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## DIGITAL MICROFINANCE AND ITS EFFECTS ON LENDING IN A REGULATED FINANCIAL ENVIRONMENT

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### **Abstract**

In the world over today several mobile applications are being developed to ease transactions as the electronic commerce develops. Digital technologies provide fast and cheap means of exchange of goods and services and they are rapidly changing the way financial services are delivered. Microfinance activities have not been left behind in this technological development and have moved in tandem with it. Regulators on the other hand have worked round the clock to ensure sufficient laws are in place to prevent loss of financial resources, this paper therefore looked at digitization in microfinance and overall effects on lending in a regulated financial environment. Digital is transforming many traditional sectors in brilliant ways. First, the ability to save has improved for a majority of users through of mobile banking platforms. Digital finance has also led to greater financial inclusion, expansion of financial services to non-financial sectors, and the expansion of basic services to individuals since majority of people already own a mobile phone. MFIs cannot afford not to develop an appropriate technology integration strategy. The strategy should ensure that technological solutions remain simple, non-alienating and aligned with their customers' needs.

**Key Words:** *Digital, Microfinance, Regulation, Electronic money, financial services, mobile banking*

## **1. Introduction**

Digital money refers to money held electronically either in a debit card account or the monies held in mobile technology such as Mpesa transactions (Lal & Sachdev, 2015). As it has come to be known mobile technology has had the potential to increase efficiency and the usage of financial services in Kenya. Many of these services, however are conditionally delivered in group setting, financial digitization may disrupt the existing social architecture, leaving its overall effect uncertain (Harigaya, 2016). This paper sought to examine how mobile banking introduction in group microfinance and effects lending. In this paper we look at the regulatory issues relating to electronic money, specifically we consider whether the rationale for financial regulation can or should extend to electronic money. The advent of technological advances and innovations in the financial markets has produced services and products that pose a challenge to financial market regulators (Frame & White, 2009).

Breyer and macavoy (1987) refer regulation as government actions which are grounded in statute, to grant or condition the rights of firms to provide goods and services in particular areas of economic enterprise with the purpose of preventing decisions by private agents that would take insufficient account of public interest. Digital technologies provide fast and cheap means of exchange of goods and services and they are rapidly changing the global payments landscape, this effort has been particularly pronounced in financial services, where large fraction of the poor faces costly access. to the provision of thrift credit and other financial services and products of very small amounts to the rural poor, semi urban or urban areas, for enabling them to raise their income levels and improving living standards. At present a large part of microfinance activity is confined to credit only and women constitute microfinance thereof refers a vast majority of micro credit and savings services. According to United Nations, microfinance institutions can be broadly defined as providers of small scale financial services such as savings, credit and other basic financial services to the poor and low income people.

Access to financial services has been recognized as a human right, strengthening credit delivery services and increasing their outreach has always been an important component in low income economies development agenda (Sjauw-Koen-Fa & Vereijken, 2005). A large number of the poor continued to remain outside the fold of the banking system; there is a

great number of unbanked populations in rural areas. Formal financial institutions and governments have failed to provide access to financial services to the poor and the low income households (Mujeri, 2015).

In fact the failure of institutional initiatives of the rural credit and to the weakness of the exploitative informal system gave birth to microfinance institutions such as Kenya women microfinance trust and equity bank that started as a microfinance bank. The lack of financial services access in rural areas lead to the introduction of financial services such as Mpesa services by Kenya's telco giant Safaricom. Its application facilitates a variety of financial services through the mobile phones such as account balance checks, deposits and withdrawals, bill and merchant payments airtime purchases and money transfers (Jack & Suri, 2011). New entrants such as bank of Africa M-shwari and Kenya Commercial Bank digital loans have given a boost to digital microfinance through the Mpesa platform.

Microfinance is playing a vital role in poverty alleviation, uplifting the living standards of the poor people, collateral challenges and the stiff completion of Kenya's financial sector has lead to the rapid development and adaption of digital microfinance. This paper focuses on digital microfinance and its effects on lending in a regulated financial environment.

## **2. Objectives of the Study**

The objectives of this paper were:

- a) To analyze the impact of technology on microfinance.
- b) To establish how financial innovation has shifted micro lending.
- c) To examine the role of mobile technology in easing financial lending business.
- d) To determine the impact of microfinance in alleviating poverty and financial inclusion.

## **3. Literature Review**

Microfinance has emerged as a catalyst of the rural development, especially in the overpopulated countries such as India and Bangladesh. Sarumathi and Mohon (2011) found that microfinance brought psychological and social empowerment than economic empowerment. Impact of microfinance is appreciable in bringing confidence, courage, skill development and empowerment. Sharma and Sarin (2011) explored the benefits of

microfinance organizations for poverty alleviation. The study established that microfinance organizations have helped in alleviating poverty. Microfinance organization facilitates access to credit which enables the poor to earn their livelihood. However, many challenges as well are faced by microfinance institutions in this pursuit to free the rural poor from endless poverty, unethical collection procedures, collateral systems and extortionist practices have forced some of the rural poor not access credit services offered.

Digital technologies provide fast and cheap means of exchanging goods and services, and they are rapidly changing the global payments landscape. This effort has been particularly pronounced in financial services, where a large fraction of the poor face costly access. Digitization could dramatically reduce transaction costs of delivering financial services for both users and providers, potentially accelerating access and usage around the world. With the success of the mobile money industry in a handful of countries, the optimism around digital financial services is growing (Harigaya, 2016).

Digitization may, however, affect the social contexts of financial behaviors within traditional financial services. For instance, microfinance institutions typically leverage social capital among community members to overcome the lack of information in client selection, monitoring, and enforcement (Harigaya, 2016). Many programs offer a communal venue where members regularly meet and engage in banking transactions as a group. Studies show that existing social connections among clients facilitate effective monitoring and enforcement (Karlán, 2007), and growing social capital through repeated interactions at regular meetings improves loan payments, even without joint-liability, by fostering cooperation (Feigenberge *et al.*, 2010). If digitization replaces the communal transaction process with more convenient but non-communal transactions, it may disrupt the existing social architecture of group banking that reinforces positive financial behaviors. Therefore, the net effects on financial behaviors, and the cost-efficiency for the provider, are ambiguous.

Kenyan perspective on digital microfinance has grown overtime. Safaricom's mobile phone-based money transfer and payments service, M-Pesa, helps to reduce income and consumption volatility (William & Suri, 2014). By reducing transaction costs and increasing security, it has stimulated an increase in the volume, value and diversity of remittances received by its users. As a result, while shocks reduced by 7% the per capita consumption of

households that don't use M-Pesa, the consumption of those households that use the service was unaffected. M-shwari a combined savings and loan product launched through collaboration between a bank and the mobile service provider, aims to deepen and diversify the consumption and income benefits of M-pesa by providing clients with a facility to save and by offering credit beyond a user's network of family and friends. Surveys of M-shwari users confirm that they mainly save and borrow to manage fluctuations in their cash flow and to cope with unexpected needs. M-Shwari was launched in 2013, and by the end of 2014 it boasted a 9.2 million saving accounts and had disbursed 20.6 million in loans to 2.8 million borrowers (CBA, 2014).

### **3.1 Digital Microfinance and Financial Regulation**

In this section we examine the justifications for the many regulations in the financial industry, Kenya's financial markets as regulated by a number of organizations, the central bank and sacco societies regulatory authority. These key organizations have developed regulatory framework that manage the sector to ensure that investors money is not lost and that customers to the entities are not disadvantaged. Technology as well has brought in new challenges as well with the introduction of products such as M-shwari in collaboration with the banks has once again challenged the lending model where there is no security offered, the introduction of credit reference bureaus has also chipped in boosting this digital intervention in micro finance.

Breyer and Macavoy (1987) used the term regulation to refer to governmental actions, which are typically grounded in statute, to grant or condition the rights of typically firms to provide goods and services in particular areas of economic enterprise with the purpose of preventing decisions by private agents that would take insufficient account of public interest. Two main regulations may arise from the above based on the recognition that there may exist factors which prevent the efficient pricing of goods and services in the financial sector and the other may address the systemic challenges such as market failure. KCB M-pesa has also joined the fray of digital microfinance, According to financial sector deepening Kenya, the performance of the digital microfinance since 2013 has been tremendous, the target group was segmented and investigated using a variety of research methods (focus groups, telephone interviews etc), and the results was amazing in that the default rate was as low as 5%.

Muisyo, Alala and Musiega (2014) carried a research on the effects of mobile banking services on the performance of the banking institutions taking Kakamega town as a case study. The study established that introduction of mobile money services has contributed positively to the financial performance of the banking institutions. Convenience and reliability of various mobile money services has largely led to increased customer satisfaction and loyalty despite occasional technical itches that prove disappointing to the customers. The interface between mobile money service providers and banking institutions has proven to be of great use to the Kenyans socio-economic life and thus one cannot envisage a future without mobile money. The future of the Kenyan banking industry remains electronic banking and the going concern of certain banking institutions will largely be determined on how well they are going to invest in technology infrastructure to make electronic banking more reliable.

Literature reveals that the mobile money transfer service is faster, cheaper, more reliable and safer (Jack & Suri, 2011). The benefits of cashless transactions including less opportunity for fraudulent and criminal activities and mobile money technology have increased adoption rates (Wishart, 2006). In his research in India's rural areas, Nandhi (2012) found that mobile banking and mobile money act as financial substitutes to informal financial services (informal savings). It also showed that the usage of financial services had been increased due to mobile money services; linkage of both accounts increased the savings in microfinance institutions.

Four scenarios have been developed to explain how and why resource poor individuals use mobile money as a savings mechanism, these scenarios describe frequency of transactions and the costs associated with each form of savings. The industry has given much attention to scaling mobile money either through growth of the distribution network or inclusion of a wide partnership base (Donovan, 2012). These discussions have overshadowed those on products and have forgotten that Mpesa grew quickly because of the rural poor, its suited their needs and was compatible with their financial habits. The expanding agent network and enrollment of many partners facilitated that growth, in addition to understanding what to do, this facilitates the shift of particular markets as well as the entire mobile money industry beyond payments. As microfinance is the provision of financial services to the unbanked

rural poor people, it's promoted as a poverty reduction tool, the mission of an microfinance firm is to serve the poor and contribute to poverty alleviation, digital money came also a tool to help the rural poor in developing appropriate financial solutions hence the birth of M-shwari.

### **Network Money**

Network money is a term that has been used to refer to those electronic impulses that are employed as value and that they may be stored on a computer hard disk. Network money is software based, and envisage the exchange of electronic impulses as the end not merely the means of a transaction. The risk of double spending in these software based systems is controlled by the use of a single use tokens and on line verification of their currency, transactions can be mad anonymous for the spender of the coin (the customer) by use of blinding technology, this enables the customer to scramble for self generated coin in such a way that its serial number is temporarily obscured when the coin is submitted to the financial institution for validation. The validated coin can subsequently be unscrambled before being spent by the customer (Lee & Longe-Akindemowo, 1999).

### **Consumer Protection**

The threat of systemic risk arising from a generalized panic run on a financial institution gives rise to a perceived need to protect the deposits of consumers to alleviate this threat. The sophisticated state of technology, the location of the industry at the junction of economics, law and computer technology, makes it particularly difficult for most people to grasp the entirety of the product being offered. In this area appropriate regulatory action may take the form of market practice regulations (such as a requirement to provide information about a product or service or laws against insider trading) that are designed to ensure customers are treated fairly (Lee & Longe-Akindemowo, 1999).

### **3.2 Legal Consideration Concerning Financial Regulation**

Jurisprudential theory recognizes that the maintenance of social order by means of rules and sanctions is a key function of the law. The prevention of or control of activities capable of threatening the financial system thus constitutes the meeting point for lawyer and economist on the issue of financial regulation. The prevention of or control of activities capable of threatening the financial system are effected and enforced by means of legal terms and

subject to legal interpretation. Policies based on legal formulae are often supported and enforced directly or indirectly by means of legal enactments, the words or tenor of which ideally reflect those policies (Lee & Longe-Akindemowo, 1999). Where financial regulation is concerned, attention is focused on the scope of the general business of banking. The categorization of an activity as falling within this description has legal consequences for example the carrying on of business of banking by an unlicensed entity is typically an offence or where authorized is accompanied by extensive regulation (Bakare, 2015).

### **3.3 Delivery Models of Microfinance**

Microfinance is a dynamic field and there is clearly no best way to deliver to the poor and hence many delivery models have been developed over a period of time. Each model has its share of problem and success and can be categorized as follows:

#### **Self-help Group Model**

This model has evolved from the NGO sector and works on the belief that the poor can help themselves and the NGOs can provide networking and education to them. A self-help group (SGH) is a small group of about 20 persons from a homogeneous class, who come together voluntarily to attain certain collective goals, social or economic. The group is democratically formed and elects its own leaders. The essential features of SHGs include members belonging to the same social strata and sharing common ideology with aims which include economic welfare of all members. The group mobilizes savings among its members only and provides needs based loans to members only (based on funds created by savings), the rules, norms (Karlan *et al.*, 2017).

#### **Federated Self-help Group**

Self-help groups have been very successful in empowering women by providing direct and indirect benefits to them. However, self-help groups are small in size (usually 10-15 members) and are limited in financial services they provide (Galab & Rao, 2003). Since self-help groups are a widely successful delivery model a need arises to scale them up without compromising with the success. The federated self-help group is one in such a way to scale up the previous model, it is then the bringing together of other self-help groups to act as an apex body (Basu & Srivastava, 2005).



### **Co-operative model**

A co-operative is an organization owned by members who use its services. This model works on the principle that every community has enough human and financial resources to manage their own financial institutions, the members who own it are the members who use its services and can come from different sectors of the same community such as agriculture, retail and wholesale (Dogarawa, 2005).

### **4. Conclusion**

Digital is transforming many traditional sectors in brilliant ways. In today's world, where technology is affecting everything and making it efficient, microfinance has not remained untouched. Digital Microfinance has come with a number of benefits. First, the ability to save has improved for a majority of users through of mobile banking platforms. Mobile banking has become a very effective, safe, and trustworthy savings instrument for its users. Mobile banking is perceived as a good substitute to both traditional banking and informal forms of savings. Digital finance has also led to greater financial inclusion, expansion of financial services to non-financial sectors.

Digital mobile technologies are helping creating employment and alleviate poverty. The upsurge of unsecured mobile loans is helping to boost millions of micro, small and medium enterprises. Mobile loans have opened loan taps for so many Kenyans who had been locked out of borrowing bracket due to lack of jobs, collateral or bank account among other requirements, so many people are now borrowing at the comfort of their homes. As a result of mobile technology, millions of poor Kenyans now use savings and credit services that help them manage risks, mitigate the impact of shocks and, increasingly, invest in improving their livelihoods.

MFI's cannot afford not to develop an appropriate technology integration strategy. This strategy should understand the challenge and opportunities in the emerging switching environment in their economy and the opportunity for mobile payments. It should also explore the advantages and disadvantages of developing alliances and partners with the formal banking sector so as to remain competitive in the evolving technological environment. Lastly, the strategy should ensure that technological solutions remain simple, non-alienating and aligned with their customers' needs.

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