a) '*Diffusion of innovations in service organizations: systematic review and recommendations*', The Milbank Quarterly, vol 82, no 4: 581–629.

Jack, B. and Suri, T. (2010), "Mobile Money: The Economics of M-PESA" NBER Working Paper 16721, Cambridge, Massachusetts

Jenkins, Beth (2008), 'Developing Mobile Money Ecosystems', Washington DC: IFC and the Harvard Kennedy School.

Karjaluoto, H. (2002), "Selection criteria for a mode of bill payment: empirical investigation among Finnish bank customers", *International Journal of Retail & Distribution Management*, Vol. 30 No.6, pp.331-9.

Karjaluoto, H., Mattila, M. and Pento, T. (2002), "Factors underlying attitude formation towards online banking in Finland", *International Journal of Bank Marketing, Vol. 20 No. 6, pp. 261-72.*

Kenya Financial Survey (2009). *National Survey 2009* (Dynamics of Kenya's changing Financial landscape).Nairobi.

Kerlinger, F.K, (1978) *Foundations of Behavioural Research*. 3rd edition London: Surjeet Publishers.

Kohen, M., Hopkins, D., & Lee, J. (2008). *Financial Education: A Bridge between Branchless Banking and Low-income Clients*. Washington DC: Microfinance Opportunities.

KPMG International, (2009), Cellphone statistics.

Laukkanen, T. &Pasanen, M. (2007)'*Mobile banking innovators and early adopters: How they differ from other online users*?' Analysis Paper, June.

Lee, M.S.Y., McGoldrick, P.F., Keeling, K.A and Doherty, J. (2003),"Using ZMET to explore barriers to the adoption of 3G mobile banking services", *International Journal of Retail & Distribution Management*, Vol. 31 No.6, pp.340-8.

Lievens, A, Moenaert, R.K, S'Jegers, R (1999),"Linking communication to innovation success in the financial services industry: a case study analysis", *International Journal of Services Industries Management*, Vol. 10 No.1, pp.23-47

Lovelock, C.H, Langeard, E, Bateson, J.E.G and Eiglier, P (1988), *"Some organizational problems facing marketing in the service sector"*, in Lovelock, C.H (Eds), Managing Services: Marketing, Operations and Human Resources, London, Prentice-Hall International Editions, pp.359-66.

Lovelock, C. (2001), *Services Marketing: People, Technology, Strategy, 4th Edition*, Upper Saddle River, NJ, Prentice Hall

Magiri, G K (2002) Relationships between Credit models used in MFIs in Kenya. *MBA. University of Nairobi, Kenya*

Mahajan, J, Vakharia, A.J, Paul, P, Chase, R.B (1994), "An exploratory investigation of the interdependence between marketing and operations functions in service firms", *International Journal of Research in Marketing*, Vol. 11 pp.1-15.

Mbuvi, L. (2007). *M-PESA: Mobile Money for the "Unbanked" Turning Cellphones* into 24-Hour Tellers in Kenya. Kenya.

McColl-Kennedy, J., Schneider, U. (2000), *Measuring customer satisfaction: why, what, and how, Total Quality Management*, Vol. 11 No.7, pp.883-9.

Merwe FM (2001). The Impact of Mobile Communication Technologies in Medium and Small Enterprises: Case Study of Nairobi City, MSc. *Thesis submitted at the University of Nairobi, School of computing and Informatics.*

Morales-Gualdron, S. T., &Roig, S. (2005). The new venture decision: An analysis based on the GEM project database. *International Entrepreneurship and Management Journal, 1, 479–499.*

Mouge, P. & Contractor, N. (2003). *Theories of Communication Networks.* Cambridge: Oxford University Press.

Mugenda, A. G. (2008). *Social Science Research*: Theory and Principles. Nairobi, Arts Press.

Mugenda, O.M. and Mugenda A.G. (2004). *Research Methods, Quantitative and Qualitative Analysis*-African Centre for Technology Studies.

Mulei, A. &Bokea, C. (2000).*Micro andSmall Enterprises in Kenya: Agenda for Improving the PolicyEnvironment*.ICEG& USAID.

Mwaura, K. (2003). "Regulation of Directors in Kenya", University of Wolverhampton.

Mwindi G. A. (2002) The relationship between interest rates charged by MFIs and performance of micro and small enterprises in Nairobi. *Unpublished project.* MBA, University of Nairobi.

Ndege, R. (2006), "Mobile banking needs an ecosystem, as well as a platform, to succeed" *Unpublished MBA Project, UON, and Nairobi.*

Njenga A D K (2009) Mobile phone banking: *Usage experiences in Kenya*. Lecturer of Information Systems, Catholic University of Eastern Africa

Oliver, R.L. (1996), Satisfaction: A Behavioral Perspective on the Consumer, McGraw-Hill, New York, NY.

Ogindo R. (2006). An Assessment of Performance of MFIs in Kenya. MBA, University of Nairobi.

Omwansa, T. (2009)."*M-Pesa progress and prospects*": Innovations case discussion. <http://www.strathmore.edu/pdf/innov-gsma-omwansa.pdf.>

Oriaro, M . (2001) Assessing the suitability of a regulatory framework for operations of MFIs in Kenya. MBA | *University of Nairobi, Kenya*

Pousttchi, K. (2003). "*Conditions for acceptance and usage of mobile payment* procedures".MPRA Paper 2912.

Ratemo Z.M. (2004) USAID Strategy for Development of MFIs in and the Expectations of Funded Institutions. *MBA, University of Nairobi.*

Reichel, M., & Ramey, M. A. (Eds.). (1987). *Conceptual frameworks for bibliographiceducation: Theory to Practice.* Littleton Colorado: Libraries Unlimited Inc.

Rogers, E.M, Agarwala-Rogers, R (1976), *Communication in Organizations*, London. The Free Press,

Saunders (2003), *Research methods for business students* (3rd edition) New York – Prentice Hall

Saunders M, Lewis P and Thornhill A, (2003) *Research Methods for Business Students*, Upper Saddle River, NY: Prentice Hall

Shanker, V. O'Driscoll, T. and Reibstein, D. (2003). *Rational Exuberance: The Wireless Industry Killer B, Strategy and Business* Vol.31.

Taga, K. and Karlsson, J. (2004).*Arthur D. little Globa l M-Payment Report, Vienna, Austria*

The Financial Standard, March 19, 2002

Wanjohi, A.M. (2008). *Competitive strategies and positioning within a changing business environment adopted by MFIs in Kenya.:*

Weill, P. (1992).*The relationship between investment in information technology and firm performance: a study of the valve manufacturing sector*. Information Systems Research.

www.advertisingglossary.net

www.thefreedictionary.com

www.merriam-webster.com

Zift, D, (2006), `Mobile phone Technology Opens up New revenue Stream. Downloaded on February 08, 2011