THE INFLUENCE OF COMMERCIAL BANKS'
TECHNOLOGICAL INNOVATION LENDING STRATEGY
ON THE GROWTH OF SMES IN KENYA

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THE INFLUENCE OF COMMERCIAL BANKS' TECHNOLOGICAL INNOVATION LENDING STRATEGY ON THE GROWTH OF SMES IN KENYA

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Abstract

Purpose: The purpose of the study was to establish the influence of commercial banks' technological innovation lending strategy on the growth of MSEs in Kenya.

Methodology: The researcher used purposive sampling to select respondents. The sample size was comprised of 352 respondents. The study used questionnaires to collect data from the field. Both quantitative and qualitative data gathered was coded and analyzed using Statistical Package for Social Sciences (SPSS) computer software. Descriptive statistics was used to analyze the data in frequency distributions and percentages which were presented in tables and figures. Inferential statistics were used to analyze qualitative data.

Results: The study found out that commercial banks' technology and innovation have a positive and significant effect on MSEs growth (r=0.505, p=0.023).

Unique Contribution to Theory, Practice and Policy: The study also recommended that commercial banks need to adopt technological innovation strategies so as reach more MSEs in terms of credit and thus enhancing its growth.

Keywords: Technological innovation, lending strategy, growth SMEs.

1.0 INTRODUCTION

1.1 Background of the Study

In developing countries like South Africa and Ghana, despite efforts to overcome the widespread lack of financial services and the expansion of credit among small business of these countries, the majority still have only limited access to bank services to support their private initiatives (Braverman and Guasch, 2006).

A number of factors affect the growth of African MSEs, including the business environment and the quality of the labour force. However, a crucial element in the development of the MSE segment is access to finance, particularly to bank financing, given the relative importance of the banking sector across the continent. African MSEs are more financially constrained than in any other developing region (Stephanou & Rodriguez, 2010). Only 20

percent of MSEs in Sub-Saharan Africa have a line of credit from a financial institution compared, for example, with 44 percent in Latin America and Caribbean, and only 9 percent of their investments are funded by banks versus 23 percent in Eastern Europe and Central Asia. The study found that the MSE is a strategic priority for the banks in the region. MSEs are considered a profitable business prospect and provide an important opportunity for cross-selling (Calice, 2012).

The participation of Kenya government in the financial sector dates back to the late 1960s when the government aimed to make the sector more responsive to the borrowing needs of the Kenyan public. This was in order to offset the tendency of financial corporations to invest their funds abroad and hence living out the common citizen from development participation (Central Bank of Kenya Annual Report, 2009).

Kenya's commercial banking sector comprises of 3 public, 28 local (private), 11 foreign (private) and two Islamic (private) as at 31st Dec. 2013 (CBK & Kenya Bankers Association, 2013). Financial sector in most of the developing countries are characterized by fragility, volatile interest rates, high risk investment and inefficiencies in the intermediation process. The industry further differs in ownership, structure, financial liberalization level and accounting treatment of various streams of income. Different regulations do exist for all institutions and some are standard across foreign banks, locally owned private banks and financial parastatals (RoK, 2010).

Most banks have dedicated units serving MSEs, to which they offer largely standardized products though the degree of personalization is growing. And albeit advanced transaction technologies based scoring and risk-rating systems remain relatively underdeveloped, banks are gradually automating their risk management frameworks to achieve efficiency gains (Calice, 2012). The findings were broadly akin to those of similar studies in other geographical contexts, suggesting that banks in the region have enthusiastically embraced the MSE segment and are making substantial investments to develop their relationship with MSE clients. Kariuki (2011) studied on bank's credit access in Kenya and established that MSEs were faced with higher nominal interest rates at higher inflation rates in the latter half of the 1980s. Moreover, the explicit transaction costs of borrowing were found to be high in relation to interest costs.

1.2 Statement of the Problem

One of the biggest obstacles in MSEs is access to either start-up or expansion capital. Lacking sufficient credit, entrepreneurs are seldom able to take advantage of discounts on new materials, and are unable to extend credit to their customers. Credit and capital have been found to be the greatest perceived needs of small businesses (Liedholm & Mead, 2009). They require working capital to survive and buy equipment. Various lending institutions like K-Rep, Faulu-kenya and Jamii Bora Bank have introduced products that enhance lending to MSEs. Despite the loan facilities offered by these institutions, the MSEs Performance, growth and existence still remains unknown. Studies on micro-enterprises suggest that most of them do not grow, although approximately 40% does actually grow (Baud & Bruijne, 2013). Micro and small enterprises have a high mortality rate. Many are started every year but very few see their third birthday (Ngugi, 2012). Micro and small enterprises do not grow at the expected rate to become medium enterprises hence the missing middle phenomena (Ngugi, 2013).

Reports from Kenya Bankers Association show that 80% of lending by banks is to corporate and government clients (KBA, 2014). Worked out, this leaves only about 20% of lending by

banks shared between individual borrowers and the MSEs. Yet up to 40% of the country's GDP is attributed to the MSEs. Could this trend be reversed by the commercial banks' lending strategies? This was the subject of this study.

Despite abundant literature on MSEs Loan, there still remains a gap in literature on the effect of the loan to the micro and small enterprises. Kombo, (2010) has researched on challenges faced by physically impaired people in access of services offered by KCB. In a study on utilization of micro finance by small entrepreneurs in Kenya, (Ndung'u, 2010) highlights how the MSEs have utilized credit extended to them. There is no research that has been done on commercial banks 'technological innovation lending strategies and thus exist a research gap. This study was therefore aimed at assessing the influence of commercial banks' technological innovation lending strategies on the growth of micro and small enterprises in Kenya.

1.3 Objectives of the Study

The objective of the study was to investigate the influence of commercial banks 'technological innovation lending strategies on the growth of micro and small enterprises in Kenya.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Hayekian Knowledge Problem (HKP)

This theory was brought up by Hayek in 1948. He did state that, "The peculiar character of the problem of a rational economic order is determined precisely by the fact that the knowledge of the circumstances of which we must make use never exists in concentrated or integrated form but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess. The economic problem of society is thus not merely a problem of how to allocate "given" resources-if "given" is taken to mean given to a single mind which deliberately solves the problem set by these "data." It is rather a problem of how to secure the best use of resources known to any of the members of society, for ends whose relative importance only these individuals know. Or, to put it briefly, it is a problem of the utilization of knowledge which is not given to anyone in its totality".

Kirzner (1992) elaborated the implication of Hayekian understanding of information stemming from uncertainty about future and genuine ignorance. It rests on a narrow view of knowledge. Adjustment change on how one undertake business, are either instantaneous or impossible without certain technological intervention. Moreover, the context in which decision are being made is crucial to the nature of the information at stake. As Boettke puts it: "It is not just that information is costly to obtain, but that it is different information if it is stimulated by a context of rivalrous, private-property exchange." The knowledge actors rely on to make decisions is not universal and abstract, as it must be if it is to be replicated through either bureaucratic planning or political deliberation (Boettke, 2007).

According to Sautet (2003), a direct implication of the lack of the HKP in mainstream economic theory is the absence of adequate consideration of the role of the entrepreneur in the market system. As Penrose admits, defining the nature of the entrepreneurial function is difficult. The entrepreneur is the one who introduces, on behalf of the firm, innovation in every possible way (with respect to products, location, technology, personnel, and administrative organization). This is to be contrasted with managerial services, which relate to the implementation of entrepreneurial innovation. Furthermore, enterprising is "a

psychological disposition on the part of individuals to take a chance in the hope of gain, and, in particular, to commit effort and resources to speculative activity" (Penrose, 2005). This theory is relevant to this study since it informs technological innovation variable.

2.2 Empirical Review

A cross country survey of the impact of ICT on MSE production and innovativeness conducted by Kropp, Fredric, Zolin & Roxanne (2011) in eight Sub-Saharan countries found that in most African countries, small and medium enterprise (MSEs) account for a significant share of production and employment and is therefore directly connected to poverty alleviation. MSEs were found to be challenged by the globalization of production and the shift in the importance of various determinants of competeness. ICTs were found to be necessary in improving efficiency and increasing productivity in different ways including, improving efficiency in resource allocation, reducing transaction costs, and technical improvement, leading to the outward shifting of the production function.

Another study by Mahmood *et al*. (2010) on the challenges facing MSEs in South Africa found that MSEs in that country faces similar problems as in other African countries with respect to poor management practices, limited access to technology, and limited access to credit facilities education, unemployment, ICT infrastructure and role of the MSE sector leading to slow pace of internet services. According to this study, the main challenge facing MSEs is how to move them to go beyond these first few basic steps, and to eventually move towards integrating ICTs in more sophisticated business applications. This would be a major step for MSEs, especially in developing countries, because these would require management and technical skills and investments (as well as organizational changes) that they may not be able to afford or for which they may not have ready access to.

Malhotra and Singh (2009) in their study on the impact of internet banking on bank performance and risk found out that on average internet banks are larger, more profitable and are more operationally efficient. They also found that internet banks have higher asset quality and are better managed to lower the expenses for building and equipment and that internet banks in India rely substantially on deposits. They further found out that smaller banks that adopt internet banking have been negatively impacted on profitability.

Hernando and Nieto (2006) while studying whether internet delivery channels change bank's performance, found out that adoption of internet as a delivery channel involved gradual reduction in overhead expenses (particularly, staff, marketing and IT) which translates to an improvement in banks´ profitability. The study also indicates that internet is used as a complement to, rather than a substitute for, physical branches. The profitability gains associated with the adoption of a transactional web site are mainly explained by a significant reduction in overhead expenses. This effect is gradual, becoming significant eighteen months after adoption and reaching a maximum generally two and a half years after adoption. Their study showed that multichannel banks present statistically significant evidence of efficiency gains, that is, reduction in general expenses per unit of output. Banks would further profit from cost reductions to the extent that the Internet delivery channel functions as a substitute for traditional distribution channels. Their analysis shows that this effect varies over time and explains, in terms of cost and income structure, the main drivers of better performance.

Berger, & Black (2011) conducted a study on Bank size, lending technologies, and small business finance. results suggest that large banks do not have equal advantages in all of these hard lending technologies and these advantages are not all increasing monotonically in firm size, contrary to the predictions of the current paradigm. We also analyze lines of credit

without fixed-asset collateral to focus on relationship lending. We confirm that small banks have a comparative advantage in relationship lending, but this appears to be strongest for lending to the largest firms.

Ngumi, (2014) conducted a study on the effect of bank innovations on financial performance of commercial banks in Kenya. The findings revealed that bank innovations had statistically significant influence on income, return on assets, profitability and customer deposits of commercial banks in Kenya and tests for significance also showed that the influence was statistically significant. The findings also revealed that mobile phones had a higher moderating effect than internet services on the bank innovations when influencing financial performance of commercial banks in Kenya. Based on the findings of the study, it can be concluded that bank innovations influence financial performance of commercial banks in Kenya positively.

3.0 RESEARCH METHODOLOGY

The researcher used purposive sampling to select respondents. The sample size was comprised of 352 respondents. The study used questionnaires to collect data from the field. Both quantitative and qualitative data gathered was coded and analyzed using Statistical Package for Social Sciences (SPSS) computer software. Descriptive statistics was used to analyze the data in frequency distributions and percentages which were presented in tables and figures. Inferential statistics were used to analyze qualitative data.

4.0 RESULTS AND DISCUSSIONS

4.1 Response Rate

The return rate provides a profile of respondents who participated in this study. A total of three hundred and fifty two (352) questionnaires were given to the respondents (MSEs owners and credit officers). A total of three hundred and thirty seven (337) questionnaires were returned giving a return rate of 95.73% as shown in table 1.

Table 1: Response rate

Response	Returned	Percent (%)
MSE s' owners	331	95.66
Credit officers	6	100
Total	**337**	**95.73**

The average return rate was 95.73% which was considered appropriate for the research findings of the study. According to Mugenda and Mugenda (2003) and also Kothari (2004) a response rate of above 50 percent is adequate for a descriptive study. Babbie (2004) also asserted that return rates of above 50 percent are acceptable to analyze and publish, 60 percent is good and 70 percent is very good. This implies that the research finding was comprehensive enough to give good reliability.

4.2 Demographic information

The study sought to establish the characteristics of the respondents such as gender, level of education, type of business and number of employees working

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4.2.1 Gender of the respondents

The study also sought to establish the gender of the respondents. This aimed at establishing whether the view of all gender was accommodated in the study. The results on gender of the MSEs is as in table 2

Table 2: Distribution of Mses Owners by gender

Gender	MSEs owners	%
Male	184	55.6
Female	147	44.4
Total	**331**	**100**

Table 2 shows that the respondents for this study were predominantly male MSEs owners , Out of 331 respondents, 55.6% were male. This agrees with a study by Ellis, Cutura, Dione, Gillson, Manuel & Thongori (2007) that in spite of women being major actors in Kenya's economy, and notably in agriculture and the informal business sector, men dominate in the formal sector citing the ratio of men to women in formal sector as 74%:26%. Other studies that have identified male domination in the formal and informal sectors include Gakure (2001) and Gakure (2003).

Further, the credit officers were requested to indicate their gender. The results on gender of the credit officers are as in table 3.

Table 3: Distribution of Credit officer by gender

Gender	Credit officers	%
Male	3	50
Female	3	50
Total	**6**	**100**

Table 3 shows that the respondents for this study were equal in number (50%). This disagrees with a study by Ellis, Cutura, Dione, Gillson, Manuel & Thongori (2007) that in spite of women being major actors in Kenya's economy, and notably in agriculture and the informal business sector, men dominate in the formal sector citing the ratio of men to women in formal sector as 74%:26%. Other studies that have identified male domination in the formal and informal sectors include Gakure (2001) and Gakure (2003).

4.3.2 Level of education of the respondents

The respondents were requested to indicate their level of education. The results are presented in table 4.

Table 4: Distribution of MSEs Owners by academic qualification

Education level	MSEs owners	%
Primary	-	-
Secondary	31	9.4
College	174	52.6
University	122	36.9
Total	**327**	**100**

Table 4 shows the level of education of the MSEs owners. Majority of the MSEs owners 174 (52.6%) had a college level as their highest level of education, 122(36.9%) had university level as their highest level while only 31 (9.4%) had secondary level to be the highest level of education. This finding is consistent with that of Kimemia (1990) who argued that employees need technical skills to apply skills and use techniques from education, training and experience, human professional experience is necessary to work effectively with the people and conceptualize and analyze complexities.

Further, the credit officers were requested to indicate their level of education. Results are presented in table 5.

Table 5: Distribution of credit officers by academic qualification

Education	Credit officers	%
Primary	-	-
Secondary	-	-
College	3	50
University	3	50
Total	**6**	**100**

Table 5 shows the level of education of the credit officers. 50% of the credit officers had a college level as their highest level of education, while another 50% had university level as their highest level. This finding is consistent with that of Kimemia (1990) who argued that employees need technical skills to apply skills and use techniques from education, training and experience, human professional experience is necessary to work effectively with the people and conceptualize and analyze complexities.

4.2.3 Type of Business

The respondents were requested to indicate on the type of business they operated in. The results are presented in table 6.

Table 6: Type of business

Business	Frequency	Percent
Manufacturing	66	19.9
Trade	123	37.2
Service	142	42.9
Total	**331**	**100**

Results in Table 6 shows 42.9% of the respondents who were the majority were operating in the service industry, 37.2% were in trade industry while only 19.9% of the respondents were in manufacturing industry.

4.2.4 Length of Business operation

The respondents were requested to indicate the length of business operation. The results are presented in table 7.

Table 7: Length of operation

Length of operation	Frequency	Percent
Less than 1 year	64	19.3
1 to 3 years	148	44.7
3 to 5 years	94	28.4
5 to 10 years	25	7.6
Total	**331**	**100**

Results in table 7 shows that majority (44.7%) of businesses had been in operation for between 1-3 years, 28.4% had been operation for 3 to 5 years, and 19.3% had been operation for less than one year while 7.6% had been in operation for 5 to 10 years.

4.2.5 Number of employees

The respondents were requested to indicate on the number of employees in their enterprises. The results are presented in table 8

Table 8: Number of employees

Employees	Frequency	Percent
1- 5 employees	262	78.1
6-10 employees	57	17.2
11-50 employees	12	3.6
Over 50 employees	4	1.2

Results in Table 8 shows that 78.1% of the MSEs had between 1-5 employees, 17.2% had between 6-10 employees, 3.6% had 11-50 employees.

4.2.5 Years worked in the bank

The credit officers were requested to indicate on the number of years they had worked in the bank. The results are presented in table 9

Table 9: Years worked in the bank

Duration	Frequency	Percent
Less than 2 years	1	16.7
3 to 5 years	2	33.3
Over 5 years	3	50
Total	**6**	**100**

Results in table 9 revealed that 50% of the respondents who were the majority had worked for over 5 years, 33% had worked for 3 to 5 years while 16.7% had worked for less than 2 years. This implies that majority of the respondents had worked in the organization for a long period. This finding is consistent with that of Ngui (2014) who found out that 65% of the respondents have worked in the sector for over five years, a period considered long enough for an employee to understand the operations of their respective duties

This finding is consistent with that of Randoy et al, (2006) who found out that one's experience depends on the number of years of service in the sector involved. It is assumed that the longer one worked in an organization, the more they understand the organization and hence the higher the ability to articulate issues pertaining to the organization (Afande, 2013).

4.2.6 Influence of commercial banks' technology and innovation on growth of MSEs

The results presented in table 10 present the fitness of model used of the regression model in explaining the study phenomena. Technology and innovation explained 4% of growth in MSEs.

Table 10: Model Fitness

Indicator	Coefficient
R	0.066
R Square	**0.04**
Adjusted R Square	0.037
Std. Error of the Estimate	3.65438

In statistics significance testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

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Table 11: Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	19.101	1	19.101	1.443	.023
Residual	4355.207	329	13.238		
Total	4374.309	330			

Table 11 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant (F statistic=1.443, p=0.023).

Regression of coefficients results is shown in table 12.

Table 12: Regression of Coefficients

Variable	B	Std. Error	t	sig
(Constant)	5.227	1.555	3.363	0.001
Technology and innovation	0.505	0.42	2.201	0.023

Results in table 12 shows that technology and innovation have a positive and significant effect on the growth of MSEs (r=0.505, p=0.023). This finding is inconsistent with that of Ngumi, (2014) who conducted a study on the effect of bank innovations on financial performance of commercial banks in Kenya and found out that bank innovations had statistically significant influence on income, return on assets, profitability and customer deposits of commercial banks in Kenya and tests for significance also showed that the influence was statistically significant.

The specific model was;

MSE growth =*0.5227+0.505X*

Where X is Technology and innovation

This finding is consistent with that of Wanjohi and Mugure, (2008) who argued that there are various other financial challenges that face small enterprises. They include the high cost of credit, high bank charges and fees, lack of collateral and long time lending procedures. Financial constraint remains a major challenge facing MSEs in Kenya. Small-scale enterprises play a major role in facilitating economic growth in Kenyan economy. The greatest hindrance to their active participation is the access to affordable credit and at reasonable terms.

Kumar and Jeyanth (2013) agree with Fidrmuc that a good relationship between MSEs and MFIs helps them to easily access finances and information. They add on that capacity building of staff for preparedness is perhaps the most important task. MFIs are unique in their way of operation as the staff has rapport with even the most remote clients.

This finding is also consistent with that of Kinyua (2014) researching on factors affecting the performance of small and medium enterprises in the Jua Kali Sector in Nakuru town, Kenya and found out that; access to finance had the potential to positively affect performance of SMEs, The study recommended that banks should improve access to finance through offering better lending terms and conditions and collateral requirements; focus on acquiring

appropriate management skills such as financial, marketing and entrepreneurial skills and effectively strengthen the macro environment in order to increase SMEs performance.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The study concluded that majority of MSEs Owners who utilize E banking, M banking and Alternative channels to a moderate extent. Further, study concluded that majority of the MSEs had set aside a moderate budget for adoption, maintaining and upgrading E banking, M banking and Alternative channels.

5.2 Recommendations

The study also recommended that commercial banks to flex terms and conditions for credits for the SMEs. Therefore, commercial banks need to make credit terms to be friendly to the creditors in this case the SMEs owners.

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