

# **EFFECT OF MICRO-CREDIT ON GROWTH OF SMALL BUSINESS ENTERPRISES: A CASE OF M-SHWARI AT KIBUYE MARKET IN KISUMU COUNTY, KENYA**

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## **Abstract**

*Major focus of this study was to assess the effect of M-Shwari micro-credit on business growth among the Small Business Enterprises (SBEs) at Kibuye market in Kisumu town. Within this scope, the study focused on the M-Shwari customer knowledge, access to microcredit, repayment of microcredit, and micro-credit risks. This was significant in determining the net effect of mobile technology and forward innovations on small scale business. The target population constituted 332 SBE operators at the selected market. Nevertheless, from a sample of 77 participants who were selected by simple random sampling, 68 questionnaires were duly completed and returned, thus representing a response rate of 88%. The instruments for data collection were semi-structured questionnaire which were researcher-administered. Collected data were processed and analyzed using descriptive statistics. The findings were presented using frequency tables and graphs. It was further recommended that core strategic players in the mobile-credit such as phone-service provider, the lender and the regulator needed to up their efforts in enhancing publicity of the designed products so as to demystify any complexities met by consumers in accessing the services. Finally, the regulator needed to work ahead of technological innovations so as to proactively deal with regulatory hindrances that may distort the financial inclusion intents.*

*Keywords: Micro-credit, Business growth, Small Business Enterprises, M-Shwari*

## INTRODUCTION

Worldwide, today's consumers are used to having technology integrated into most aspects of their work and personal lives; and banking is no exception. To respond to changing customer expectations, banks, credit unions and other financial institutions have incorporated mobile technology into consumers' banking experiences (Porteous, 2007). According to Hernandez (2011), this is further necessitated by the increasing number of people in developing countries with mobile phones more than bank accounts. In 2007, for instance, there were over 3.3 billion phone users, and close to 60% of the subscribers lived in the developing world. Many entities thus with a global development focus had to turn to the mobile phone as a potential platform for delivering financial services to the formally unbanked (Hernandez, 2011).

Porteous (2007) argues that the formally unbanked populace is limited in ability to take out loans, maintain savings or make remote payments, and these constraints can inhibit their economic opportunities. Further, Porteous (2007) contends that these obstacles could be partially overcome if financial services were delivered over mobile phones. In most of the countries, mobile phone-enabled banking services are already available and are increasingly being targeted at unbanked populations that are largely low-income and low-literate. However, there seem to be a number of issues which prevent this population from meaningfully adopting and using existing services (Hernandez, 2011). In this study, it is assumed that small scale traders are largely unbanked and that most of the banking transactions they undertake are mobile-phone based. On such basis, the study intends to analyze the effect of M-Shwari micro-credit on growth of small business enterprises at Kibuye market in Kisumu County. The micro-credit is a mobile-banking (M-banking) enabled facility that makes registered Safaricom customers to access qualified credits from the Commercial Bank of Africa (CBA) which are payable in a cycle of 30 days.

### Mobile Banking

The M-Shwari is a derivative product of M-banking, which is the use of mobile phones to access basic financial services. Hernandez (2011) argues that M-banking is a response to a dynamic and unpredictable business environment, which requires financial institutions to seek new strategies that facilitate information sharing and transactions. Consequently, linking banking business to customers through mobile devices such as mobile phones is one of these competitive strategies. The concept of M-banking, according to Ensor, et al. (2012), refers to using mobile devices to provide financial information, communication and transactions to customers such as checking account balances, transferring funds and accessing other banking products and services from anywhere, at any time. Also, Porteous (2006) asserts that mobile

phones have become a tool for everyday use, which creates an opportunity for the evolution of banking services to reach the previously unbanked population through mobile banking.

M-banking services provide time independence, convenience and promptness to customers, along with cost savings. The platform presents an opportunity for banks to expand market penetration through mobile services (Lee, Lee and Kim, 2007). Moreover, through M-banking, customers are enabled to obtain immediate and interactive banking services anytime and anywhere which, in turn, initiate great value for them (Mallat, Peacock and Chin, 2004). M-banking service can also increase the amount of data processing and improve operational performance. Adoption of M-banking has significant impact on reducing costs and facilitating change in retail banking (Laukkanen and Lauronen, 2005). Cruz et al. (2010) suggested that mobile banking has great potential to provide reliable services to people living in remote areas where internet facility is limited.

There is no universal form of M-banking; rather, purposes and structures vary from country to country. The systems offer a variety of financial functions, including micropayments to merchants, bill-payments to utilities, P2P transfers between individuals, and long-distance remittances. Currently, different institutional and business models deliver these systems. Some are offered entirely by banks, others entirely by telecommunications providers, and still others involve a partnership between a bank and a telecommunications provider (Porteous, 2006). Regulatory factors, which can vary dramatically from country to country, play a strong role in determining which services can be delivered via which institutional arrangements (Mortimer-Schutts, 2007).

The World Bank (2009) attributes the massive growth of M-banking to advances in information and communication technology in many countries as long as limitations such as lack of availability, poor wireless product quality and insufficient technology infrastructure are encountered. A consequence of this growth has seen developing countries start also to realize M-banking and have already adopted its services (Bandyopadhyay, 2010). Statistics suggest that adoption of mobile banks services is escalating. In 2010, more than sixty percent of banks worldwide offered mobile banking services considering that users of mobile banks in United States had reached 11 million households in 2009 (Sripalawat et al., 2011). According to Forrester Research (2007), in Europe only five percent of the banking users were adopting the M-banking services even though the availability of leading European Banks offering the services was large. Those who did not use mobile banking applications were reluctant to use it because they lacked awareness about the benefits of this new technology, and this has been the obstacles towards adoption of the system.

In Malaysia, Razak (2011) notes that although the system has been launched for almost five years and the penetration of people using mobile phones is very high, the adoption rate of using M-banking is still low. This results from the fact that consumers are less aware on the benefits when performing fund transfers, bill payments, access account information and a lot other related activities via their mobile devices. In India, customers' behavior is found to be a major barrier for banking to engage in M-banking system. Further, M-banking customers are not keen to be leaders or pioneers but more prefer to be followers (Ng, 2009).

Many commercial banks in developing countries, particularly Africa, have tried to introduce M-banking systems to improve their operations and reduce costs. This has developed from the fact that bank branches alone are no longer adequate to provide banking services to cater for the needs of demanding customers. Therefore, the provision of banking services through mobile banking has provided an alternative means to acquire banking services conveniently and timely to bank customers (Amin et al., 2008). Consequently, mobile phone operators and banks have partnered to identify M-banking/M-payments systems as a potential service to offer customers. Financial institutions, which have had difficulty providing profitable services through traditional channels to poor clients, see M-banking as a form of "branchless banking", which lowers the costs of serving low-income customers (Ivatury and Mas, 2008). For instance, in South Africa, banks are in partnership with mobile operators to offer mobile banking (mobile money) services. The mobile banking providers are making investments into the mobile banking infrastructure for effective provision of mobile banking service to the low-income market (Mobile Telephone Network (MTN) banking, 2009).

Kenya has been at the forefront of the M-banking revolution in Africa with the trade-mark M-Pesa product pioneered by Safaricom, the country's leading mobile phone service provider, in 2007. By the year 2010, over 10 million people, representing 40 percent of Kenya's adult population, had registered as customers (Beck et al., 2012). The registered M-Pesa users can store, transfer or accept sums of money through their mobile phones and turn their virtual balances into cash at any one of over 20,000 authorized Safaricom dealers. Notwithstanding the remarkable success of M-Pesa, the system is not a perfect substitute for the range of services offered by a formal bank, with the initial notable absence of a credit facility for customers. However, recent innovations have begun to bridge the gap with the opening up of M-Pesa to institutional payments and enabling companies to pay salaries and collect bill payments.

Starting November 2012, the M-Pesa customers in Kenya got additional access to interest bearing saving accounts and the ability to take out small loans through a new service called M-Shwari. This was the next step in the M-Pesa innovation of increasing further access to a wider range of financial services and was the result of a new strategic cooperation between

Safaricom and the Commercial Bank of Africa (CBA). Safaricom customers are simply required sign up to the M-Shwari interest bearing savings account, provided by CBA, directly through the M-Pesa menu on their phone. There are no forms to complete and no need to visit a bank branch. M-Pesa customers are enabled to apply to CBA for a micro-credit, again directly from their phone. Based on the individual customer's M-Pesa transactions and savings history, CBA determines the customer's eligibility. The loan money is sent by CBA to the customer's M-Pesa account immediately, again emphasizing the convenience and simplicity of M-Shwari (<http://www.vodafone.com/content/index/media/2012/m-shwari.html>).

### **Growth of Small Business Enterprises**

This research sought to determine knowledge and influence of the M-Shwari product on business growth among the Small Business Enterprises (SBEs) at Kibuye in Kisumu. According to Srinivasan, Thongmak and Ngramyarn (2004), growth of entrepreneurial investment has become an important area of recent policy and academic debate. Comparatively, little rigorous and in-depth research, however, has been undertaken on the issues of gender and business performance (Lerner, Brush and Hisrich, 2007). The SBE growth is the act and process of performing, of doing something successfully, and using knowledge as distinguished from merely possessing it. However, growth seems to be conceptualized, operationalized and measured in different ways, thus making cross-comparison difficult. Among the most frequently used operationalizations are survival and profitability (Srinivasan et al., 2004).

Chandler and Hanks (2004) argue that the model of growth indicate that performance is a function of ability, motivation and opportunity. The performance of a business founder is measured by the growth of the organization (Schein, 2007), which is in turn influenced by the environment in within which the organization emerges. Rosa et al (2006) also outlined four different measures of comparative growth of business, that is, primary performance measures (number of employees, growth in employees, sales turnover, value of capital assets); proxy growth measures (geographical range of markets); subjective measures (including the ability of the business to meet business and domestic needs); and entrepreneurial performance measures (the desire for growth, the ownership of multiple businesses).

In Kenya, according to the Department of Micro- and Small-Enterprise Development (DMSED) in the Ministry of Labour and Human Resource Development, in 2008 there were about 2.8 million SBEs employing 5.1 million people (Stevenson and St-Onge, 2005). There were an estimated 7.8 million people employed in 2007, an increase of 6.5 per cent from the 7.3 million in 2003 (GoK Economic Survey, 2008). Thus, the SBEs in Kenya provide the bulk of jobs

and need not be ignored. The SBE's growth in this study will be measured by sales turnover, employment capacity, and capital appreciation over a period of 24 months.

### **Objectives of the Study**

The general objective of the study was to determine effect of micro-credit on growth of small business enterprises: a case of M-Shwari at Kibuye market in Kisumu County

Specifically, the study was intended:

1. To analyze the effect of consumer knowledge on business growth among small scale entrepreneurs at Kibuye market in Kisumu;
2. To establish the extent to which ease of access to microcredit influences growth of small business enterprise at Kibuye market in Kisumu;
3. To assess the effect of micro-credit risks on growth of small business enterprises at Kibuye market in Kisumu; and
4. To determine the influence of M-banking legislation on growth of small business enterprises at Kibuye market in Kisumu.

### **THEORETICAL FRAMEWORK**

This subsection reviews the various theories which explain the concept of SBE market orientation, growth, and financing. The specific theories presented include the bottom of pyramid theory, stage theory, and financial growth life cycle theory.

#### **Bottom of the Pyramid (BOP)**

According to Prahalad (2005), the distribution of wealth and the capacity to generate incomes in the world can be captured in the form of an economic pyramid. According to Prahalad (2005) there are more than four billion people at the BOP living on less than \$2 per day purchasing power parity (PPP), in both developing countries and least-developed countries. Karnani (2007) used the 2001 World Bank estimates of 2.7 billion people at the BOP living on less than \$2 per day (PPP); and furthermore in 2009, Karnani (2009) used an estimated the figure of 2.5 billion people on the BOP. Jaiswal (2008) used the 2005 World Bank estimates of 2.4 billion people living in low-incomes countries.

Prahalad (2005) argues that there is a fortune at the Bottom of the Pyramid and that the private sector and entrepreneurs should target these vast untapped rural markets in developing countries with low-cost services and appropriate business strategies. This notion is opposed by Karnani (2009), who suggests that it is a fallacy to claim that there is much "untapped" purchasing power at the BOP. The poor consume most of what they earn, and as a

consequence, have a low savings rate. Guesalaga and Marshall (2008), in a study comparing the buying power index (BPI) of BOP consumers in different geographic areas, found that more than 50% of the purchasing power resides in the BOP segment in developing countries. However, the BOP consumption concentrates mainly on food, housing, and household goods (Guesalaga and Marshall 2008).

Karnani (2009) argues against the BOP proposition made by Prahalad (2005), who estimates that the BOP market size is \$13 trillion. Karnani estimates the market size to be \$360 million. However, both Karnani and Prahalad use the same BOP definition of people living on less than \$2 per day (Karnani, 2009). Louw (2008) conducted a study to redefine the BOP, where the BOP definition was categorized into segments. Firstly, BOP1 is defined as people living on less than \$2 per day PPP, as defined in Prahalad (2005). Secondly, BOP2 defined the upper section of the BOP1 market with a population of people earning more than \$2 per day PPP (Louw, 2008).

Much of the literature on Information Communication Technologies (ICTs) suggests that with the availability of telecommunications, incomes increase and local economies become more efficient (Aker, 2008). Survey data from Morocco reveals that mobile phones make a financial difference in the lives of micro-entrepreneurs and act to both intensify and extend local and nonlocal forms of communication (Ilahiane and Sherry, 2012).

According to Kenya's communications regulator in their Quarterly Sector Statistics Report (June 2012), Kenya has a mobile penetration of 75.4% (October, 2012). This figure is significantly higher than the African average of 65% (Praekelt, 2012). Nevertheless, these figures could offer a slightly misleading picture of access to mobile phones, since there is an important difference between mobile connections and unique individual mobile subscribers. The high mobile usage holds true even for those at the lower end of the economic spectrum. Of those Kenyans living on less than \$2.5 USD/day, 60.5% owned a mobile phone. With the cost of mobile phones decreasing steadily, what was once considered a luxury good is now more commonly considered a necessity by many Kenyans (FSD, 2012).

### **The Stage Theory**

The stage theory of the firm originates in economics literature and is commonly used to describe the progression of the successful firm through growth phases (Poutziouris, 2003). According to Hanks et al. (2004), organizations are born, grow, and decline. Sometimes they reawaken, sometimes they disappear. The stage theory describes the development of the firm as a linear sequential process through a number of stages. Numerous stage models have been developed, particularly in the management and organizational studies literature, to explain details of this

theory. Notably, Poutziouris (2003) assert that the number of stages in the cycle is not standardized. Hanks et al. (2004) identify common developmental stages based on the comparison of a number of stage models, namely start-up, expansion, maturity, diversification, and decline stages. Specifying age categories for each developmental stage in a universal life cycle is difficult because of intra industry differences (Hanks et al., 2004).

Regarding enterprise funding, as successful firms survive nascent and start-up phases and mature through growth stages, personal funding becomes relatively less important as investment finance is increasingly sourced from retained profits. Furthermore, accumulation of a trading history facilitates access to increased sources and amounts of external financing, particularly bank financing and trade credit. Rapidly expanding firms lacking adequate working capital to meet increased costs may experience liquidity problems at this stage. Firms faced with the problem of overtrading often seek to alleviate these liquidity problems by increasing their overdraft facility. Thus, it is common for SBEs to have high levels of short-term debt (Ayadi, 2008). Firms requiring large amounts of financing are characterized by their stage and pursuit of a high growth strategy, and may be involved in the development of products or services based on new technology (Ullah and Taylor, 2005). According to Hogan and Hutson (2005), on reaching maturity stage, firms have acquired a trading history, and typically have access to a broad range of financing sources. Sources of finance accessed at this stage are generally determined by preferences of firm owners, rather than supply side restrictions.

### **Financial Growth Life Cycle Theory**

The financial growth life cycle theory developed by Berger and Udell (1998) presents firms on a size continuum, and describes the increasing array of financing options available to the firm as it grows. The theory incorporates changes in availability of information and collateral in describing sources of finance available to firms over time. Berger and Udell (1998) thus conceptualize the sequencing of funding over the life cycle of the firm centered on information opacity and following a financial pecking order. Smaller, more informational opaque firms are depicted to the left side of the continuum relying on initial insider finance, trade credit, and/or angel finance. As firms advance along the continuum, they gain access to increased sources of external debt and equity capital. Ultimately, firms may access greater amounts of capital in public debt and equity markets. Similar to earlier approaches, the model does not specify age categories for each stage of development, nor does it consider truncation at any point in the life cycle. Further, it does not specify stages of development of the firm, and whilst it includes a number of sources of external equity and debt not included in previous models, retained profits are not incorporated into the model (Ayadi, 2008).



Similar to the stage model developed in organizational studies literature, the financial life cycle theory of the firm developed in corporate finance identifies a number of stages in a firm's development. The theory outlines sources of finance typically available at various growth stages of the firm, along with potential financing problems that may arise at each stage. The financial life cycle model incorporates elements of trade-off, agency, and pecking order theories, and describes sources of finance typically advanced by funders at each stage of a firm's development. At start-up, the commonly held view is that firms have difficulty accessing external finance due to information opacity (Huyghebaert and Van de Gucht, 2007). The most important and commonly-used sources of finance at this stage are personal savings of the firm owner, and finance from friends and family members (Ullah and Taylor, 2007). The contribution of the firm owner in nascent firms is not confined to equity, but commonly includes the provision of quasi-equity in the form of personal assets used as collateral to secure business debt (Basu and Parker, 2001). Whilst a firm may obtain sufficient capital to initiate trading, a lack of planning may lead to problems of under-capitalization in the earliest stages. In extreme cases, particularly in the face of competition, the firm may not be able to continue in business (Cressy, 2006).

## **LITERATURE REVIEW**

This section presents the review of literature related to the study problem. The specific themes reviewed include M-banking technology, access to microcredit by M-banking, microcredit repayment, perceived risk of M-banking, theoretical review of bottom of the pyramid (BOP), and study's conceptual framework.

### **Growth of Small Business Enterprises (SBEs)**

Entrepreneurship is increasingly recognized as an important driver of economic growth, productivity, innovation and employment, and it is widely accepted as a key aspect of economic dynamism (Hisrich, 2005). Lerner, Brush and Hisrich (2007), show that transforming ideas into economic opportunities is the decisive issue of entrepreneurship. History shows that economic progress has been significantly advanced by pragmatic people who are entrepreneurial and innovative, able to exploit opportunities and willing to take risks (Hisrich, 2005).

Box et al. (2005) suggest that there are four elements which have positive relationship with the small business growth, that is, previous experience as a member of an entrepreneurial management team, number of previous starts, age and scanning intensity. On the other hand, Hisrich (2007) propose human capital (level of education, years of experience and business skill), personal goals, and strategy to assess the performance of entrepreneurs. Lerner and

Hisrich (2005) conducted a study on Israeli entrepreneurs and categorized the factors that affect their growth into five perspectives, that is, motivations and goals ; social learning theory (entrepreneurial socialization); network affiliation (contacts and membership in organizations); human capital (level of education, business skills); and environmental influences (location, sectoral participation, and sociopolitical variables).

Thibault et al. (2002) suggest personal factors such as demographic variable and business factors such as amount of financing, use of technology, age of business, operating location, business structure and number of full-time employees as important factors in examining the growth of small scale entrepreneurs. Machado, Cyr and Mione (2003) enlist entrepreneurs' managerial styles with the variables such as planning and strategic choices; decision style; formulation of objectives; structure of the company and share of power; and human resources policies are linked to and have association with their growth. The measures used in their study are turnover, number of employees, profit as well as the largest and the smallest salary paid (Machado, Cyr and Mione, 2003).

In Kenya, according to an ILO study carried out by Stevenson and St-Onge (2005), there are three profiles of entrepreneurs operating SBEs, namely those in Jua Kali micro-enterprises, "very small" micro-enterprises and "small-scale" enterprises. These are differentiated by their demographic profiles, extent of previous business experience, needs, access to resources and growth orientation. The Jua Kali micro-enterprisers are identified as owners of unregistered (informal) businesses who have little formal education (usually less than secondary school level) and lack entrepreneurial and business know-how. They also have little access to credit, with limited awareness of markets and market opportunities. They are constrained by their household responsibilities and marital status, for instance having to obtain permission from their husbands to travel out of town for training or trade fairs (Stevenson and St-Onge, 2005).

The 2008 Economic Survey by the Government of Kenya posits that employment within the SBE sector increased from 4.2 million in 2006 to 5.1 million with the informal sector accounting for 70.4 per cent of total employment opportunities. In 2005, the informal sector accounted for 72.8 per cent of total employment opportunities. This percentage rose to 74.3 per cent in 2002 and 76.5 per cent in 2008 (GoK Economic Survey, 2008).

## **RESEARCH METHODOLOGY**

### **Research Design**

The study adopted the descriptive research design to realize its objectives. Grey (2004) defines descriptive research design as a scientific method which involves observing and explaining the behavior of a subject without influencing it in any way. According to De Vaus (2002), good

descriptive study is the basis of sound theory and that unless something is described accurately and thoroughly, it cannot be explained. Illuminating descriptions can highlight puzzles that need to be solved, and thus provide the inspiration for the construction of theories. Furthermore, the identification of problems can provide the cornerstone for action. Descriptive studies are often undertaken to ascertain attitudes, values and opinions. Black (2003), however, notes that there may be differences between the opinions found through a survey, which is a description of people's perceptions, and the actual reality of practice. That is, people may articulate a particular view, but in practice behave differently. Hence, caution was exercised in drawing conclusions from this survey.

### Target Population

The study's target population constituted a total of 332 registered and active business units which were categorized as Small Business Enterprises (SBEs) at Kibuye market in Kisumu town. From each identified SBE, the owner or operator delegated with daily running of business were recruited as the study's resource persons whose opinions formed basis for ultimate deductions. Preliminary study indicated that most SBEs were managed by owners. Where owners were not in full-time management, they delegated responsibilities to another extra individual who was tasked with transactions and any other assistance.

### Sample Size and Sampling Technique

Cresswell (2003) asserts that the entire population may not be easy to study. A researcher, therefore, has to draw a sample from the study population. In this study, the Yamane model was used to obtain the sample size.

According to the model,

$$n_s = \frac{N}{\{1 + N(e^2)\}}$$

Where;

$n_s$  - Sample Size

$N$  - Population Size

$e$  - Precision level (at 0.90 confidence interval,  $e = 0.1$ )

Given  $N = 332$ , then;

$$n_s = \frac{332}{1 + 332(0.1^2)}$$

= 77 study participants

Due to anticipated participant homogeneity, the study adopted simple random sampling method to select from among active SBEs at the market. The sampling frame was prepared from the list of SBE which was prepared before actual data collection starts. Each SBE was assigned a unique random number that was used for the purpose of selection. From each selected SBE, the one owner or any person delegated with operational duties and responsibility was identified for the study.

### **Data Collection**

The study targeted access to both secondary and primary data. Deriving information from the secondary sources was accomplished by analysis of documentations such as business reports and analyses, previous discourses, online materials, and press articles. To ascertain the primary data from various respondents, the researcher preferred the use of researcher administered questionnaires which was designed to enhance interactive data generation and at the convenience of respondents and informants. This option was reinforced by Casley and Kumar (2003) who argue that well standardized and tested questionnaires are most effective tools for a structured survey. Keeping the central objective of study in mind, the researcher adopted both open-ended and closed question items that were sufficient to yield only relevant information. Prior to fieldwork, obtained introduction letter from Jomo Kenyatta University of Agriculture and Technology this subsequently permitted data collection. The researcher identified and worked with group leaders at the market who were used to win goodwill from the individual traders.

### **Pilot Testing**

According to Dornyei (2003) pilot testing is one comprehensive procedure towards enhancing instrument validity and reliability. This underlies the intent of this study to conducting a rigorous instrument validation exercise through pilot-testing. The process ensured that the researcher got first-hand experience with the study context while focusing on refining the data collection instruments. Pilot units, equivalent to one-tenth of the proposed sample size, that is 11 potential participants, were obtained from comparable members of the population from which the sample for the full study was taken. This size was informed by Mugenda and Mugenda (2003) who regard the proportion as sufficient for pilot testing. To avoid respondent contamination and possible resistance, those respondents identified for the pilot were not included in the final completions.

## Data Processing and Analysis

Research data in a raw form, that is, before these data have been processed and analyzed, convey very little meaning to user groups (Saunders, Lewis and Thorndike, 2007). These data therefore need to be turned into information so that it is useful. In this study, conversion of data into meaningful information was accomplished by quantitative/metric data and qualitative/non-metric data analyses. The refined and organized quantitative data were analyzed using descriptive statistics involving percentages and mean scores to determine variations in responses and thus providing basis for deductions. In addition, inferential statistics were used for the purpose of testing relationships between predictor and outcome variables. This statistical approach was essential in condensing data contained in a number of study indicators into a smaller set of factors with a minimum loss of information. The multifaceted approach adopted in analyzing data was specifically intended to enhance findings validity and reliability owing to the merits derived from each dimension. Requisite statistics were generated with aid of the computer software, Statistical Package for Social Sciences (SPSS) Version 20.0.

The qualitative information were processed and analyzed following three steps advocated by Best and Kahn (2004). In the first step, data were organized on the basis of key thematic areas defined by objectives of the study. The second step involved description of the responses to produce interim reports; areas that required additional information were identified and the requisite data sourced. The third and final step involved systematic analysis and interpretation of the interim report which integrated with quantitative data results.

## ANALYSIS AND FINDINGS

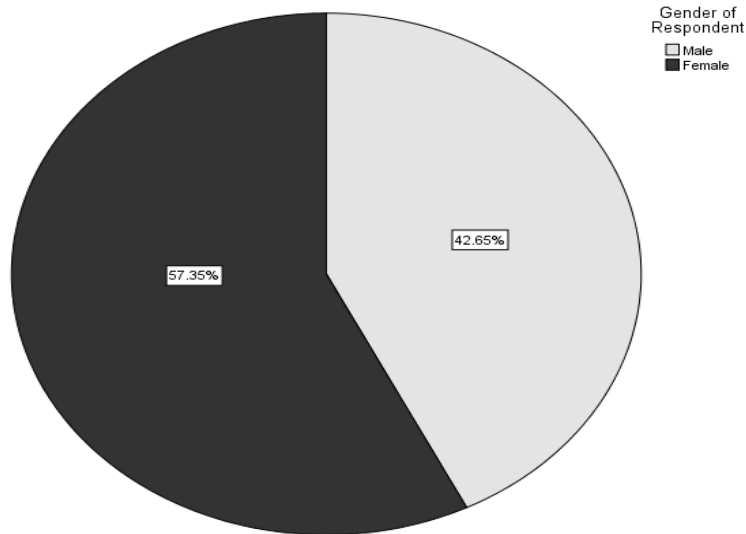
### Response Rate

The study sought requisite data from an aggregate of 77 small business proprietors operating at the Kibuye open-air market in Kisumu. By the end of data collection period, however, a total of 68 questionnaires were duly completed and considered for inclusion in the subsequent data processing and analysis phases. This completion translated to a summation of 88% response rate, which met the Bell (2003) benchmark of at least 60% response rate.

### Gender Participation

The study sought and obtained data relating to composition of small business entrepreneurs at Kibuye market based on gender-participation. Generally, research data indicated that the target small-merchandise market was dominated by female entrepreneurs as opposed to male counterparts. In terms of proportions, as further illustrated in Fig. 1, there were 57% of the female-owned entrepreneurial entities far ahead of the male ownership of 43%.

Figure 1: Gender Participation at the Kibuye Market in Kisumu



As shown in Figure 1, the larger segment (57.35%) emphasized dominance of women participation at the Kibuye market, thus beating the male (42.65%) small business ownership by 14% margin. Such differential dominance-pattern implied to a preliminary indication to difficulty in sustained investment of borrowed funds owing to the women’s spending chores and domestic responsibilities.

The study further established that entrepreneurs in the market engaged in a variety of small business operations but predominantly in three clusters which included retail, service and manufacturing. Fig. 2 illustrates relative concentrations of the entrepreneurial activities at the market.

Figure 2: Small Business Clusters at Kibuye Market in Kisumu

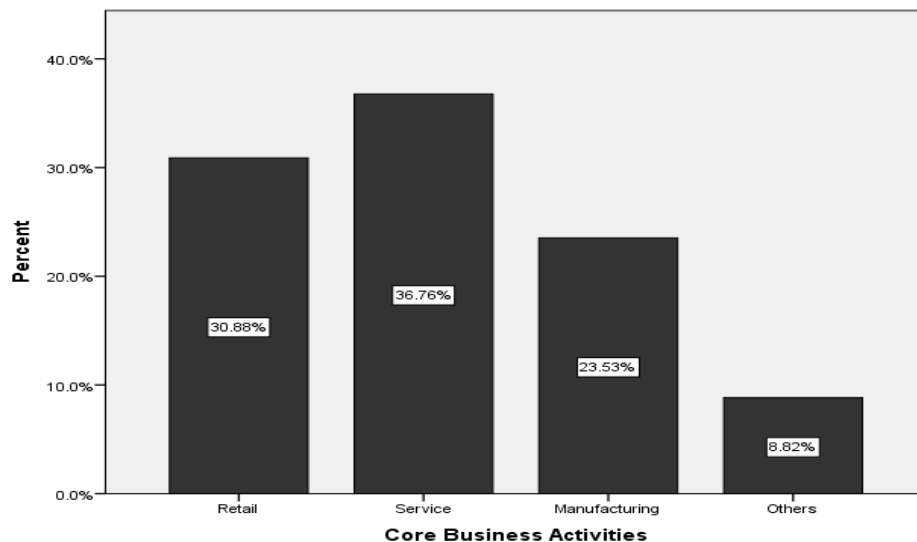


Figure 2 shows that majority of small entrepreneurs at Kibuye market (37%) had their investments in the service cluster, followed by the retailers at 31%. In the subsequent lower rank, about 24% were practicing manufacturing. A paltry 9% were outside the three predominant small-scale operations. This investment diversity denoted differential capital requirements for the entrepreneurs to attain their operational targets.

### Customer Knowledge and Growth of Small Business Enterprises

According to Brucks (2006), customer knowledge is a complicated construction characterized by the structure and the content of the information stored in the memory of product consumers. Similarly, Korchia (2004) describes customer knowledge as all the information related to the product and to the market which are stored in the long-term memory of the consumer allowing him/her to act on the market. In the study, customer knowledge was measured using indicators such as ownership of mobile phone gatchet, M-pesa registration, M-shwari product awareness, usage frequency, length of usage, and mastery of applications. Table 1 presents the summarized ordinal measures on a 5-point scale.

Table 1: Measures of Customer Knowledge

Customer Knowledge on M-Credit	Mean	Std. Dev.
The main reason of owning phone is to benefit my business	3.06	1.006
I am a registered M-Pesa customer to benefit my business	3.29	1.065
I am fully aware of the M-Pesa products on offer	3.00	.829
I always use M-Shwari credit to buy stock to my business	2.57	1.041
I started using M-Shwari products shortly after launch	3.15	.966
I have mastered all options in the M-Shwari platform	2.90	.849
<b>Group Mean</b>	<b>3.00</b>	

The study found that all entrepreneurs who subscribed to the parent phone-service provider (Safaricom) were M-Pesa registered. However, there were divergent views in regard to whether the virtual account registrations were specifically acquired for the benefit of business operations. With a wider standard deviation (1.065), the extent of respondent agreements averaged 3.29 score which was marginally above the neutral mark. This implied that there were no M-Pesa lines strictly registered and used for the businesses; entrepreneurs instead used their private lines to transact on the M-shwari platform. Closely related to M-Pesa registration, the study found consistency that the mobile phones owned by the entrepreneurs were not for exclusive use by the income generating entities (3.06 mean score and 1.006 standard deviations). Occasionally, though, the entrepreneurs used mobile connectivity for businesses, but ordinarily they were used for other non-entrepreneurial engagements.

While the M-shwari application was an automatic inclusion in M-Pesa platform, not all the entrepreneurs started making use of it immediately at inception. This interpretation is based on the attained mean score of 3.15 with a standard deviation level of 0.966. The implication here is that a significant chunk of entrepreneurs were hardly aware of product existence and only started benefiting from it long after the service was embraced. Nonetheless, not all entrepreneurs were fully aware of the inherent product merits (3.00 mean score and 0.828 standard deviations). This indicated to a possibility of slower adoption rate of M-credit services to the small business owners. At a level lower than the moderate benchmark, the study summaries showed that most entrepreneurs had not fully mastered the M-shwari applications (2.90 mean score and 0.849 standard deviation). Optimization of the easily-accessed micro-credit was thus a practical challenge. Finally, available data indicated that majority of the traders did not convert entirely the borrowed credit to business stock, hence returns (2.57 mean score and 1.041 standard deviation). By extension, therefore, accessible micro-credit by entrepreneurs at Kibuye market in Kisumu did not yield an optimal realization of asset growth.

The response disparities in consumer knowledge were attributable to skewed access to information regarding the various products and benefits obtainable through micro-credit. Some of the participants expressed openly their little knowledge on M-shwari while others showed a detailed understanding. According to Laroche, Bergeron and Goutaland (2003), the various levels of consumer knowledge create different perceptions of product attributes. Consumers with higher levels of product knowledge have better developed and more complex schemata, with well-formulated decision criteria. In the same vein, Kempf and Smith (2008) suggest that consumers with higher levels of product knowledge are more diagnostic and better informed than those who have lower levels of product knowledge. As a result of inherent response disparities, the aggregate group mean value was found to be 3.00, implying that customer knowledge influenced growth of the small enterprises at a moderate level.

### **Ease of Credit Access and Growth of Small Business Enterprises**

Kasseeah (2012) acknowledges that small business need capital adequacy to play their significant role in economic development. However, the greater difficulty of smaller firms accessing credit relative to larger firms revolves around differences in risk profile and information asymmetries between the firm and lending institutions. In this study, the ease at which SBEs accessed micro-credit was measured by indicators such as usage complications, reliability of connectivity, credit worthiness, and rejection of requests, feedback, and processing costs. Table 2 shows summary of responses obtained from the field.



Table 2: Ease of Access to Micro-Credit

<b>Ease of Access to M-Credit</b>	<b>Mean</b>	<b>Std. Dev.</b>
M-Shwari options are not complicated to master	3.66	.940
M-Shwari connectivity is always reliable	3.79	.890
Over time I have gradually increased by creditworthiness	2.90	.995
I hardly have my loan requests rejected	3.31	.833
The feedback pace in M-Shwari is satisfactory	3.68	.888
The processing cost is customer-friendly	3.76	.813
<b>Group Mean</b>	<b>3.52</b>	

Shown in Table 2, there was a relatively high agreement among respondents that M-shwari connectivity was always reliable (3.79 mean score and 0.890 standard deviation). This assertion was followed by the view that micro-credit processing costs were affordable and customer friendly (3.79 mean score and 0.813 standard deviations). In addition, the M-shwari feedback pace was recommendably above average (3.68 mean score and 0.888 standard deviations), while the application options were not complicated and hence easy to master (3.66 mean score and 0.94 standard deviations). Marginally above the mid-mark (3.00), entrepreneurs hardly had their transaction requests rejected (3.31 mean score and 0.833 standard deviations). Notably, however, entrepreneurs did not seem to be upgrading their credit worthiness (2.90 mean score and 0.995 standard deviations), thus implying slower inflow of capital for enterprise expansion. Aggregately, the ease of access to investible micro-credit influenced growth of SBEs at a score of 3.52 which was not adequate in bolstering investment growth.

These findings confirmed the World Bank (2012) report that about 90% of small enterprises in the Sub-Saharan Africa had credit as a major constraint to new investment. Also, Abor and Bikpe (2006) found access to flexible credit as a dominant constraint facing the Ghanaian small enterprises. Moore (2013) found that a large portion of the SBE sector in Kenya does not have access to adequate and appropriate forms of credit and equity or indeed to financial services more generally.

### **Micro-Credit Risks and Growth of Small Business Enterprises**

According to Kolari and Shin (2004), lending to small businesses is riskier than to large corporate owing to their asset base and repayment abilities. However, Berger (2004) asserts that small business lending has a strong positive effect on lender profitability. The study adopted various indicators to measure the extent to which credit risks influenced growth of target small enterprises. Further details are as presented in Table 3.

Table 3: Micro-Credit Risk

<b>Micro-Credit Risk</b>	<b>Mean</b>	<b>Std. Dev.</b>
I always make my repayments on time	3.37	.976
Credit amount is low and does not create quick interest	4.26	.683
There is a high competing demand for business returns	3.79	.821
Part of the business profits is converted to consumption	4.18	.711
I always get repayment amount from the business returns	2.79	1.016
Safaricom always sensitizes me on M-Shwari security	3.81	.797
I am fully aware of the penalties of non-repayment	3.47	.922
I always ensure that borrowed money is only for business	2.35	.806
<b>Group Mean</b>	<b>3.50</b>	

Table 3 shows that at the higher extent, respondents indicated that the credit amounts advanced to them were low and hence attracted smaller interests (4.26 mean score and 0.683 standard deviations). This implied low risk exposure to lenders' investment and positive perception from the borrowers on credit costing. The notable high risk was consumption of part of the business returns (4.18 mean score and 0.711 standard deviations), thus alluding to competing uses of business returns (3.79 mean score and 0.821 standard deviations). As part of risk mitigation, the service provider (Safaricom) sensitized product consumers on security issues and need for repayment through short text messages (3.81 mean score and 0.797 standard deviations). Moreover, entrepreneurs were made aware of penalties applicable in case they defaulted in repayments (4.37 mean score and 0.922 standard deviations). The result of these mitigation approaches was timely repayment for the majority of borrowers (3.37 mean score and 0.976 standard deviations). Nevertheless, most repayments were not realizable from the businesses but from other sources (2.79 mean score and 1.016 standard deviations). This was associated to a disagreement that borrowers invested obtained credit wholly in their operated businesses (2.35 mean score and 0.806 standard deviations). The aggregate group score was found to be 3.50, which still implied inherent risks in lending credit through the virtual accounts without visible collaterals. The findings are in agreement to other past studies such as Monyi (2009) and Monyi (2011). Munya (2009) found that among small enterprises in Eldoret town there is no explicit picture of business risk and that their risk management is often not well structured nor systematic or standardized. Monyi (2011) also found that about 72% of SBEs in Nairobi are not ready to handle the risks they faced.

### **M-Banking Legislation and Growth of Small Business Enterprises**

Legislation presents both favorable and unfavorable outcomes in any business setup. While the favorable outcomes induce more credit borrowing, the unfavorable outcomes constraint capitals

flow. Under this objective area, the study sought to examine the basic regulatory checks governing the relations between the micro-credit lenders and borrowers. The indicators included customer awareness of self responsibility, legality of enterprises, record keeping, contracting, and non-repayment. Data summaries for each of the indicators are as presented in Table 4.

Table 4: M-Banking Legislation

<b>M-Banking Legislation</b>	<b>Mean</b>	<b>Std. Dev.</b>
I am fully aware that borrowed money must be repaid	4.53	.503
I always put borrowed money to legal business activities	3.13	1.021
I keep records on every transaction I make through M-Shwari	3.56	.817
I know that borrowing through M-Shwari involves a contract	3.79	.856
There is no probability of changing SIM card before repayment	4.04	.762
<b>Group Mean</b>	<b>3.81</b>	

Based on the research feedback, existing legislation ensured that borrowers understood that the amount received through M-shwari was credit which needed to be repaid at interest (4.53 mean score and 0.503 standard deviations). This was a significant indicator in determining an individual's credit worthiness and basis for future transactions. Consistent to this, therefore, it was rare for the borrowers to dispose their SIM cards before repayments (4.04 mean score and 0.762 standard deviations). There was a generally high understanding that borrowing involved a contract that had to be managed at both parties' satisfaction (3.56 mean score and 0.817 standard deviations). The extent to which entrepreneurs put the borrowed money into legal use was rated at a moderate level (3.13 mean score and 1.021 standard deviations). The aggregate impact from the legislation was measured to be 3.81 which were obviously far above the moderate level. The M-credit regulatory/legal environment was therefore a significant contributor to the growth of small enterprises. According to Moiche (2007), the regulatory environment affects the lending infrastructure and determines the confidence of contracting parties and therefore the extension of credit.

### **Analysis of Growth Indicators among Small Business Enterprises**

Growth of small business enterprises was measured by the M-Shwari transaction volumes and monthly sales turnover. Data collected indicated growth of average M-Shwari amounts transacted over time in a period of 24 months. The minimum amount of Ksh. 2,300 was recorded in the first month which grew to a maximum of Ksh. 4,300 in the last month, translating to 87% growth of micro-credit. Table 5 provides further details.

Table 5: M-Shwari Transaction Volume

	N	Minimum	Maximum	Mean	Std. Dev.
M-Shwari Amount	24	2300	4300	3168.33	685.424
Valid N (listwise)	24				

Corresponding to the growth in micro-credit, there was evidence of significant growth in sales turnover over the same period. In the first month, the average turnover for the studied enterprises was Ksh.1,200,000 which later grew to Ksh.3,770,000 in the last month. Table 6 provides further details of the growth in sales turnover.

Table 6: Descriptive Statistics

Sales Turnover	N	Minimum	Maximum	Mean	Std. Dev.
Sales Turnover "Ksh 000"	24	1200	3760	2837.92	593.559
Valid N (listwise)	24				

The relationship between the M-shwari transaction volume and the sales turnover was tested and found to significant ( $p = 0.000$ ). The correlational coefficient was estimated at 0.762 implying a possible cause-effect by M-credit on sales turnover, hence growth.

Table 7: Correlation between Turnover and M-Shwari Amount

		Sales Turnover "Ksh 000"	M-Shwari Amount
Sales Turnover "Ksh 000"	Pearson Correlation	1	.762**
	Sig. (2-tailed)		.000
	N	24	24
M-Shwari Amount	Pearson Correlation	.762**	1
	Sig. (2-tailed)	.000	
	N	24	24

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

Table 7 illustrates the correlation between sales turnover and M-shwari transaction volume whose coefficient was 0.762 and signified a highly positive or direct relationship. The more the micro-credit ceilings were extended the more the capital was made available to the business entities, and the more the propensity for business growth.

## CONCLUSION

Based on findings, it is concluded that borrowers' knowledge on micro-credit, ease of access to investible capital, risks inherent in micro-credit, and existing regulatory framework have a significant effect on asset growth of small business enterprises. This is pegged on the fact some

of the borrowed amounts are directly injected into business or use elsewhere to minimize business withdrawals. Notably, however, the highest magnitude of effect emanated from the manner in which the emerging industry was regulated (3.81 score). This was followed by the ease at which borrowers accessed funds (3.52 score), and then the inherent risk in the whole M-banking platform. The least effect originated from the extent to which customers were knowledgeable about the M-credit products.

## **RECOMMENDATIONS**

On the basis of the study conclusion, four recommendations are advanced. First, the core strategic players in the mobile-credit such as phone-service provider, the lender (CBA) and the regulator (CBK) need to up their efforts in enhancing publicity of the designed products so as to demystify any complexities met by consumers in accessing the services. This, if well executed, will ensure benefits to all parties while borrowers are enabled to inject more funding to the small-scale investments.

Second, there is need to move in the next level that eliminates any avoidable barriers such as phone connectivity, mastery of application usage and access to instructions.

Third, the lenders and phone-service provider are urged to device newer and proactive approaches to mitigating the effect of risk so as to increase disbursement and credit recovery.

Finally, it is recommended that the regulator (CBK) works ahead of technological innovations so as to proactively deal with regulatory hindrances that may distort the financial inclusion intents.

## **SUGGESTIONS FOR FURTHER RESEARCH**

Though the study was intended to analyze the effect of micro-credit knowledge, access, risk and legislation on business growth, the scope so defined could not be exhaustive for a more objective and reliable generalization.

There is a wide range of equally significant issues within the ambits of micro-credit that need further scholarly considerations prior to drawing conclusive deductions in regard to variable relationships. In addition, a study on micro-credit is suggested but involving a wider population scope than small business enterprises so as to generate a more inclusive relational picture. Finally, an action study is recommended on possibilities of dealing with credit constraints on the mobile-phone platforms so as to enhance the borrowing impact on investment.

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