INFLUENCE OF SERVICE PROCESS INNOVATION ON COMPETITIVE ADVANTAGE IN THE BANKING SECTOR IN KENYA

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ABSTRACT
Banking sector organizations are gaining competitive advantage anchored on service process innovations as the key differentiating factor for banks (Kandaphully, 2002). However, it is regrettable that some banks in Kenya have lost sight of the key goals anchored on serving customer needs, through improved efficiency and augmented financial benefits. The main objective of this study was to analyze the influence of service process innovations in the banking industry towards competitive advantage. The study added to the literature by addressing the role of service process innovations and competitive advantage and this assumed relationship was moderated by the government regulations in banking sector. The study adopted a triangulation design involving a cross sectional approach. A pilot study was conducted to test reliability and validity of instruments. The target population included all the 44 bank incorporated in Kenya. Stratified random sampling technique was applied where the CEOs, directors and branch managers of all banks in Nairobi were targeted. Heterogeneous purposive sampling technique was used to select the bank customers for interview schedule. Data was collected by use of closed and structured questionnaires and interview schedule. Collected data was analyzed using SPSS V18.0 and statistical analysis focused on correlation between variables and analysis of variance among the variables. Multivariate analysis techniques was applied where a PCA method was applied to reduce the set of factors to a manageable scale, analysis of relationship was done using SEM. Pearson correlation coefficient was computed to test linear relations. The test of statistics was carried out at 5% significance level. The study established that service process innovations are very important in influencing competitive advantage in the banking sector.

Key Words: Service process innovation, competitive advantage, banking sector

Introduction

Reichstein and Salter (2006) found that process innovation posed difficulties for managers to separate technology from organizational innovations and that process innovations often involve technological and organizational changes. Therefore, suggested for future research to focus on highlighting the differing and incomplete understanding of the concept in the literature on the sources of innovation. Such a refinement of process innovation should account for the multi
dimensional character of process innovation which often involves technological and organizational changes.

Service process innovation is defined as the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software. Process innovations can be intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products (OECD Oslo Manual, 2005). Fagerberg et al. (2004) stressed that while the introduction of new products is commonly assumed to have a clear, positive effect on the growth of income and employment, process innovation, due to its cost-cutting nature, can have a more hazy effect. Voutsas and Weinrich(2012) observed that there is shift in power towards the banking customers enhanced by collapse of customer profitability in many markets all over the world, this combined with technology is shifting the behavior of customers regarding he services which banks offer. Thus, demand for simplicity, self control, mobility, personalized service and consistency of customer experience for each customer segment across various channels.

Gemes, Fletcher and Aggarawal (2009) regretted that the banking complexity has resulted in varying levels of customer service and inefficiency. End to end simplification and a core focus on processes that add value can help banks cut costs, enhance customer service and improve customer retention; four areas of banking value chain form prime target for simplification: product management involving cutting out non-core business lines, rationalized and simplified product offering; migrating from low value transactions to direct channels and focus on scales; capitalizing on scale in case of operations and IT; and clarifying roles and responsibilities in case of banking organizational structure. Cognizant report (2012) notes that the retail banking industry faces unprecedented need to invest in new operating efficiencies while reducing cost. Moreover, new-age competition and demographic changes are further driving investment in technologies that boost productivity and help banks create and retain competitive advantage. However, in an environment of high velocity, narrowing customer niches ,and increased competition, the successful integration of technology and marketing capabilities for service/product confers little long term competitive advantage to a firm (Fowler, King, Marsh and Vicotr, 2000).

In Kenya, studies by Bikker and Bos, (2006) concluded that innovation in Kenyan banking industry were driven by technological advances, changing customer needs and intensified competition. The changing business environment can be explained by a number of factors; - First, customer productivity and profitability in the retail segment has gradually collapsed in many markets in Africa and around the world. Secondly, the self-aware attitude of the new customer towards the bank has led to a shift of power in the customer bank relation. Thirdly, tighter regulation demanded by government and institutions led to increasing costs for compliance. This power shift have dictated changes in the way customers and bankers conduct their business, making service innovation essential to achieve competitive advantage.
Over the last few years, Kenyan banks have been pre-occupied with innovations in the services they offer and how they offer them. Such innovations have become the value proposition for particular banks. For instance, Equity bank (2013) identify itself with money transfer services, mobile banking, ATM services, card services, equity cash back, FAQs, Visa personal payments, online banking and agent banking. Consolidated Bank (2013) identify with banking product which are classified into personal banking products and business banking products. This is characterized by services product innovations: internet banking, mobile banking, agent banking, Forex rates, ATM locations, Branches and debit cards. Chase bank embraces the following services: bank teller, electronic banking, money transfer, safe deposit lockers, and night safe and executive management offices. Barclays bank(2013) is currently focusing on investing in technology and system capabilities so as to offer more affordable and convenient products such as the internet banking, smart phone and tablet banking services to enhance service delivery to all customers wherever they are. There are forty four banks in Kenya which form the focus of this study. These banks are classified on several basis; capital deposits, size and nature of banking activities. Out of the forty four banks, ten are assumed to be the largest banks and are listed in the Nairobi Stock Exchange (NSE). The rest are a total of thirty four small banks which are not enlisted with NSE. Generally, these banks can widely be classified banking institution, non banking institution, microfinance institution and foreign exchange bureaus.

Objective of this study

To evaluate the level of influence of service process innovation on competitive advantage in the banking sector in Kenya

Research Hypothesis

There is no positive relationship between service process innovation and competitive advantage in the banking sector in Kenya

Literature Review

Service Process Innovation

Jeston and Nellies (2006) underpin the following types of process innovations which are applicable in an organization:

1. Redesign of industry value chain involves redesign of customer service such that customers have more control and provides more optimal process due to information access and data integrity. Secondly it involves customer to customer interactions which enhance exchange of ideas, information and opinions which encourage purchase of goods and services.
2. Redesign of business involves processes developed around customer wishes, flexibility is the process rather than exception by pursuing that customer choice (flexibility) is embedded in the process.

3. Redesign of processes by use of real time and geographical information such as using technology to track information, giving customers ability to track and trace their products real-time at the same time reducing workload for the call center.

4. Sub-process innovation involves adopting multi-process rather than using one standard process for a variety of situations such as use of automated services as well as use of mobile communications which allows employees and customers to access time based critical information such use of mobile devices in utility companies.

In the banking sector, Robinson, Sayer and Pallister (2007) observed that the most visible process innovations in recent years have been those exploiting internet technology to allow for rapid increase in online banking transactions. Also, other process innovations have been observed: the development of a new, automated, integrated back-office system has allowed banks to outsource and offshore routine administration and customer service functions. At the same time centralization of transactions processing and of such core operations as credit risks assessment and sanctioning has reduced the role of local branch and led to a raft of branch closures. Payment methods have been migrated from checks to credit cards, debit cards, chip and pin and now contactless payment systems, how consumers transact business is now being revolutionized.

Pearson (2010) cited key areas where banks were pursuing process innovations were:

1. The automation of credit processes, including the use of electronic signatures for online sales across a broader set of products. Where an end to end online application is not possible, some banks allow customers to start application online and then complete it in a branch.

2. The introduction of paperless branches and cashless branches, developments which have significant process implications for sales and service.

3. The use of mobile phones to process applications for new accounts, supporting the greater use of mobile sale forces. TEB has developed an application for credit cards in Turkish market, and Equity bank in Kenya has also enabled account applications by mobile phone.

Heineke and Davis (2010) define delivery process as the end to end process that directly interacts with the customer. It consists of steps that a customer goes through in the co-creation of value. It begins where the customer first interacts with the service organization and ends when the
delivery of the desired service is completed and the customer exits the process. Gemes, Fletcher and Aggarawal (2009) emphasized that shift in customer routine transactions to direct channels such as call centers and internet reduces employee’s time spent on cashing cheques because they can be done by customers themselves. For this to be achieved, banks should continue to improve self-service technology within branches and use employees to encourage customers to carry out simpler transactions themselves or through direct channels.

According to Riddle (2008) service delivery process innovation involves changes to the service delivery process or how the service is being provided with significant changes in the role of staff, strategic partners, and/ or customers, the most typical form of innovation including increased accessibility and changes in the degree of self service. Bernard, Lima and Souza (2007) found that automating back office processes such as account opening or closing, processing checks, mortgage and loan personal approvals, etc has helped banks reduce cycle times, reduced high level staffing, improved visibility into the status of requests for front office and customers, standardization of processes and improved quality of services to customers.

Banerjee (2009) found that most recent innovations in the banking sector focused on delivery of products or services, management of customer interactions and administration of back office functions. Process innovations such as: internet related has improved online banking; Automated and integrated back office systems have enabled banks to outsource or offshore routine administration and customer service functions. Centralized transaction process in core operations such as credit risk assessment and loan approval has reduced the role of the local branch. Payment processes have been revolutionized by the introduction of chip-and-pin and contactless payment systems such as smart cards. KPMG (2012) suggest that process innovations have been very important in transforming back office functions, streamlining customer interactions and in facilitating outsourcing, off-shoring and similar cost management strategies.

López-Mielgo et al. (2009) reported that especially process innovations exert a positive influence on the total quality management efforts of the organizations. Beside the speed and quality aspects, innovative performance is also related to the two other elements of production performance; namely, flexibility and cost efficiency. Success in the renewal efforts especially in administrative mechanisms, production processes, and new products can contribute extensively to the dissemination of knowledge and effectiveness of co-ordination within the organization, which are necessary for operational flexibility and decreased related costs (Koufteros and Marcoulides, 2006).

Peters (2008) purports that not all the process innovations lead to cost savings, but some do and allow the organization to market products at competitive prices. Therefore, we can argue that the production performance, which is the combination of the achievements in such performance indicators as speed, quality, flexibility, and cost efficiency, is positively affected by the innovative performance.
Competitive Advantage

Kotler (2000) defined competitive advantage as an organizational capability to perform one or many ways that competitors find difficult to imitate now and in future. Porter (1985) considered that competitive advantage grows out of the value of a firm is able to create for its buyers that exceed the firms’ cost of creating it. Porter recognized competitive advantage as strategic goals; that is a dependent variable and the reason behind this is the good performance is related to achieving a competitive advantage (Reed and Defillipi, 1990).

According to Cole (2008) competitive advantage is an advantage gained over the competitors by offering customers greater value, either through lower prices or by providing additional benefits and service that justify similar or possibly higher prices. Papulova and Papulova (2006) real competitive advantage implies companies are able to satisfy customer needs more efficiently than their competitors. It is achieved if and when real value is added for customers.

Porter (1985) suggests that competitive advantage in an industry arises from differentiation, overall cost leadership and focus by minimizing industry forces which intensify competition. According to Porter (1998) in order to create a competitive advantage and generate shareholder value a company needs a certain set of activities that create value. These activities constitute the value chain. The purpose of these activities is to offer customers with a greater value than the costs of the activities and thereby achieving profit margins.

According to Porter (2012) competitive advantage resides in the value chain and strategy is manifested in choices about how activities in the value chain are configured and linked together. However according to Treacy and Wiersema (1992), Veiveire and Revolo (2009) nowadays, companies have taken their leadership positions in their industries in the last decade by narrowing on their focus to delivering superior customer value in one of the following: Operational excellence, Customer intimacy or product leadership.

Tracey et al. (1999) argues that competitive advantage comprises of distinctive competencies that sets an organization apart from competitors, thus giving them an edge in the marketplace. They further add that it is an outcome of critical management decisions. Porter (1985) suggests that competitive advantage arises from cost leadership, where, the source of cost leadership emanates from pursuit of economies of scale, proprietary technology, preferential access to raw materials and other factors. In fact Cole (2008) contends that quality is an underlying factor in competitive advantage and arises from a product offered being perceived as of higher physical quality than the competitors product or from providing excellent customer service.

Competitive advantage emerges from the creation of superior competencies that are leveraged to create customer value and achieve cost and/or differentiation advantages, resulting in market share and profitability performance (Barney, 1991; Prahalad and Hamel, 1990). Porter's (1991) approach to competitive advantage centers on a firm’s ability to be a low cost producer in its
industry, or to be unique in its industry in some aspects that are popularly valued by customers. These views have been contested. According to Reeves and Deimler (2011) competitive advantage no longer arising from positioning or resources, rather, from a firm’s dynamic capabilities. These capabilities include innovation, organization learning, knowledge management, strategic decision making in order to cope with changing competitive environment (Teece, Pisano, & Shuen, 1997). According to Hana (2013) innovations are and will continue to be a means for organizations to survive in today’s turbulent and highly competitive world. According to Campos (2006), an integral part of the strategy of any firm should be to innovate constantly. This means that in order for a company to remain competitive, it must not only improve the products and services but it also has to innovate. This calls for correctly using its resources (tangible and intangible), profit from the clusters it is in and benchmark those activities that foster (impulse) its innovation.

Competitive advantage is defined as the benefits of implementing some unique value creating strategy not simultaneously being implemented by any current or potential competitors (Barney, 1991). However, Customer -centrism proponents or user driven proponents such as Bisgaard & Hogenhoven (2010) agitate for value proposition to the market as arising from user interface, involvement and co-creation, an aspect of services. Empirical findings have shown that differences between organizations may account for more variance in firm performance than differences between industries (Rumelt, 1991). Although important industry effects may be present (e.g., see McGahan & Porter, 1997), organizational-level differences are now acknowledged as a critical source of variation in firm performance over and above industry differences. Gemes, Flatecher and Aggarwal(2009) claim that banks can achieve competitive advantage by focusing on simplifying four areas of value chain: product management, distribution, operations and IT, and organizational structure.

For competitive advantage to be realized through innovation, for instance, Filiscchi, Boone, Brouwer and Wiel (2011) argue that within an industry, successful innovators of new products are the ones that face less intense competition after the innovation and that the firms that introduce new products are the ones that face relatively little competition. Moreover, to compete with established incumbents, in the industry, innovation provides a strong impetus for banks to introduce new products and services as a means of consolidating their foothold in international competition and for start-ups to strengthen their relative competitive position. In addition, Abernathy and Utterback (1978) suggested that companies would achieve competitive advantage in an atmosphere of threats from old technology and entry of new entrant by developing a dominant design. Alternatively, a company can try to take control of complementary assets and wait for appearance of a dominant design, once the standard becomes clear, it will try to secure most of the profits basing its competitive advantage on the distribution channels, supplier contacts and other complementary assets that will create barriers to entrants.
Teece (1986) describes who will benefit from innovation and what company will have higher incentives to invest in certain innovation as being dictated upon by two factors: imitability and availability of complementary assets. Imitability refers to how easily competitors can copy or duplicate the technology or process underpinning the innovation. Complementary assets includes any activity that gravitates around the core innovation such as distribution channels, reputation, marketing capabilities, strategic alliances, customer relationships licensing agreements among others. However, according to Bharadwaj, Varadajaran and Fay (1993), the presence of co-specialized assets or lack thereof also impacts on the imitability of innovations.

Competitive advantage suggests that each organization have one or more of the following capabilities when compared to its competitors such as lower prices, higher quality, higher dependability and shorter delivery time. These capabilities enhance the organization’s overall performance (Mentzer et al, 2000). Day and Wensley,(1988) asserts that sustaining competitive advantage requires that firms set up barriers that make imitation difficult through continual investment to improve the advantage, making this a long-run cyclical process). Competitiveness appears as the penultimate link in the learning chain. Its meaning differs for profit-making market organisations and non-profit ones. In both cases, however, regardless of their nature, they have elements in common that refer to client satisfaction: opportunity price; quality of products and processes; design and timeliness (flexibility, response capacity) of the goods or services offered. “Competitiveness is the ability always to secure the most advantageous position or niche in rapidly changing markets. The main determinant of this capacity to sell goods and services in the international market is no longer just the edge of relative costs.

Competitiveness is increasingly based on quality, speed of response, technological superiority, product or service differentiation (Tolentino, 2000). Diab (2013) focused on cost, flexibility, delivery as well as quality dimension to measure competitive advantage in Jordan private hospitals. The four dimensions of competitive capability used were operationalized as follows: Cost: the focus being cost reduction especially to customers who are price sensitive. Flexibility: the organization’s ability to provide a variety of and different levels in the target market through its ability to keep pace with development in technology, and design products and services according to customer expectations. Quality: the ability of a product or service to meet customer needs and expectations.

Most managers agree that cost and quality will continue to remain the competitive advantage dimensions of a firm (D’ Souza and Williams, 2000). In a research framework, Koufteros et al. (1997) describe the following five dimensions of competitive capabilities: competitive pricing, premium pricing, value-to-customer quality, dependable delivery, and product innovation.

Wheelwright (1978) suggests cost, quality, dependability and speed of delivery as some of the critical competitive priorities for manufacturing. There is widespread acceptance of time to market as a source of competitive advantage (Holweg, 2005). Competitive advantage is the
extent to which an organization is able to create a defensible position over its competitors (Porter, 1985 and li et al, 2006). Price/cost, quality, delivery and flexibility has been identified as important competitive capabilities (Treacy et al., 1999). Based on studies which were done by Thatte(2007) and Azmi et al. (2012) respectively, and the contributions of Kavitha, Karthkeyan and Devi (2013), Koufteros (1995) and Li et al (1997) competitive advantage has been operationalized and four dimensions of competitive advantage: Cost, quality, time and flexibility have been utilized.

Hong, Callaway, Kunnathur (2010) point to important features of delivery performance improvements as related to delivery speed and reliability, reduced cost and quality. Delivery speed is the ability to reduce time between order taking and customer delivery to as close to zero as possible. Reliability is the ability for firms to meet quoted or anticipated delivery dates and quantities. Flexibility can be focused to achieve a variety of operating attributes such as ability to respond to special service requests. Quality indicates effectiveness of firms to retain customers and focuses on delivery dependability, responsiveness, order flexibility, and delivery flexibility. Time based competition is the ability to reduce lead times and cycle times which assumes close collaboration with suppliers.

Research Methodology

The study adopted a validating quantitative data triangulation design involving descriptive cross-sectional survey approaches. For purposes of triangulation, the researcher implemented the quantitative and qualitative method during the same time and with equal weights (Cresswell, 2006). Descriptive cross-sectional approaches were applied in this study aimed at making predictions regarding the occurrence of phenomenon under study and by taking a sample of a large population at one point in time (Owens, 2002). The study was located in Nairobi County in Kenya. Given the technicality associated with the banking sector information it was imperative to conduct this study in this county where the respondents were likely to generate better information due to high experiences at the headquarters where most of the innovations are generated from. In addition, Nairobi County was suitable because of its centrality and demographic potential of the banking sector. That meant the researcher expected to realize better data information and better responses as compared to other counties in Kenya. The study focused on all the forty four banks in Kenya with special reference to head offices and branches. It was expected that by focusing on banks head offices and their branches the results of this study would be reliable and representative given information sought. The respondents in this study were the bank CEOs, directors of three departments which are responsible for innovations in the banking sector i.e. R&D, operations and marketing and branch managers of all the banks in Nairobi. The officers targeted in this study comprised of 584 members. They were believed to be endowed with knowledge and information regarding innovations in the banking sector. The study also interviewed a few selected customers drawn from some banks in Nairobi County.
The study adopted a mixed method sampling schemes involving a stratified random sampling for the bank officers and a purposive sampling for the customers. Stratified random technique sought to generate a representative sample from target population by addressing a quantitative strand of a study as in this case. In order to select a few customer to be interviewed, heterogeneous purposive sampling technique which aimed to achieve a heterogeneous sample, i.e. a sample whose units share the different characteristics or traits was applied (Teddie, 2009). In this study a questionnaire and an interview schedule were used to solicit the information from the respondents. The questionnaire constructed in this study will comprise of closed and open ended questionnaire items in the same questionnaire paper carefully worded to capture and solicit the intended information. Dichotomous and ordinal scales were applied and were useful in generating descriptive statistics. Likert scale data was constructed and was analyzed at interval measurement scale whereby scale items were created by calculating a composite score from a five type likert –type items (Boone and Boone, 2012). This study mainly utilized likert five point scale as it is one of the best and most frequently used scales to measure opinions due to its ease and balance (Zikmund, 2000). In order to make the data collected amenable to statistical analysis using the SPSS v18 (Statistical Package for Social Sciences), the data was coded as follows: For nominal data for example, representing demographics of the respondents and other characteristics of the bank studied such as , male = 0 and female = 1. In categorical data where likert scale was used representing, 1- 5 where, 1 imply least, 5- imply most was used. The Pearson Correlation coefficient was used to measure the degree of the relationship between linear related variables. In this study, the correlation between innovation constructs and competitive advantage was measured. By using MANOVA, the significance of the regression model was tested through the Wilks’ Labda .When the overall model is significant, then the study can predict the individual significance of each variable. In addition, Levene’s tests were also used to test whether or not the variance between the group in the independent constructs is equal. Insignificant value of Levene’s test shows equal variance between groups. Additionally, the beta coefficient in the regression analysis indicated how effectively the predictor variable influences the criterion variable. These data analysis procedures were applied by Gunday et al. (2009) to measure effects of innovations on firm performance.

Summary of findings relevant to the study

Service process innovation

The study found that majority of the banks surveyed had adopted service process innovations with varying degrees of success. The study established that these service innovations have been imitated by competitors therefore having no or little competitiveness the respective banks but for those few innovations not yet imitated, they do offer some competitive advantages. The findings there support previous research findings by Letangule et al (2012) who found that process innovations increases effectiveness and efficiency of the operations. This is because process innovations leads to cost savings and market the services at competitive prices. However, as
Peters (2008) suggested, not all service process innovations lead to competitive cost savings as this was established in the study findings. Those service process already imitated by competitors would have little or no value to competitive advantage. Additionally, the study findings also are in support of studies by Baer & Free (2003), who studied German companies and found that initiatives for psychological safety innovations had a positive impact on longitudinal performance of a firm. The null hypothesis that posited no relationship between service process innovation and competitive advantage was rejected and the alternate hypothesis accepted.

**Competitive advantage**

The study found that ATM withdrawal charges had remained the same across banks, banking staff courtesy has also remained the same, so are the banking hall appearance in most of the banks surveyed, the loan origination fees. However, over the period of last 3 years, the respondents said that the customer care has increased significantly while the rest of the competitive advantage metrics have slightly increased. The increase in the cost of service, interest rates, over the counter withdrawals bank statement charges have increased slightly as banks try to cover the increased costs of doing business in Kenya due to increased inflation and other government regulations. The banks have also been known to report billions of profits in the last three years as a result of non-traditional charges that have managed to be concealed from the regulators and enhanced the bank’s profitability over the years. The major banks that have reported over 1 billion operating profits in the last three years include KCB, Cooperative bank, Equity Bank, Barclays bank, Stanchart and Citibank. These and other banks have resorted to non-traditional charges such as over the counter charges being too high.

**Conclusions**

The study also concludes that banks have now shifted their focus into email marketing and SMS banking using the mobile technology. However, most of the banks delayed implementation technology in their marketing processes probably due to the high level of mobile connectivity among the Kenyan populace is a big disservice. Internet banking is not really embraced for all the market segments and banks are therefore segmenting their markets while innovating in this area.

**Recommendations**

1. The failure by most banks in Kenya to invest in web chat, click to call, remote video conferencing with customers has denied the banks an opportunity to offer customers enhanced levels of service and convenience. It’s recommended that banks look into innovating in this area in order to achieve cost savings in communication, information sharing marketing and product and service design as well in customer satisfaction surveys.
2. The study recommends that bank managers invest in IT and more so the mobile technology where majority of the Kenyan population have access to due to mobile connectivity. The mobile technology would serve a greater number of customers even those who do not know how to write and read English because the mobile phone software allows Swahili in its use. Internet banking although widely hyped among the city residents, it may not be worthwhile in the rural areas. However, more secure features of mobile banking should be enhanced to avoid personal critical data falling into the wrong hands.

3. The banks should look into ways of stimulating consumption of their funds through offering low interest credit cards to middle level wage earners. A credit agency bureaus should consolidate financial information and credibility of each credit prospective card customer before granting such credit. It start with small amounts in the credit card such as shs. 5000.

Area for further research

Given the time limitation, this time-based analysis on the process of innovations and their gradual impact on a bank’s competitiveness were not included in the analysis. This study suggest for future researchers to apply a longitudinal approaches.

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