Strategic marketing and technological innovations and firm growth: The case of retail banking in Kenya

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The purpose of this study is to determine the extent to which strategic marketing and technological innovations influence the growth of retail banks in Kenya. Knowledge of innovation in the banking sector is key in today’s competitive environment is key for strategic decision making. Marketing and technological innovation practices lead to growth in commercial banks. The study was carried out on 26 commercial banks purposively selected in Nakuru county. Data were collected from branch managers using structured questionnaires. Correlation and regression were used to analyse data on the relationship between innovations and the growth of banks. The results indicated that innovations significantly influence the growth of retail banks. This finding reinforces the bank’s need to invest in innovative practices in order to improve their performance.

Key words: Differentiation, marketing innovation, strategy, strategic innovation, technological innovation.

INTRODUCTION

Marketing innovation and entrepreneurial drive provide cultural foundation for organizational learning which enables an organization to achieve a higher level of performance and better customer value (Liu et al., 2002). Organizational learning is associated with the development of new knowledge, which in turn, is crucial for firm innovativeness and firm performance (Liu et al., 2002). Significant innovations allow firms to establish competitive positions in the market. Innovation in production processes, work organization, and human resource management practices are associated with high risks and may require more firm resources (Baer and Frese, 2002). Innovation has been found to contribute to firm performance (Harmsen et al., 2000). The commercial banks innovate mainly on their customer business in terms of financial structures, credit, new products, new markets, inventory and marketing policies.

The key driver of innovations in the banking industry is information computer technology (ICT). Innovation directly affects bank managements strategic decisions in terms of product development, pricing, distribution and promotion. Managers who desire to remain competitive have to embrace the importance of marketing and technological innovation and incorporate it into their strategic plans. Only banks that apply marketing and technological innovation to their operations are likely to survive and prosper in the new millennium (Woheren, 2000). The quest for survival, global relevance, maintenance of existing market share and sustainable development has made exploitation of the many advantages of marketing and technological innovations. The growth of firms in terms of market share, no of branches and customer base has been linked to the nature of response of retail banks to the global trend in innovative practices. This study sought to investigate the effect of strategic marketing and technological innovations in their operations of retail banks in Kenya since no similar work had been carried out before.

STATEMENT OF THE PROBLEM

The financial sector is undergoing global transformation as a result of marketing and technological innovations. To be competitive, the retail banks need to adopt the changes that are taking place in the banking industry.

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growth of retail banks.

ii.) To establish the effect of technological innovation on the growth of retail banks.

iii.) To determine the composite effect of marketing and technological innovation on the growth of commercial banks.

Hypothesis

HO1: There is no significant relationship between marketing innovation and growth for commercial banks.

HO2: There is no significant relationship between technological innovation and growth for commercial banks.

HO3: There is no single type of innovation influences the growth for retail banks.

LITERATURE REVIEW

Concept of innovation

Innovation is widely proclaimed as being of vital importance to achieve and maintain competitive evidence suggests that the successful adoption of new technology poises extreme challenges to managers (Markides, 2002; Smith, 2002; Teece, 2002). Key issues hindering successful adoption of technological innovations include: resistance to change organisational structure, cultural inertia, internal politics, fear of cannibalizing existing products, fear of destroying existing competencies, satisfaction with the status quo, and in general, a lack of incentives to abandon the certainty of the current way of doing things to embrace the uncertainty of future rewards. Moreover, a widening gap between managers’ discourse and their ability or lack of ability to implement innovations and between normative and prescriptive contributions by academics and what managers actually do (Salaman and Storey, 2004).

An innovation is either radical or incremental by determining the degree of change associated with it. Radical innovations produce fundamental changes in the activities of an organisation, industry or society and represent clear departures from existing practices. Highly radical, competence-destroying innovations also significantly increase environmental uncertainty and result in the transformation of firms or industries (Meyer et al., 1990). Incremental innovations, on the other hand, merely call for marginal departures from existing practices as they mainly reinforce the existing capabilities of organisations. Incremental innovations emphasise the importance of the economies of scale and economies of scope in production and development of innovations are intrinsically separate and occur at different times.

An innovation consists of certain technical knowledge about how the things can be done better than existing state of the art. The innovativeness of a new product and firm innovation capability is important for several reasons. Innovation products present opportunities for firms in terms of growth and expansion into new areas as well as allow firms to gain competitive advantage. Innovation by itself is defined as the generation, acceptance, and implementation of new ideas, processes, products or services. The innovation process includes the acquisition, dissemination and use of new knowledge (Calantone et al., 2002) and successful implementation of creative ideas within an organization (Amabile et al., 1996).

Marketing innovation

Thompson (1999) noted an important aspect of marketing development is the search for a competitive advantage, something a firm does that gives it an edge over competitors ways to achieve quality products that command a premium price, providing superior customer service having the lowest product cost and lower prices. When banks are successful in introducing new ways to the market, their products, they can spark a burst of customer interest, wider industry demand, increased product and service differentiation and lower unit cost all of which can alter the competitive positions of rival firms. Berry (1994) asserted that matching of customer value opportunities with the firm’s capabilities is necessary to create superior products and services through the development and deployment of key resources.

North American (mostly U.S.) data, which leaves the perspective, pioneering advantage arises from the process by generalizability of their findings to other economies an open which consumers learn about brands and form their preferences (Lieberman and Montgomery, 1998). For this process can produce a preference structure that favors the example, Cho et al. (1998) suggest that due to pioneer, making it difficult for late entrants to “compete away” the unique cultural characteristics of Asian countries, the pioneer's large market share (Carpenter and Nakamoto, 1989). Pioneer and follower phenomenon in Asia may not be.

Innovation, however, is not the only choice for a product systematically explained by theories largely embedded in the introduction. Because there can be only one pioneer in any West. In addition, emerging economies, during their transition product market, imitation remains a viable and more common to market economies, experience unprecedented changes in strategy than innovation (Golder and Tellis, 1993; Kerin et al., 1992). Another limitation of extant research on product innovation innovating firms can gain advantage through sustained and entry strategies is that most studies have been based on technology leadership (Kerin et al., 1992).

Sethi et al. (2001) propose a model that tests the relevant conditions that allow creativity to foster new consumer products like positive correlation between super-ordinate identity and creativity, negative association between social cohesion and creativity, and
positive effect between encouragement to take risk and creativity. Moreover, Andrews and Smith (1996) stress that risk taking attitudes of firms have a positive impact on marketing program creativity, in a context of promotion over mature products. Risk adverse individuals use to work under algorithmic processes (Andrews and Smith, 1996; Sethi et al., 2001) compared to heuristic ones, because consolidated routines help to solve problems with lowering the cost on the expected event. Granted this, the cultural index that should largely influence the firm marketing creativity, especially in the case of high-risky innovation-based sectors, is uncertainty avoidance index (UAI) (Hofstede, 1991; Shane, 1993). (Andrews and Smith, 1996) define marketing activities as tools to protect and differentiate the firm products.

Technological innovation

Information technology development such as World Wide Web and the internet have revolutionized the world. The internet has provided global payment infrastructure through SWIFT, thus, enhancing electronic banking, payments for goods and services can be made electronically including provision of financial services online through internet. Western capitalist societies became knowledge based. Knowledge and information replaced money as a fundamental source of power in organization (Toffler, 1990).

The technological revolution has made businesses becoming more competitive all over the world. This has led to the advent of a world without borders. This means organizations are in direct competition with each other. The internet and World Wide Web, phone, modem and fax have opened unbelievable opportunities to the observant and innovative businessman (Olago, 1997). The co-operative bank has invested in products such as e-commerce, electronic bulk payment system as well as programme of installing 20 ATMs. The banking sector in general has invested in information technology in order to provide better services to their customers. In addition to investing ATMs they have also invested to paperless payment system such as electronic money transfer. An automatic cheque clearing house is also in place facilitated by the Central bank of Kenya through the Kenya Banker Association. The magnetic Ink character recognition system (MICR) was also adopted in 1998 as the basis for automation of clearing in the country.

Irechukwu (2000), lists some banking services that have been revolutionized through the use of ICT as including account opening, customer account mandate, and transaction processing and recording. Information and Communication Technology has provided self-service facilities (automated customer service machines) from where prospective customers can complete their account opening documents direct online. It assists customers to validate their account numbers and receive instruction on when and how to receive their chequebooks, credit and debit cards. Communication Technology deals with the Physical devices and software that link various computer hardware components and transfer data from one physical location to another (Laudon and Laudon, 2001). ICT products in use in the banking industry include Automated Teller Machine, Smart Cards, Telephone Banking, MICR, Electronic Funds Transfer, Electronic Data Interchange, Electronic Home and Office Banking. Several authors have conducted investigation on the impact of ICT on the banking sector of the Nigeria economy.

What matters most for technological development is the speed with which technology diffuses within a country. Empirical evidence shows an important divergence across developing countries in the speed of diffusion within countries and their role for growth (World Bank, 2008). Many developing countries have a business environment that constrains firm’s absorption of new technologies and performance. Among the macro-factors identified as potential barriers for growth and the adoption of new technologies are heavy regulatory burden, the quality of institutions, severe financial constraints and macro-economic uncertainty (Bastos and Nasir, 2004; Dollar et al., 2003; Eifert et al., 2005). In addition, technology diffusion depends on the extent to which firms are exposed to and able to efficiently absorb foreign and new vintage technologies through trade, FDI and migration of human capital.

More recently Stoneman et al. (1988) concluded that there is a considerable amount of evidence from different economics and different time periods to support the view that technological change is an important factor in the generation of economic growth. The estimate suggests that around 40% of output growth can be attributed to new technology. It has frequently been argued in recent years that the fundamental performance indicator of success for any organization. Rhodes et al. (1994) comment that success in most industries today requires an organizational commitment to compete in the marketplace on technological grounds.

Technological strategies must be linked in with the overaching corporate or business strategy to be truly successful. Without a serious continuous, institution wide corporate strategic planning process it will not be possible to determine any technology roadmap effectively. It is the integration of technology and technology systems with the rest of an organization’s activities, policies, plans and strategies that is important. As Andrews et al. (1994) also comment the sensible application of technology with work processes.

Technological innovation is essentially about function and performance if one is not offering really new functionality or the potential for intrinsically superior performance, then success in the marketing against established technologies is not likely. The economic benefits of technological change are found marketplace. The ability to plan then, when, why and how of
technological penetration into or losing money in the new technologies (Betzs, 1993).

Good strategic technology management requires the integration of any technologies strategy with the rest of an organization’s strategies. These may be the business or marketing strategies, the research and development strategy and the human resource strategy. As Anstey (2000) has noted, the elements of technology development and application are likely to be paramount importance.

At the same time, similar studies on the service sector focusing on financial services (Damanpour and Gopalakrishnan, 2001), were rather prescriptive and disregarded possibilities that findings documented mostly within manufacturing sectors transferred unaltered to financial services. Moreover, studies emanating from experiences in manufacturing ignored possibilities which were specific to service firms. For instance, banking organisations have used IT applications to implement innovations that would simultaneously achieve greater process efficiency and enhance service quality (Uchapalanan, 2000).

**Marketing and technological innovations on growth**

It is now widely recognized in the macro-economic literature that innovations are a major driver of economic growth. The endogenous growth literature (Romer, 1994; Grossman and Helpman, 1991; Aghion and Howitt, 1998) identifies commercially oriented innovation efforts as a major engine of this technological progress and productivity growth. The rate of growth of a country is determined by its initial level of development, the creation of new knowledge within the country and the absorption and exploitation of knowledge, independently of where it is created. Particularly knowledge spillovers have been identified as important drivers in endogenous growth models (Grossman and Helpman, 1991). These knowledge spillovers need not be confined to domestic borders, with international transfer of technology, through trade or FDI, an important source for growth especially for catch-up countries.

Within this macro-perspective, a first factor explaining cross-country differences in their innovation growth nexus is the level of development. Technological diffusion is slow at very low levels of development, in part because of difficulties in affording new technologies, in part because low levels of human capital severely constrain technological progress. At some level of development, however, the pace of technological diffusion becomes less obvious, with a high cross-country variance in technology adoption, even across countries at similar development level. One explanation for this heterogeneity in diffusion rates at higher income levels is the divergence in the countries’ ability to effectively absorb new technologies (Lall, 1992). Accessed knowledge needs to be combined with a sufficiently developed “absorptive capacity” (Cohen and Levinthal, 1989) or “social capability” (Abramovitz, 1986) in order to deliver growth. This absorptive capabilities depend on many factors, including the extent to which a country has a technologically literate workforce and a highly skilled elite; promotes an investment climate that encourages investment and permits the creation and expansion of firms using higher-technology processes; permits access to capital; and has adequate public sector institutions to promote the diffusion of critical technologies where private demand or market forces are inadequate (Worldbank, 2008).

A second set of factors explaining the divergence in countries’ performance is a divergence in own indigenous innovative capacity, which becomes increasingly important as a country progresses closer to the technology frontier (Hoekman et al., 2005). First, own R&D complements the adoption of existing technology because it is a component of absorptive capacity. Foreign technologies frequently need to be modified so that they are suitable for domestic circumstances. Countries tend to acquire technology more readily when domestic firms have R&D programs and when public research laboratories and universities have relatively close ties to industry. But, at higher levels of development, own R&D increasingly may also start to substitute adoption of existing technologies, allowing generation of new technologies, particularly in these areas where the country has developed comparative strengths.

Empirical macro-analysis confirms the importance of innovation for catch-up (Nelson, 1993; Kim, 1997; Fagerberg et al. 2007) for a large cross-section of countries find significant effects of technological capacity (both creation and absorption) to be significantly related to growth. But although a well functioning innovation system seems critical for development, they also confirm the importance of governance and the quality of institutions. Another result from these macro-empirical studies is no or little support for openness to trade and foreign direct investment to matter for innovation and growth. Although many endogenous growth models have emphasized technology spillovers from the North to the South as a vehicle for productivity growth of the South (Grossman and Helpman, 1991), the empirical evidence zeroing in on the effects of international technology transfer is less clearcut (Hoekman and Javorcik, 2006). Although earlier studies based on industry level cross-sectional data found statistically significant horizontal spillover effects in developing countries (Blomstrom and Persson, 1983; Kokko, 1994), more recent studies using panel data sets, correcting for firm or sector specific fixed effects, find no positive within-industry spillover effects for developing countries (Gorg and Greenaway, 2003).

One explanation for the difficulty to find evidence of positive spillovers from openness is the confounding impact of competitive effects from open markets (Markusen and Venables, 1999). In addition, the potential
benefits from FDI may not materialize, as multinational firms may protect their core know-how from dissipating to local rivals. An additional critical factor to exploit spillovers is the technological capability of indigenous firms (Blomstrom and Kokko, 1998). Most of the empirical studies on developing countries have failed to find robust evidence of positive knowledge spillovers from multinational investment, accounted for by the lack of absorptive capacity in these host countries (Aitken and Harrison, 1999). Overall, the macro and trade literature paints a complex relationship between indigenous efforts of technology development (technology make) and the acquisition and absorption of externally developed (foreign) technologies (technology buy) along the development path of a country. R&D and innovation seem important for development, but are no panacea for success.

Depending on the initial country conditions, flanking conditions such as education, finance, quality of institutions, governance and openness, need to be factored in. Our analysis takes the relationship between technology make and buy and performance, together with its flanking conditions to the level of individual firms. More particularly, we want to examine, within the settings of a particular developing country, what effectively drives or impedes individual firms’ innovative performance and their growth. The literature explaining firm growth has shown that growth is largely a stochastic process where many unidentified and unobservable (firm-specific) factors are responsible for the growth performance of firms. However, since the seminal work of Jovanovic (1982) the theoretical literature developed the idea that firm growth is also a learning process, by which firms discover their true efficiency levels and adjust their size accordingly. This learning process is most apparent shortly after entry, explaining why small and young firms grow faster, once they discover in confrontation with the market that they can stand up to competition.

Pakes and Ericson (1998), building further on developed an ‘active’ learning model, in which the efficiency level can be actively raised by firm-specific investments in innovation activities and R&D, thereby opening up the growth perspectives of firms. In this respect, several authors, following the evolutionary theory of economic change have pointed at the importance of ‘technological capabilities’ of firms in developing countries as the knowledge and skills - technical, managerial and institutional – necessary for firms to utilize equipment and technology efficiently (Enos; Lall, 1992, 1996). Firms build up these technological capabilities in a process of technological learning, by engaging in a wide variety of activities, such as research, training, technology licensing, investment in new vintage machinery and ICT, aimed at introducing products and production processes that are new to the firm and reinforce the firm’s competitive position. The more broader literature on firm growth in developing countries has paid particular attention to institutional barriers hampering firm development, such as poorly functioning financial markets and regulatory and institutional barriers, e.g., Sleuwaegen and Goedhuys (2002), finding financial and institutional constraints to growth in Côte d’Ivoire, and Fisman and Svensson (2007) finding corruption and taxation to hamper firm growth in Uganda. Empirical evidence on the innovation-growth relationship for firms in developing countries is relatively scarce, related to difficulties to measure innovation and data scarcity.

### Growth indicators of commercial banks

Commercial banks growth is based on their ability to attract a large number of customers. One way of measuring commercial banks growth is therefore, the comparative proportion of account holders relative to other banks. Customer satisfaction indicates the trust that people have accorded to their bank with their finances. Another important growth indicator was the market share of the bank. Number of branches was another measure indicator of growth.

### Empirical studies on marketing and technological innovation

Empirically, firm level data from different industries, countries and time-periods provide evidence in favor of a stable skewed distribution reflected as serial correlation in firm growth (Klette and Kortum, 2004). The observation of persistent asymmetries among firms in terms of size, innovation, productivity, profitability and growth has spurred the development of competence-based and other non-equilibrium theories of the firm at the micro level. The literature suggests several different reasons for performance persistency of firms: such as “success breeds success” the cumulative nature of knowledge (Nelson and Winter, 1982; Cohen and Levinthal, 1991), sunk cost in R&D investments. In practice, as Cefis and Orsenigo (2001) suggests, it is very difficult to distinguish between the various sources of persistence. Duguet and Monjon (2002), however, list several simple empirical tests to determine which of the theoretical models that are most relevant (Bernard, 2004). But do they base their success on the ability to continuously bring innovative new products to the market? Applying a Bayesian approach on a panel of 267 UK manufacturing firms over the period 1988 - 1992, Cefis and Ciccarelli (2005) suggest a difference in profitability between innovators and non-innovators, and a greater difference when the comparison is between persistent innovators and non-innovators. Similar findings has also been reported by Roberts (1999). Few studies, however, have investigated the link between persistent innovation and growth rates whether expressed in terms of employment, sales, exports, productivity or profitability. Kipngetich (1991) carried out a study on management satisfaction.
in performance of computer mediated information system in Kenya. His findings indicated that computer based information system are increasingly being used in Kenya with the most computer use being in the banking sector and business service. He further found out that most businesses which extensively used computer systems were in existence for 20 years and had invested at least Kenya shillings 5 million. This represented huge investment of most organization like previous studies he based his research on the private sector enterprises.

Nyambane (1996) studied the extent of computer usage and factors limiting use of computers in public quoted companies in Kenya. The study identified the factors limiting use of computer in business organization as lack of national policy framework and strategy for computer development, little education of users on computer by local, software and hardware supplies, inadequate marketing of the technology, proliferation on incompetent computer equipment in the companies due to poor planning, low computer literally in organizations and small size of transactions. In the fast growing micro finance sector.

In their survey over literature on technical change, industrial dynamics and evolutionary processes, Dosi and Nelson (2010) conclude that firms' persistently differ over all dimensions one is able to detect. The empirical literature deals with at least three issues of persistency. They are the correlation between: Firstly previous and current innovation investments secondly previous and current innovation output performance in patents, innovation sales or major innovations and lastly persistent innovation activities and economic performance. Below we briefly summarize some of these studies.

**Persistent engagement in innovation input activities**

Using an innovation panel data set on German data on manufacturing and service firms for the period 1994 - 2002, Peters (2009) reports presence of true state dependence: past innovation experience is an important determinant for current innovation engagements. Investigating European Patent Office data on 49 different technology classes, Malerba and Orsenigo (1999) find that occasional innovators account for a large part of the patenting activities, while there is a smaller core of relatively persistent innovators. The relevance of these analyses is confirmed by numerous empirical studies in economics, sociology, and managerial science that have emphasized the large and highly persistent differences in the engagement in innovation activities across firms. Most firms are noninnovators, and a hard core of the innovative firms is persistent innovators (Henderson, 1993; Cohen, 1995; Duguet and Monjon, 2002; Cefis, 2003; Klette and Kortum, 2004; Raymond et al., 2006).

**Persistent innovation input and innovation output growth**

In their seminal paper, Griliches (1998) define a theoretical model for relating innovation input to innovation output. Applying a distributed lag approach, they find a significant association between R&D and patents. Regarding the times-series dimension, Griliches (1998) reports literature support of the hypothesis that changes in R&D expenditures correlate with changes in patent numbers. Quantitatively, the elasticity of patents with respects to patents typically clusters around 0.5 (Blundell et al., 2002). Following the general methodology outlined in Crépon et al. (1998) and simplified by Loof and Heshmati (2002), a large number of studies also have confirmed a positive relationship between innovation input and sales income from new product across firms. However, the impact of a particular innovation strategy, persistent or occasionally on the share of new product in sales is not well documented in the literature. The data availability is one possible explanation for this gap in the literature.

**Persistent innovation input and economic growth**

It is a stylized fact that firms that are identified as innovators tend to be more productive, profitable or export disposed than other firms, Bernard (2004). But do they base their success on the ability to continuously bring innovative new products to the market? Applying a Bayesian approach on a panel of 267 UK manufacturing firms over the period 1988 - 1982, Cefis and Ciccarelli (2005) suggest a difference in profitability between innovators and non-innovators, and a greater difference when the comparison is between persistent innovators and non-innovators. Similar findings has also been reported by Roberts (1999) and others. Few studies, however, have investigated the link between persistent innovation and growth rates whether expressed in terms of employment, sales, exports, productivity or profitability.

**Other factors affecting strategic innovation and bank growth**

**Economic factors**

No external factors affects a business more than economic conditions. When interest rates are high, and capital is expensive to borrow, business growth may stop expanding. Conversely, cheap money feeds business growth and innovation. When capital is scarce, the economy often shrinks in response, as business hoard cash reserves to weather recession.
Competition factors

Competition shapes the business landscape, as a company executive creates business strategies based on other firm's actions. Gaining market share is the goal of all corporate executives as they contemplate the next quarterly shareholder's meeting. The obvious way to accomplish growth objectives is to take market share from an inferior competitor.

Environmental factors

Organizations that operate in stable external environments find mechanistic structures to be advantageous. This system provides a level of efficiency that enhances the long-term performance of organizations that operate in volatile and frequently changing environments. More likely to find that an organic structure provides the greatest benefits. This structure allows the organization to respond to environment change more proactively.

Marketing and Technological Innovation on Bank Growth

Marketing innovation is at the forefront of organizational priorities and is one of the crucial aspects of increasing customers' awareness and loyalty. It informs the customer's introduction of new products in markets, the use and importance of the product or service has. Providing quality products and services, introducing ways of marketing their products and services, correct promotion, correct pricing, market research regulated by the government through the CBK affects the number of customers, customer satisfaction, growth of market share and number of branches.

Technological innovation affects the quality of services and products offered. Use of computers, internet automation of bank, electronic banking, electronic notification, phone banking, increase IT literacy and electronic bank payment (Figure 1) as increased the level of competitiveness hence the increase number of
customers, customer satisfaction, growth of market share and number of branches. Retain as this is one of the measures of growth as conceptualized in Figure 1. Innovation reduces cost of operation, attracts more customers, increases efficiency and reduces time taken to enter transactions. All the two strategic innovations makes commercial banks increase number of customers, customer satisfaction, growth in market share and number of branches.

Government affects the growth of commercial banks through policies implemented by an act of parliament and regulations effected through CBK. Regulations restrict banks and the broadening of product lines of the banks continue to use strategic marketing and technological innovation. Changes regarding reserve limits, bank powers, geographic restrictions affects growth.

RESEARCH METHODOLOGY

Research design

The research used descriptive survey to establish the relationship between strategic innovation and growth of commercial banks in Nakuru town. Descriptive research is the most commonly used and the basic reason for carrying out descriptive research is to identify the cause of something that is happening. Descriptive research studies are designed to obtain important information concerning the status of phenomena from which valid conclusions may be drawn.

Study population

The study population comprised 26 commercial banks in Nakuru town. All the banks are included in the study. The data was obtained from the Municipal Council of Nakuru 8th September 2011. I carried census to ascertain the number of commercial banks.

Sample size

The study carried out a census survey on the commercial banks. Further more Israel (2003), asserts that when population is a size 200 or less, a census is the most appropriate for the study. Another advantage of a census is that it reduces the sampling error since all the elements in the population are studied.

Data collection instruments and administration

A questionnaire was used to collect data. Using a questionnaire is advantageous since it presents an even stimulus potential to large number of people simulatenously and provides on investigation with easy accumulation of data. The questionnaire was administered to the branch managers by drop and pick method. A time period of one week was allowed to fill the questionnaire after which they were collected.

Validity and reliability of the instrument

The validity of questionnaire was evaluated by experts in the faculty of Commerce. According to Brown et al. (1992), validity of an instrument is better improved by expert judgement. The validity evaluated include; construct validity which refers to the extent to which operationalization of construct do actually measure what the theory say they do, content validity which is an examination of the test content to determine whether it covers a representative sample of the behaviour domain to be measured and face validity which is an estimate of whether a test appears to measure a certain criterion that is whether a test appear to be a good measure or not.

The reliability of the instruments was tested using the Cronbach Alpha Coefficient was 0.85. The Cronbach’s alpha coefficients of the factors/constructs surpassed the 0.70 threshold recommended by Parasuraman et al. (1988), for the test of scale reliability. The questionnaire was pilot tested with five commercial banks purposefully selected in Naivasha town to test for the instrument is reliability.

Data presentation methods

Data was presented by use of tables, frequencies and percentages. This gives a clear data that shows the growth of commercial banks in Nakuru town.

Data analysis

Preliminary data analysis was recorded, edited, coded and then entered in the statistical package for social science. The analysis was facilitated SPSS version 17.0 which was available for the study. The data was analysed using descriptive statistics. Correlation and regression analysis were used to test the hypotheses. The Correlation was used to determine the relationship between the banks and possession of the strategic innovation and its effect on growth while regression analysis was used to determine the level of contribution of each of the types of innovations on firm performance.

\[ Y = \beta_0 + \beta_{1M} + \beta_{2T} + \epsilon \]

Where:

- \( Y \) is firm growth (dependent variable).
- \( M \) is marketing innovation (independent variable) likely to bring about firm growth.
- \( T \) is technological innovation (independent variable) likely to bring about firm growth.
- \( \epsilon \) is the error term, other factors that influence firm growth.
Table 1. Bank ownership.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government owned</td>
<td>1</td>
<td>3.8</td>
<td>3.8</td>
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<tr>
<td>Multinational</td>
<td>7</td>
<td>26.9</td>
<td>26.9</td>
</tr>
<tr>
<td>Locally owned</td>
<td>13</td>
<td>50.0</td>
<td>50.0</td>
</tr>
<tr>
<td>Jointly owned</td>
<td>5</td>
<td>19.2</td>
<td>19.2</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>100.0</td>
<td>100.0</td>
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</tbody>
</table>

Table 2. Year of incorporation.

<table>
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<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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</thead>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Before 1970</td>
<td>4</td>
<td>15.4</td>
<td>15.4</td>
</tr>
<tr>
<td>Between 1980 to 1990</td>
<td>1</td>
<td>3.84615</td>
<td>3.84615</td>
</tr>
<tr>
<td>Between 1990 to 2000</td>
<td>2</td>
<td>7.692308</td>
<td>7.84615</td>
</tr>
<tr>
<td>Above 2000</td>
<td>19</td>
<td>73.07692</td>
<td>73.07692</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>73.07692</td>
<td>100.0</td>
</tr>
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</table>

Table 3. Scope of operation.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kenyan</td>
<td>11</td>
<td>42.3</td>
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<tr>
<td>Regional</td>
<td>10</td>
<td>38.5</td>
<td>80.8</td>
</tr>
<tr>
<td>Multinational</td>
<td>5</td>
<td>19.2</td>
<td>19.2</td>
</tr>
<tr>
<td>Total</td>
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<td>100.0</td>
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</table>

DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

This chapter outlines the findings from the research whose main objective was to determine the effect of strategic marketing and technological innovation on growth of commercial banks in Nakuru town.

Bank classification by ownership

Table 1 shows that banks are classified as government owned 3.8%, multinational 26.9%, owned by local 50.0% and jointly owned 19.2%. Most banks are owned locally as per frequencies and percentage. The growth in the number of these local financial institutions was due to regulatory framework in which entry requirements were relaxed as government effort to promote the growth of locally owned commercial banks.

Year of incorporation

Table 2 indicates the year of incorporation, 15.4% between 1960 - 1970, 23.1% between 1970-1980, 38.5% between 1980 – 1990, 23.1% between 1990 -2000. The financial sector grew steadily in the 2000s as indicated by the growth in numbers of commercial banks. The number of increase is due relaxing regulatory requirement for commercial banks.

Geographical scope of operation

Commercial banks exert control in an actual market situation, its dominance is precarious and most often subject to change. Marketing and technological innovation facilitate geographical expansion of banking organizations beyond the effects of the increases in the bank scale associated with expansion. Table 3 shows; 42.3% banks are nationally only in Kenya, 38.5% regionally in two countries in Africa and 19.2% internationally operating two or more branches which might be outside Africa.

Number of branches

Most commercial banks environment competition is likely to take the form of internal competition and number of branches which it operates. Table 4 indicates the number of branches; less than 5 19.2%, between 6 and 10 15.4% between 11 and 15 and 42.3% above 23.1%. Marketing and technological innovation facilitates the expansion of banking organizations.
RESPONSE RATES OF MARKETING INNOVATION

Listening to opinions of customers in our bank affects growth

Respondents were asked to indicate their degree of agreement to the statements on whether their banks were affected by listening to opinions of customers or not. Table 5 shows that when asked to respond to the statements whether the physical facilities were affecting growth, 65.4% of the respondents strongly agreed, 34.6% agreed. This shows that banks have recognized the contribution of listening to customers.

Use of customers information to improve service delivery affects growth

The findings, as indicated in the Table 5 reflect that most (69.2%) respondents strongly agreed that the use of customer information to improve service delivery in banks affects growth and 30.8% of the respondents agreed with the statement. It is apparent that majority of respondent approved use of customer information to improve service delivery in banks to affects growth. This indicate how the customers value use of customer information in service delivery and probably this influences their decision to select and be loyal to their bank. Bank services such as prompt communicatin to customers are vital. Customers are concerned whether their bank will provide the right information to right customers promptly. This creates public confindence and thus helps to make the right decisions at the right time. This finding was consisted with a similar study on service quality in retail banking by Mohammed and Shirley (2009).

Keeping promises made to customers

Information was sought on what the respondents thought of keeping promises made to customers. With reference to Table 5, majority of the respondents (85.5%) acknowledged that keeping promises made to customers in banks affects growth while 11.5% agreed with the statement. It was believed that keeping promises made to customers affects growth in banks. It implied that most banks are able to make good on their promises.

The use of lower service cost affects bank growth

The data collected showed that at least 57.7% of the respondents strongly agreed that the use of lower service cost affects bank growth, and 38.5% agreed while a total of 3.8% disagreed. A Thompson (1999) noted an important aspect of marketing development is the search for a competitive advantage, something a firm does that gives it an edge over competitors ways to achieve quality products that command a premium price, providing superior customer service having the lowest product on cost and lower prices.

The use of effective distribution of branches influences bank growth

The findings, as indicated in the Table 5 reflect that most (61.5%) respondents agreed that the use of effective distribu
tion of branches affects bank growth. 9% of the respondents strongly agreed and 3.8% were uncertain whith the statement. Ths indicate that most banks are affected with the distribution of branches.

The use of recent marketing programme influences bank growth

The results in the Table 5 indicate that about 84.6% approved that use of recent market program affects growth. This demonstrates of the majority of the respondents were satisfied with the manner in which they use recent programmm. 15.4% were uncertain to statement. Moreover, Andrews and Smith (1996) stress that risk taking attitudes of firms have a positive impact on marketing program creativity, in a context of promotion over mature products. Risk adverse individuals use to work under algorithmic processes (Andrews and Smith, 1996; Sethi et al., 2001) compared to heuristic ones, because consolidated routines help to solve problems with lowering the cost on the expected event. Granted this, the cultural index that should largely influence the firm marketing creativity, especially in the case of high-risky innovation-based sectors, is uncertainty avoidance index (UAI) (Hofstede, 1991; Shane, 1993). Andrews and Smith (1996) define marketing activities as tools to protect and differentiate the firm products.
Table 5. Response rates.

<table>
<thead>
<tr>
<th>Marketing innovation</th>
<th>SA</th>
<th>A</th>
<th>U</th>
<th>D</th>
<th>SD</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listening to opinions of customers in our bank affects growth</td>
<td>69.2</td>
<td>30.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>Use of customers information to improve service delivery affects growth</td>
<td>69.2</td>
<td>30.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>Use of customers information to improve service delivery affects growth</td>
<td>69.2</td>
<td>30.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>Keeping promises made to customers in our bank affects growth</td>
<td>88.5</td>
<td>11.5</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>The use of lower service cost in affects bank growth</td>
<td>57.7</td>
<td>38.5</td>
<td>3.8</td>
<td>0.0</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>The use of effective distribution of branches influences bank growth</td>
<td>9.0</td>
<td>61.5</td>
<td>3.8</td>
<td>0.0</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>The use of recent marketing programme influences bank growth</td>
<td>30.8</td>
<td>53.8</td>
<td>15.4</td>
<td>0.0</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>The use of creative methods of operation influences our bank growth</td>
<td>50.0</td>
<td>46.2</td>
<td>3.8</td>
<td>0.0</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>The responses to customer needs by writing contacts affects growth in our bank</td>
<td>61.2</td>
<td>20.8</td>
<td>0.0</td>
<td>10.0</td>
<td>8.0</td>
<td>100</td>
</tr>
<tr>
<td>Focuses on market in which we have competitive strength affects growth</td>
<td>7.7</td>
<td>34.6</td>
<td>19.2</td>
<td>26.9</td>
<td>11.5</td>
<td>100</td>
</tr>
<tr>
<td>Technological innovation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The use of computers in our bank affects growth</td>
<td>65.4</td>
<td>33.6</td>
<td>0.0</td>
<td>0.0</td>
<td>1.0</td>
<td>100</td>
</tr>
<tr>
<td>The use of electronic home and office banking affects growth</td>
<td>81.5</td>
<td>15.4</td>
<td>0.0</td>
<td>5.0</td>
<td>3.1</td>
<td>100</td>
</tr>
<tr>
<td>The use of automated Teller machines in our bank affects growth</td>
<td>80.0</td>
<td>10.0</td>
<td>0.0</td>
<td>0.0</td>
<td>9.2</td>
<td>100</td>
</tr>
<tr>
<td>The use of electronic bank payment in our bank influences growth</td>
<td>38.5</td>
<td>50.0</td>
<td>3.8</td>
<td>7.7</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>The use of smart cards in our bank affects growth</td>
<td>11.5</td>
<td>57.7</td>
<td>19.2</td>
<td>3.8</td>
<td>7.7</td>
<td>100</td>
</tr>
<tr>
<td>The use of MICR cheques in our bank influences growth</td>
<td>3.8</td>
<td>23.1</td>
<td>23.1</td>
<td>23.1</td>
<td>26.9</td>
<td>100</td>
</tr>
<tr>
<td>The use of telephone banking in our bank affects growth</td>
<td>61.5</td>
<td>26.5</td>
<td>3.8</td>
<td>7.7</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>The use of electronic data exchange in our bank affect growth</td>
<td>34.6</td>
<td>19.2</td>
<td>11.5</td>
<td>11.5</td>
<td>3.8</td>
<td>100</td>
</tr>
<tr>
<td>Make cheque available program m affects bank growth</td>
<td>57.7</td>
<td>38.5</td>
<td>0.0</td>
<td>0.0</td>
<td>3.8</td>
<td>100</td>
</tr>
<tr>
<td>Computerized credit rating affects bank growth</td>
<td>46.2</td>
<td>50.0</td>
<td>0.0</td>
<td>3.8</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>Firm growth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased number of customers</td>
<td>69.2</td>
<td>30.8</td>
<td>0.0</td>
<td>0.0</td>
<td>11.5</td>
<td>100</td>
</tr>
<tr>
<td>Increased customers satisfaction</td>
<td>30.8</td>
<td>42.3</td>
<td>11.5</td>
<td>3.8</td>
<td>11.5</td>
<td>100</td>
</tr>
<tr>
<td>Increased market share</td>
<td>61.5</td>
<td>30.8</td>
<td>3.8</td>
<td>3.8</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>Increase in the number of branches</td>
<td>57.7</td>
<td>26.9</td>
<td>7.7</td>
<td>0.0</td>
<td>7.7</td>
<td>100</td>
</tr>
</tbody>
</table>

The use of creative methods of operation influences our bank growth

The Table 5 showed that 50.0% of the respondents strongly agreed that their bank used creative methods of operation while 46.2% agreed and 3.8% were uncertain. This indicate how creative methods affects growth. Sethi et al. (2001) propose a model that tests the relevant conditions that allow creativity to foster new consumer products like positive correlation between super-ordinate identity and creativity, negative association between social cohesion and creativity, and positive effect between encouragement to take risk and creativity.

The responses to customer needs by writing contacts influences growth in our bank

The results in Table 5 indicate that more than 69.2% strongly agreed that their banks were affected by writing contacts to customers though the number 20.2% agreed 10.0% disagreed and 2.0% strongly disagreed.
Customers are concerned whether their bank will contact them.

**Focuses on Market in which we have Competitive Strength Affects Growth**

The findings, as indicated in the Table 5 reflect that most (34.65%) respondents agreed that the focus on which we have competitive strength affects growth. 26.9% of the respondents disagreed, 19.2% uncertain, 11.5% strongly disagreed and 7.7% strongly agreed with the statement.

**RESPONSE RATES FOR TECHNOLOGICAL INNOVATION**

**The use of computers in our bank affects growth**

The responses in Table 5 indicate that 65.4% strongly agree, 33.6% agree and 1.0% strongly disagree. This shows that most commercial banks use computers. Communication technology deals with the physical devices and software that link various computer hardware components and transfer data from one physical location to another (Laudon and Laudon, 2001). ICT products in use in the banking industry include Automated Teller Machine, Smart Cards, Telephone Banking, MICR, Electronic Funds Transfer, Electronic Data Interchange, Electronic Home and Office Banking.

**The use of electronic home and office banking affects growth**

Table 5 showed that 81.5% of the respondents strongly agreed that use of electronic home and office banking affects growth while 15.4% agreed, 5.0% disagree and 3.1% were uncertain. This indicates that most commercial banks have acquired modern equipment which has become crucial in influencing growth.

**The use of automated teller machines in our bank affects growth**

The data collected showed that at least 80.8% of the respondents strongly agreed that the use of automated teller machine affects bank growth, 10.0% agreed while a total of 9.2% strongly disagreed. Some banking services that have been revolutionized through the use of ATMs. Information and communication technology has provided self-service facilities (Olago, 1997).

**The use of electronic bank payment in our firm influences growth**

Table 5 showed that 50.0% of the respondents agreed that their bank uses electronic bank payment affects growth while 38.5% strongly agreed 3.8% and 7.7% disagree on the statement. The internet has provided global payment infrastructure through SWIFT, thus, enhancing electronic banking payments for goods and services can be made electronically including provision of financial services online through internet (Toffler, 1990).

**The use of smart cards in our bank affects growth**

The findings, as indicated in the Table 5 reflect that most (57.7%) respondents agreed that the use of smart cards in our bank affects growth. 19.2% of the respondents were uncertain, 11.5% strongly agreed, 7.7% strongly disagreed and 3.8% disagreed with the statement.

**The use of MICR cheques in our bank influence growth**

Respondents were asked to indicate their degree of agreement to the statements on whether their banks were affected by listening opinions of customers or not. Table 5 shows that when asked to respond to the statements whether the MICR were affecting growth, 26.9% strongly disagreed, 23.1% disagreed, 23.1% were uncertain and 3.8% strongly agreed. This shows that MICR cheques does not influence bank growth.

**The use of telephone banking in our bank affect growth**

Table 5 showed that 61.5% of the respondents strongly agreed that use telephone banking affects growth while 26.5% agreed, 3.8% were uncertain and 7.7 disagree on the statement.

**The use of electronic data exchange in our bank affect growth**

The result in Table 5 indicate that 34.6% strongly agree that the use of electronic data exchange in our bank affect growth while 19.2% agreed, 11.5% were uncertain, 11.5% disagreed and 3.8% strongly disagreed.

**Make cheque available program M affects bank growth**

The responses in Table 5 indicate that 57.7% strongly agreed, 38.5% agreed, and 3.8% disagreed. This shows that make cheque available program M affects bank growth.

**Computerized credit rating affects bank growth**

The data collected showed that at least 46.2% of the respondents strongly agreed that the use computerized credit rating affects bank growth, 50.0% agreed while a total of 3.8% disagreed.
### Table 6. Correlations analysis.

<table>
<thead>
<tr>
<th></th>
<th>Marketing innovation</th>
<th>Technological innovation</th>
<th>Firm growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing Innovation</td>
<td>Pearson Correlation</td>
<td>1</td>
<td>0.334</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.120</td>
<td>0.267</td>
</tr>
<tr>
<td>N</td>
<td>26</td>
<td>23</td>
<td>26</td>
</tr>
<tr>
<td>Technological Innovation</td>
<td>Pearson Correlation</td>
<td>0.334</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>23</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>Firm Growth</td>
<td>Pearson Correlation</td>
<td>0.226</td>
<td>0.599*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.267</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>26</td>
<td>23</td>
<td>26</td>
</tr>
</tbody>
</table>

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

### RESPONSE RATES FOR FIRM GROWTH

**Increased number of customers**

Respondents were asked to indicate their degree of agreement to the statements on whether their banks were affected by marketing and technological innovation on growth. 69.2% strongly agreed, 30.8% agreed and 11.5% strongly disagreed.

**Increased customers satisfaction**

Table 5 showed that 42.3% agreed marketing and technological innovation contribute firm growth while 30.8% strongly agreed, 3.8% were uncertain and 3.8% disagreed.

**Increased market share**

The findings, as indicated in the Table 5 reflect that most (61.5%) respondents strongly agreed that the use of use of marketing and technological innovation affects growth of banks. 30.8% of the respondents agreed 3.8% were uncertain and 3.8% disagreed with the statement.

**Increase in the number of branches**

The findings, as indicated in the Table 5 reflect that most (57.7%) respondents strongly agreed that the use of marketing and technological innovation affects growth of banks 26.9% of the respondents agreed, 7.7% were uncertain and 7.7% strongly disagreed with the statement.

### CORRELATION ANALYSIS

**Hypothesis one**

There is no significant relationship between marketing innovation and growth for commercial banks.

From the analysis it indicates that marketing innovation and firm growth was (0.226) at 0.01 significance level. There was association between marketing innovation and firm growth. Therefore the decision was to reject null hypothesis. This was because there was enough evidence to support that marketing innovation was related to firm growth. This means there was a relationship between marketing innovation and firm growth (Table 6).

**Hypothesis two**

There is no significant relationship between technological innovation and growth for commercial banks.

According to the result at 0.01 significance level technological innovation contribute (0.559), firm growth. According to the analysis it indicates that there was significant relationship between technological innovation and firm growth. Therefore the decision was to reject the null hypothesis. This was because that there was enough evidence to support that technological innovation was related to firm growth. This means there was association between technological innovation and firm growth (Table 6).

**Marketing and technological innovation**

The result of this research show marketing innovation and technological innovation positively influence growth. According to the result R value was (0.599). The result indicate marketing innovation and technological innovation had a strong effect on growth. According to model above R square was the percentage of variance in the dependent variable explained collectively by all the independent variable (Garson, 2007). The above indicates that R square value was (0.358), which imply that the predictor attribute explained 35.8% of the variability in the domain. The predictor attribute is significant in the regression model based on growth associated with technological innovation. The regression model was a good fit. This means there was relationship
Table 7. Model summary.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.599*</td>
<td>0.358</td>
<td>0.294</td>
<td>1.73582</td>
</tr>
</tbody>
</table>

Predictors: (Constant), Marketing, Technological Innovation.

Table 8. Coefficients.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>6.322</td>
<td>6.644</td>
</tr>
<tr>
<td></td>
<td>Marketing</td>
<td>0.006</td>
<td>0.177</td>
</tr>
<tr>
<td></td>
<td>Innovation</td>
<td>0.276</td>
<td>0.088</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Firm Growth

Y = 6.322 + 0.006M + 0.597T + ε.

between technological innovation and firm growth (Table 7).

**Hypothesis three**

There is no composite effect of marketing and technological innovation on growth of commercial banks.

From the results it shows that Beta test for marketing innovation value was (0.006) and Beta test for technological innovation value was (0.597). From the analysis it indicates that there was association between marketing and technological innovation on growth. According to the analysis it indicate that there was insignificant relationship between marketing innovation and firm growth, but significant relationship between technological innovation and firm growth (Table 8). Therefore the decision was to reject the null hypothesis. This was because there was enough evidence to support that marketing and technological innovation were related to firm growth.

From the findings Beta test for marketing innovation value was (0.006) and the t test value was (0.952). This means that marketing innovation has insignificant effect on growth. The t test was 0.952 which is below 2.0 indicating insignificant influence on growth. The tolerance for this regression model was 0.889. According to Drazin and Rao (1999), rule of thumb, tolerance values greater than 0.20 do not indicate problems with interpretability. The result of this study revealed that the VIF values for all independent variables in this regression model was 1.125 less than 3. Therefore, this indicate that the independent variables were related to to the dependent variables.

**Conclusion and recommendations**

**Conclusion**

From the research findings and analysis of the information obtained, which has been presented, the effect of marketing innovation on firm growth indicates Beta of (0.226) at 0.01 significance level on Table 6. There was positive correlation but an insignificant relationship between marketing innovation and growth of commercial banks.

The statistical analysis showed that technological innovation had a positive influence on growth. According the Table 6 at 0.01 significance level technological innovation influences firm growth (0.599). There is positive correlation but a stronger relationship between technological innovation and bank growth. Technological innovation create new services that are subject to more scale economies or fewer deseconomies than traditional services.

From the results, Table 8 shows that Beta test for marketing innovation value was (0.006) and Beta test for technological innovation value was (0.597). From the analysis it indicates that there was association between marketing and technological innovation on growth. According to the analysis it indicate that there was
insignificant relationship between marketing innovation and firm growth, but significant relationship between technological innovation and firm growth. Therefore the decision was to reject the null hypothesis. This was because there was enough evidence to support that marketing and technological innovation were related to firm growth.

The research was primarily set to examine marketing and technological innovation on growth of commercial banks. The finding of the study showed that marketing and technological innovation are positively related to growth. The study as shed some light on the importance of focusing efforts on improving and increase use of marketing and technological innovation in order to continually increase the level of customers, customer satisfaction, market share and number of branches. Continued improvement of marketing and technological innovation would mean commercial banks would be able to continually stay ahead of competitors.

Recommendations

Adoption of marketing and technological innovation has influenced the growth of banking operations. From all indicators marketing and technological innovation presents great potential for business process reengineering of Kenyan banks. Investment in marketing and technological innovation should form an important component in the overall strategy to ensure effective growth. It is imperative for bank management to intensify investment in marketing and technological innovation to speed, convenience and accurate services, or otherwise lose out to their competitors. The banking industry in Kenya presents marketing and technological innovation providers with great opportunity to market their innovations. Success in this area however, depends on how they can customize their services to appeal to the minds of various stakeholders in the industry.

The result of this research show marketing innovation positively influence growth. According to Table 7, R value was (0.226). The result indicate marketing innovation had a insignificant effect on growth.

The result of this research indicites technological innovation positively influence growth. According to Table 7 R value was (0.599). The result indicate technological innovation had a stronger effect on growth.

From the Table 8 the Beta test for marketing innovation value was (0.006) and Beta test for technological innovation value was (0.597). From the analysis it indicates that there was association between marketing and technological innovation on growth. According to the analysis it indicate that there was insignificant relationship between marketing innovation and firm growth, but significant relationship between technological innovation and firm growth.

Management should use and improve marketing and technological innovations to increase the growth of commercial banks. The implementation of marketing and technological innovations should forefront priority for banks to be competitive in the market.

Commercial banks should focus on the changes the market environment and use marketing and technological innovations to fit the customers. The customers are important in determining the success of the business. This research study was initiated with the intention of making a modest contribution to the relevant body of knowledge and stimulates further research in the discipline of banking.

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