Effects of Technological Diversification on Organizational Performance: Case of Equity Bank Ltd

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\textbf{Abstract:} This study was about technological diversification as a strategy for competitive advantage. The purpose for this study was to find out effects of technological diversification on Equity bank performance. The study specifically sought to find out the effect of mobile banking, online/internet banking and Finserve on the bank's performance. The research design was a case study. It was chosen so as to investigate the in depth of Equity bank performance as a result of technological diversification. Primary data was successfully collected from nine senior managers of the bank using an interview guide while secondary data was collected from audited financial reports of Equity Bank Limited. Content analysis was adopted to establish the systematic detail description of the effect of technological diversification on performance. The findings showed that technological diversification had a positive effect on the performance of Equity bank. The findings revealed that as the income from the forms of technological diversification increased, the total profits, market share growth, customer acquisition and strategic expansion and partnerships of the banks had also registered significant increment. This study recommends that the Bank needs to make the features of Mobile banking - Equitel platform more user-friendly. This would effectively meet the needs of the customers even in the most remote regions of Kenya which results to customer loyalty and increase in profits.

\textbf{Keywords:} Technological Diversification, Mobile Banking, Online/Internet Banking, Fintech, Organizational Performance

\section*{I. INTRODUCTION}
Organizations need to embrace new strategies to achieve competitive edge in an increasingly aggressive business environment. The environment is never static but highly dynamic ever-changing presenting opportunities and challenges in which organizations operate (Pearce and Robinson, 2003). Organizations require adopting strategies that will give them an advantage over their competitors. Diversification is seen as a unique strategy that has been considered by various organizations across the globe to achieve their objectives and add value. Organizations are in consistent pursuit of performance improvement (Miller, 2004). One of the ways through which organizations can ensure survival and success in a highly turbulent environment is by maximizing on the external factors such as technology. There are various forms of diversification strategies and technology diversification is one of them. Technology diversification refers to the extension of the range of technologies that an organization uses in combination with other resources to have more output (Koren, &Tenreyro, 2013). It can therefore be applied as a competitive strategy in firms with the core objective of improving or enhancing a better position for the firm in the market. The effects of technological diversification however, depend on the level of the competence in core technology in the organization. Hashai (2015) asserts organizations that have high competence in core technology within any given industry attain more growth through adoption of technological diversification whereas, Lee, et al., (2010) argue that the organizations with low levels of core technology competence maximize their growth by having unrelated technological diversification at the immediate level. This means that organizations that are not very competent in enhancing their own core technology can easily lose on the market advantages associated with technological diversification. The Kenyan banking industry has been struggling with ideas and efforts on how to remain relevant and competitive in this turbulent environment. Equity bank is among the commercial banks that have ventured into technological diversification as a strategy for survival and success.

Various definitions have been given by scholars on diversification as a competitive strategy. According to Dibb (2007), diversification of organizations is by the extension of the operations’ scope into multiple markets and a diversification strategy is trailed as explained by Chandler (2010), as when organizations have opportunities embedded in market structures and technology as well as opportunities for growth in the organization’s basic business. When a firm decides to diversify, there three different options; horizontal, vertical and conglomerate diversifications (Sohl, 2012).

Technology is a term that refers to the whole large extent of all systems, applications, innovations and processes utilizing scientific knowledge (Oxford English Dictionary 7\textsuperscript{th} Edition). It can be considered as a tool...
of growth area in firms especially in the highly competitive business environment. As such, it is important for a firm to make prudent decisions while considering the coordination, integration and user-friendliness in regards to diversifying their technology. Miller (2006) proposes that technological diversification refers to the diversity of a firm’s research portfolio and the depth to which a firm pursues links in its knowledge network (Miller, 2006: 606). While according to Koren and Tenreyo (2003), technology diversification refers to the extension of the range of technologies that an organization uses in combination with other resources to have more output. From the latter definition, technological diversification is applied as a competitive strategy in firms with the core objective of improving or enhancing a better position for the firm in the market.

Some of the reasons why firms adopt the use of technology diversification are gaining economy of scale, coping with risks that follow fast technological change, reducing costs in technology investments, achieving greater output or productivity and achieving higher competence in core technology. According to Breschi et al., (2003) when the organizations make efficient use of their technological assets, this leads to synergy as a result of sharing knowledge in various technology fields. Also, the firm’s specific assets facilitate positive spillover in technology across the board creating more market value.

Secondly, some technological resources are at a high peril of getting obsolete as more sophisticated and modern versions are developed, it would be essential to integrate and diversify the available technology to enhance survival and success for a firm amidst possible changes in technology. This is because it is not easy to trade the obsolete technology in the market efficiently. Thus, some firms chose to diversify their technology to minimize the high cost of technology acquisition (Quintana-Garcia & Benavides-Velasco, 2008). Therefore, a firm is forced to explore other methods one of which is to develop strategies to improve the performance of a firm by utilizing existing technologies. In addition to that, Breschi et al., (2003) asserts that the cost of technological development and acquisition is very high. Thus, diversification reduces the risk of technological investments, since R&D investments are distributed over diverging projects and therefore the probability of technological success increases. This ultimately generates value to the organization in terms of cost effectiveness and value enhancement. Consequently, the technological diversifications, as well as the resource integration no doubt result in greater output.

An organization is an amalgamation of various productive resources and capabilities and technology is one of the major capabilities of any given firm in the present times. According to Miller (2004), organizations are in consistent pursuit of performance improvement. Performance in this context refers to the working and functionality of all the parts within a firm to achieve the desired output. Robbins (2000), asserts the organization performance is determined by five key elements of success: efficiency, timelines, effectiveness, productivity, and quality.

An organization comprises of various roles and functions, all of which maintain a level of synergy in operations so as to achieve the aggregate goal. To enhance the productivity of each functional part, the organization engages in various efforts, focused on both improvement of the existing systems and processes or introduction of new systems. According to Dodge (2003), organizations focus on providing quality products and simply update them to a level that maintains their competitiveness in the market. This can be achieved when an organization embrace technological diversification which brings about greater output. Diversification of technology has become increasingly important aspect of doing business in the present world (Elango & Ma, 2003). As such, diversity particularly across technologies is no longer a choice, but a necessity.

Research on Technological diversification and firm performance has attracted much of attention. As such, many researchers from various fields such as strategic management, financial management and industrial organization have investigated the relationship between technological diversification and organization performance. Both the benefits and costs of technological diversification have been discussed in previous literature. The researchers explain that a firm anticipates gaining incentives such as, reduction of risk, large market share, financial growth and optimal resource utilization when they choose technological diversification strategy. For example, Chui et al. (2008); Garcia-Vega (2006); Kim, Lee and Cho (2016); Miller (2006) all found similar positive financial implications of technological diversification. Lin and Chang (2015) investigated the effects of technological diversification on organization performance. A research study of “S&P 500 manufacturing firms” showed that the manufacturing firms’ financial, market share and innovation performance improved drastically as a result of technological diversification. In spite of the positive outcome, after analyzing the Taiwanese smartphone sector, Chen, Yang and Lin (2013) found that technological diversification played a negative role in firm performance. This is due to increased cost of technological diversification in R&D and lack of expertise.

According to Ngugi et al. (2012), states that the banking industry emerges as one of the industries where technological diversification has been clearly and intensely applied. There are various processes, activities and systems that have been linked, integrated, furthered in terms of scope; both within and outside the firm. A keen focus on the core functions of a banking firm would essentially reveal increased interaction with the related functions; both within and outside the firm. Processes such as customer-bank interaction, interbank interactions, bank and media as well as marketing agencies have all experienced various technological.
diversifications. One major impact of this diversification in technology has been the increased market penetration for banks. According to Ratan (2008), this has integrated the mobile services, internet access and the regular banking services within a single system accessible to the customer in almost all locations within the country. The general pursuit in all technological diversification is centered on a firm’s performance enhancement and improvement.

Equity bank commenced business in 1984 as a registered building society. It has evolved from a Building society, a Microfinance institution, to now the all-inclusive Nairobi Stock Exchange and Uganda Securities Exchange public listed Commercial bank. The bank also commands the largest market share with a customer base of over 10 million accounting for 57% of all bank accounts in Kenya (Onuonga, 2014). Equitel by Equity bank is one of the technological diversification applications which combine the mobile phone calling, sending messages and internet access service as well as linking the users to their bank accounts for cash withdrawals, deposits and other inquires. According to Onuonga (2014), Equitel service has been a source of competitive advantage to Equity bank over its competitors in the country. Consequently, mobile usage has a higher penetration even in remote areas which therefore makes the services integration achieves a higher market penetration for the bank (Ratan, 2008).

Equity bank online banking is the first of its kind in the region to gain abroad user base. Equity bank provides detail customer service for all its existing and potential customers to help them convey feedback on their services and products (Equity bank, 2015). The primary Equity online banking services include; EzazzyBiz, EzazzyNet, Self service for Paypal users and EzazzyAPI. They have are game changing online banking services unveiled by Equity bank with numerous advantages such as user friendly, process payments in real-time, automated reconciliation, versatile and customers are able to navigate regardless of the time and place (https://ke.equitybankgroup.com). Equity Group Holdings Plc is already ahead of the game as it launched its fintech subsidiary named Finserve. Finserve has been trusted as Equity Group’s arm of technology as it has revolutionized banking and other financial services through digitization. The subsidiary, Finserve signifies a future defined by disruptive innovations beyond the Group’s current financial services. This therefore, shall enable Finserve to operate an autonomous commercial enterprise delivering solutions not just for Equity Group but to the entire economy. Finserve has stormed the market and it has been behind revolutionary products such as Jenga, a swahili name for “build”, that provides a versatile payment gateway and the Group’s Mobile Virtual Network Operator (MVNO) that offer innovation solutions to businesses and developers. (https://ke.equitybankgroup.com). This study therefore sought to find out the effect these technological diversifications – mobile banking, online/internet banking and finserve had on the performance of Equity Bank.

**Statement of the Problem**

This study sought to solve two problems that proved whether Equity bank achieved their goal through technological diversification. The first argument was on whether the need to bring new information on the relationship between technological diversification and firm’s performance from a banking sector’s view that had not been mentioned in previous studies while the second was on what were some of the forms of technological diversification adapted by Equity Bank. The study sought to understand how these forms of technological diversification act as a source to build competitive advantage in a highly dynamic environment and improve performance.

Miller (2006), states that firms operate within limited resources and a competitive environment. Hence, firms tend to choose diverse ways of improving their performance to essentially achieve a better operational position in the market which also implies higher returns. Improvement in the organizational performance is the main objective for technological diversification. It was important to note, there had been increased competition in the banking sector over the last few years coming from improved transformations among the key players and new participants into the market (Pearce & Robinson, 2007). Effective resource utilization remains at the forefront of the goals in any given firm. It has been noted by Leten, Beldersbos and Van Looy, (2007) that when firms diversify their technological base, it helps the firms to improve their technical expertise in their technological fields.

According to Ngugi et al (2012), there are over 300 financial institutions in Kenya all regulated by the CBK. This indicates quite a high level of competition in the banking industry as the various financial institutions all a relatively similar target market. This competitiveness has subsequently increased the necessity of the individual banks to develop more effective strategies that avail them a substantial share in the market. Part of the pursuit of effectiveness is enhancing performance by diversifying technology available in the firms. Banks have endeavored to adopt modernity and technological diversification is one core aspect that has yielded the improved performance notable in the present day. However, this does not imply that the banking organizations have reached the peak of their performance neither does it suggest an exhaustion of the technological diversification opportunities.

Porter (1985) observes that firms to be able to retrain competitive advantage, they need to examine their environment both internal and external and respond accordingly. The internal and external factors can be affected the performance of commercial banks (Al-Tamimi, 2010; Aburime, 2005). Equity Bank is not an

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exception of the same. Thus, there are various core performance indicators within the banking industry that the firms would use to determine their competitive position. These include the profitability margin, the number of customers per region, the asset value growth over time, share price for those listed on the stock exchange, geographical expansion in terms of market penetration among others. Adoption of technological diversification as a competitive strategy should thus enhance in increasing the customer portfolio, increase profit margins, increased market penetration, operational cost reduction and improved share prices. (Ruud and Sharma, 2003).

The success of an organization is closely tied to its ability to retain relevance amidst changes in the operating environment (Arnold S. & Johnson s. 2012). Thus Equity bank has also endeavored to build human resource and technical capacity over time. The Equity bank’s range of products include loan products: crop advance loans, farm inputs loans, from single credit to include business, household, education, emergency and group loans savings (Simpasa, 2011). However, the bank like any other organization has its own unique challenges which include maintenance of the client-focused culture, even with growth. This is as a result of, the increasing competition from financial technology companies that are disrupting the way traditional banking has been done. They have created a big challenge for traditional banks because they are not able to adjust to the changes not just in operations but also in technology. The rise of mobile transfer services such as M-Pesa, Airtel money and T-Kash have also brought in a lot of competition to banks. Many people find it easier to save and transfer money through these mobile money transfer services as opposed to banks (Modina, Arnone & Farina, 2015). Equity Bank Group has adopted a number of diversification strategies. The strategies range from operational diversification to geographical diversification to remain Competitive. These diversification strategies are known to only enhance the efficiency of bank’s operations. However we are yet to figure out whether technological diversification has enhanced the efficiency and effectiveness of the bank.

Several extensive studies have been done on Effects of diversification on the banking industry locally. Lole (2009) undertook a research on diversification strategies in the banking industry where, she sought to identify the types of bank diversification in Kenya and to determine the benefits and cost of diversification on commercial banks. Sophia (2014) studied Diversification strategies and Performance of KCB (Kenya Commercial Bank Group) and found out that geographical and product diversification has a positive effect on KCB group. As diversification increases the total profits of the bank also register a significant increment. Anne (2016) researched on the effects of diversification strategies on the performance of commercial banks in Kenya. The objective was to find out how product diversification, market diversification and internal growth diversification strategies affect the performance of commercial banks. Most banks have not been achieving the targeted performance despite their diversification strategies into the market and have continued to register low performance in terms of profits growth this is according to CBK (2012).

However, none of these dealt on Equity Bank and therefore this study focused on the effects of technological diversification on organizational performance. This study therefore sought to fill the knowledge gap by seeking to answer the question: What are the effects of technological diversification on Equity Bank performance?

**Objectives of the Study**

The primary aim of this investigation was to establish the effects of technological diversification on the performance of Equity Bank, whereas its specific objectives were:

i) To establish the effect of Mobile banking on Equity bank performance.

ii) To establish the effect of Online banking on Equity bank performance.

iii) To establish the effect of Fintech on Equity bank performance.

**Significance of the Study**

The finding of this study would be important to Equity Bank as it establishes the benefits of technological diversification on its performance that set them apart from its competitors in the industry. The study further has a benefit to the policy makers of Equity Bank as they have more insights on the benefits of technology diversification and thus pursue the strategy to improve their firm performance and gain more competitive advantage. The results would also be valuable to the scholars and researchers, as it would form a basis for further research. In addition, the students and academics would use this study as the basis of discussion on technology diversification strategies. The highlights on shared experiences would also enlighten the market players and fast track search for solutions in this era of disruptive technology diversification.
Conceptual Framework
The study was guided by the following conceptual framework.

![Conceptual Framework Diagram]

**Independent Variables**
- Mobile banking
- Online/Internet banking
- Fintech

**Dependent Variable**
- Organizational Performance (Equity Bank Performance)
  - Increase in profits (share capital income)
  - Customer retention and acquisition
  - Geographical expansion

Source: Adopted from literature review

Figure 1 showed that the independent variables under the dimensions of mobile banking, online/internet banking and fintech are capable of influencing the performance of Equity Bank through the increase in profits, customer retention and acquisition and also through the geographical expansion of the bank.

II. LITERATURE REVIEW

Theoretical Framework

Resource-based theory
The resource-based view it has been said to provide the earliest theoretical arguments favoring diversification. This theory affirms that, the strategic resources of a firm are key elements of outsmarting competitors (Barney, 1991). According to Penrose (2007) at any point in time a firm has certain productive resources, useful for exploiting productive opportunities to allow the firm to grow successfully. Similarly, RBV also states a firm that commands ownership or application of strategic resources achieves a competitive advantage over the competitors without (O`Donhue and Torugsa, 2013).

However, a resource is termed as strategic if it meets four attributes: valuable, rare, imperfect imitability and non-substitutable to ensure sustainable competitive advantage for sustained superior performance. As Galan & Barroso (2006) further note, the resource-based theory, technological innovations and applications may be viewed as unique resources that firms utilize to achieve competitive advantage. The ability to tailor make technological applications to deliver very unique results specific to a firm is one way that firms have reaped great efficiencies and effectiveness in processes. The banking industry has taken a lead in the adoption and customization of technological applications and systems which has essentially yielded great efficiencies for them. Equitel by Equity bank is one of the technological customization applications which combine the mobile phone calling and internet access service as well as linking the users to their bank accounts for cash withdrawals, deposits and other inquiries. Essentially, this has enabled the bank acquire a greater customer reach in rural and remote areas. There is an increased efficiency for the customers in undertaking their transaction without necessarily visiting the banking halls. According to Onuonga, (2014), Equitel service has been a source of competitive advantage to Equity bank over its competitors in the industry.

Empirical Studies
Research findings according to Looy and Belderbos (2010), in their research study on technological diversification, coherence and performance of firms, asserted that technological diversity in firms is largely driven by the increasing complexity of products and production processes. As time passes, the needs among the population change; they get more complex and so are the expectations on the firms. The customers expect that firms would design even more complex products to suit the level of sophistication in the customers’ needs.

Nakata (2013) additionally highlights that various empirical studies have revealed a positive effect of technological diversification on the performance of the firm. Hence without a doubt, technological diversification is a key driving force for the growth of any organization. Besides, the differences in the performance of various firms are a direct result of various structural factors in which the industry operates. Risk reduction is yet another motivating factor for technological diversification. Organizations are in consistently finding ways to reduce the risk exposure available to their operations. According to Hughes and Mester, (2008), higher average incomes can be obtained in financial institutions if higher risk investments can be made from the gains obtained from technological diversification.

To remain competitive in the dynamic environment, Innovation and customization of technological applications is the new source of operational differences among competitors. Studies by Wallace and Carolle (2006) indicate that that there is a great difference in firms that use diversified IT effectively and efficiently. Elimination of redundancy in organizational operations is yet another motivation in technological diversification. Some firms chose to diversify their technology to minimize the high cost of technology acquisition (Quintana-García, & Benavides-Velasco, 2008). Therefore, a firm is forced to explore other methods one of which is to develop strategies to improve the performance of a firm by utilizing existing technologies.
Through the integration of diverse technological applications, the redundancy in various operations has significantly been reduced and the impact of this is increased efficiency and cost effectiveness.

III. RESEARCH METHODOLOGY

A case study was the research design used for this study. The study used a case study as a strategy research to understand or explain the phenomena, which is the effect of technological diversification on Equity Bank's performance. Mugenda and Mugenda, (2003) defines a case study as an in-depth investigation of an individual, institution or phenomenon. The research targeted eleven top managers of Equity bank who are charged with technological diversification strategy. They were managers who run: customer service, mobile banking, internet banking, marketing, operations, ICT, project management and finserv. An interview guide was used in this case as a primary data collection method while, published financial reports, stock exchange reports and formulated strategies as a form of secondary data collection method. The interviewees involved 11 top managers charged with technology diversification of the Bank. They include: customer service, mobile banking, internet banking, marketing, operations, ICT, project development and finserv managers. The researcher sought to utilize the interviewees’ specific knowledge because they are more conversant with strategic plans and objectives for they are part of the team that formulate and oversee the implementation of strategic decisions and have experience in that specific area. The published financial reports, stock exchange reports and formulated strategies also played a vital role in collecting quality information than the researcher could gather independently as it is vetted for reliability and validity. Data obtained from the interview guide was analyzed qualitatively. Qualitative analysis was adopted because it enabled the researcher to describe, interpret and at the same time criticize the research problem of the study. Qualitative analysis was done using content analysis.

IV. RESULTS AND DISCUSSION OF FINDINGS

Effect of Mobile Banking on Equity Bank Performance

The findings revealed that Equity bank launched a mobile banking app called Equitel in 2015. https://ke.equitybankgroup.com. Currently, the number of subscribers according to the Communication Authority of Kenya was estimated to be 2 million. The Kenyan wall street journal, stated that the reasons for Equitel innovation were: Easy to use, Secure mobile phone platform that helps you manage your money, Communicate with more Freedom, Choice and Control. All a customer needs is an Equitel sim card to operate this app. The informants established that the bank has various mechanism of measuring how mobile banking has improved its performance. One of the mechanisms is the increased profits that have resulted to impressive financial performance. The study established that, Equitel is the one propelling the digital payments for the bank as more customers have confidence in the mobile platform for higher value transaction. The informants confirmed that in 2018 only, Equitel transacted Ksh. 572 billion, an increase of 19 % on the Ksh. 480.3 billion that was transacted in 2017. In addition, this increase came even as the number of transactions grew by just 0.3% from 251.6 million to 260.3 million. (Equity bank financial reports 2017 and 2018). The performance of the bank was also measured by the increased market share as a result of geographical expansion. The informants stated that, bank has been on the move to spread its mobile banking platform. It has so far managed to launch Equitel in Uganda, Tanzania, Rwanda, South Sudan and DR Congo expanding rapidly its geographical scope. This clearly indicates mobile banking has great impact on Equity bank’s performance.

Summary of Findings

Effect of Mobile Banking on Organizational Performance

The study established Equity bank has made tremendous efforts in bid to continue being the market leader in the Kenyan’s banking industry through adoption of technological diversification. Mobile banking was found to be extensively used among the adoptions of technological diversification in Equity bank. It was evident that the bank’s Equitel money service has been the best mobile banking platform with its exceptional growth since inception. This mobile banking service eliminates the need for mobile applications in accessing internet banking as even a simple feature phone works. It has resulted to meeting the needs of the customers even in the most remote regions which enable greater financial inclusion and access for many Kenyans. The number of Equity bank customers on Equitel stands at about 2 million. Thus considered as the most multichannel mobile money in Kenya.

V. CONCLUSION

The findings of this study revealed that the positive impact of technological diversification on the bank is as a result of a well-crafted strategy. Technological diversification is best executed by strong and organized leadership which is aimed at in improving the performance of Equity Bank both financially and their market share. At the same time, the success of technological diversification is determined by recruitment of qualified and experienced staff that possesses technical expertise and innovative mind. Employee inclusivity through,
thorough training and development offered by the bank was found to have enabled the organization to continue being the market leader in technology diversification.

The managers interviewed felt that Equity bank success is has been as a result of modern technology. The research found that the organization has been at the forefront in diversifying their technology knowhow at best to drive performance, efficiency and effectiveness.

Technological diversification has a positive effect on the performance of Equity bank limited. This has resulted to increase in bank revenues, increase customer loyalty, increase in market share and increase in stakeholders’ benefit.

**Recommendations**

This study recommends that the Bank needs to make the features of Mobile banking - Equitel platform more user- friendly. This would effectively meet the needs of the customers even in the most remote regions of Kenya which results to customer loyalty and increase in profits. Secondly, the study recommends that the bank needs to invest more to improve the various systems of security on the forms of technological diversification. Further, the study recommends that Equity Bank needs to increase its staff training and sensitization on the forms of technological diversification.

**VI. REFERENCES**


Lessons Kenyans can learn on fintech innovation. The Standard media: https://www.standardmedia.co.ke/business/article/2001311481/lessons-kenya-can-learn-on-fintech-innovation


