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STRATEGIC PROCESS INNOVATION AND PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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ABSTRACT

The purpose of this study was to investigate the effect of strategic process innovation on performance of commercial banks in Mombasa County. The study used a descriptive cross-sectional survey research design. The study targeted management staff of seven banks which were feted as the best banks in digital and service efficient banks in 2020 and include Standard Chartered bank, Equity Bank, KCB Bank, Sidian Bank, Bank of India, Bank of Baroda and I&M Bank. Stratified random sampling technique was used to select a sample size of 82 participants by help of Yamane statistical formula. Primary data was collected using structured questionnaire based on the objectives of the study. The collected data was edited, coded for processing using the Statistical Package for Social Sciences (SPSS v.26) and results were presented in frequency tables. Descriptive and inferential statistics was used to analyze information generated from the respondents. The study results revealed that the bank has installed point of sale terminals in all areas in Mombasa. This means that the point of sale terminals are widely accessible within Mombasa. The study found that the bank had wholly transitioned to cash less transactions meaning that customers of the bank has switched to digital transactions. The bank systems accessibility to customers had improved and that the bank account holders had been connected to electronic banking platform. The analysis came to the conclusion that there is parallel loan application processing and optimal workflow distribution and that the bank has experienced lower turnaround time of credit processing. The study concluded that the credit worthiness of the applicants is effectively ascertained. Also the commercial bank has experienced timely credit approval for customers. The study recommended that the commercial banks work towards zero rating transactions processing error rate. This would save the banks unnecessary costs occasioned by transactions human errors. The study recommended that the commercial banks endeavor in digitizing and automating all its backend work flow to increase efficiency and effectiveness in banking services. The human factor in handling repetitive tasks in the back-office should be significantly reduced as this would lead to increase in efficiency in back-office operations.

Key Words: *Online Banking Innovation, Back-Office Processes Automation, Credit Processing Automation, Automated Queue Management*

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INTRODUCTION

The global banking sector is becoming both more strategically focused and technologically advanced to respond to consumer expectations while trying to defend market share against an increasing array of competitors. A great deal of emphasis is being placed on digitizing core business processes and reassessing organizational structures and internal talent to be better prepared for the future of banking. Global and regional competition intensity has led financial institutions to seek to create or sustain competitive edge by engaging in innovation. A fast-changing environment with constant abrupt changes makes it indispensable for banks to build up their capability to innovate (Cahn, Liem, Thu, & Khuong, 2019).

Coupled with service economy rise, many organizations are attempting to gain a competitive advantage through service process innovation (Feng, Ma, & Jiang, 2020). In the service sector, companies need to continuously innovate their processes in order to remain competitive in constantly changing market conditions. Successful innovators utilize current technologies to harness process innovation capacity and knowledge which can be located internal or external to their organization.

Innovation is broadly seen as an essential component of competitiveness, embedded in the organizational structures, processes, products, and services within a firm. Innovations provide firms a strategic orientation to overcome the problems they encounter while striving to achieve sustainable competitive advantage (Kuratko, 2016). Innovation is central to the existence and growth of any organizations. It is recognized as a strategic driver of economic growth and performance, sustainable competitive advantage, and even survival (Durst, 2015).

Process innovation construct is adapted from an observation by Gallouj (2016) that a distinction between service product and process is possible and these two are separate dimensions. Process innovation is the introduction of something new in the production service operations to render a service offer. It is the realignment of service delivery channel that might lead to novel approaches to satiate customer needs (Mooi, Rudd, & de Jong, 2020). Service 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, 2017). Process innovation is a new and desirable approach to transforming organizations and improving their performances. It includes incremental improvements rather than radical changes (Davenport, 2016).

In United States of America, virtual banking innovations was launched in the year 2011, hyped “SIMPLE” which helped customers to get control of their finances thus simplifying their banking experience. In Australia, one of the largest banks, Commonwealth Bank of Australia in 2012 launched the Kaching online and mobile payments services which combine a wide range of state-of the-art payments options for customers among other innovative products in the world banking sector.

In Kenya, commercial banks are rethinking how to innovate by focusing on service processes so as to gain competitive advantage. Standard Chartered bank has demonstrated its ability evolve with its customers, a move that has seen the bank Mobile platform deliver more than 52 percent of all service requests and manage 50 percent of all bank service requests coming through the bank’s digital channel (Business daily, 2021). In 2021, Absa Bank Kenya has rolled out contactless payment solution with the launch of a new vertical card. This new service has a capability to make bank services faster, easy and secure when paying for goods and services by tapping Absa Cards on a point of sale (POS) machine.

In recent years, technological disruptions have greatly affected the Kenyan financial services sector (Koori, Wanjiku, & Atheru, 2020). Mobile money is by far the most significant, as underlined by data from the Central Bank of Kenya (CBK), which indicates that the value of mobile transactions has

grown at a CAGR of 66.3% since inception in 2007, from Kshs 14.8 bn of transaction volume, to Kshs 4.0 tn of transaction volume in 2017 (Cytonn report, 2019). Online banking has also gained traction and majority of banks are now aligning their business models to towards online channels as opposed to the traditional brick and mortar. The most recent innovation to shake up the industry is digital lending, which has been, to some part, a response to the slow growth in private sector credit following the capping of interest rates on loans offered by banks. According to the CBK, the banking sector's efficiency, measured by the number of deposit accounts per employee, has increased by 100.5% from 770 in 2014 to 1,544 in 2017, driven by a decline in the number of staff in the banking sector by 16.3 % from 36,923 in 2014 to 30,903 in 2017, against an increase of 67.8% in deposit accounts (CBK, 2017).

In Kenya, the banking industry comprised of 22 local commercial banks, 17 foreign commercial banks, 69 forex bureaus, 14 Micro-finance Banks, 3 Credit reference bureaus, 19 Monetary Remittance Providers, 9 Representative offices, and 1 mortgage finance company. Coupled with recent developments in the banking industry such as high costs of operations, narrowing profit margins, high competition for market share, high regulatory changes, technology evolution and changing consumer demographics and behavior are impacting on the way banks in Kenya are innovating so as to be competitive. These banks have to look for creative methods of innovating into superior services so as to achieve competitive advantage (Kungu, Desta & Ngui, 2016).

With the future of the old-fashioned banking system seemingly bleak, Kenyan lenders are running against time to embrace new technologies to stay afloat. In the 2017 Bank Supervision Report, the Central Bank of Kenya (CBK) argues that the integration of digital technology into the banking business will lead to fundamental changes in how the banking sector operates and delivers value to its customers.

According to Think Business Banking Awards (2020), Standard Chartered bank, Equity bank, Kenya Commercial Bank and Sidian bank were feted as the best banks in digital banking. Bank of India, Bank of Baroda and I&M Bank were selected as the most efficient banks. Equity bank and Citi bank won the best product innovation award. The COVID-19 pandemic has fast-tracked the adoption of digital money systems thus making digital payments critical. The current study will focus on those commercial banks which have been feted for innovation awards and are present in Mombasa.

Statement of the Problem

The commercial banking sector in Kenya is characterized by intense competition, changing customer preferences, and regulatory pressures. To remain competitive and enhance their performance, commercial banks in Kenya have implemented various strategic process innovations, such as automation of operations, adoption of digital technologies, and customer-centric approaches. However, the impact of these strategic process innovations on the performance of commercial banks in Kenya remains unclear. Therefore, the problem addressed in this study is to determine the relationship between strategic process innovation and performance of commercial banks in Kenya.

The existing literature on the impact of strategic process innovation on the performance of banks is inconclusive. Some studies suggest that strategic process innovation positively influences the performance of banks (Choi, 2018; Saeidi, Saeidi, & Saeidi, 2019). On the other hand, other studies have found no significant relationship between strategic process innovation and bank performance (Nwankwo & Kusi-Sarpong, 2019; Yusuf, Anifowose, & Olanipekun, 2018). Therefore, there is a need to investigate the impact of strategic process innovation on the performance of commercial banks in Kenya.

Moreover, the banking sector in Kenya is unique in terms of its regulatory environment, customer preferences, and cultural factors. These factors may

affect the relationship between strategic process innovation and bank performance in Kenya differently compared to other countries. Therefore, this study will fill the research gap by examining the relationship between strategic process innovation and bank performance in the unique context of the commercial banking sector in Kenya.

The study will help commercial banks in Kenya to understand the impact of strategic process innovation on their performance and guide them in making informed decisions about innovation investments. Additionally, the study will provide insights to policymakers on how to support innovation in the banking sector in Kenya. Wanjiku, Koori and Atheru (2020) did a study on technological innovation and financial inclusion by commercial banks in Nairobi established a positive relationship between technological innovation and financial inclusion. Based on the reviewed literature, there is dearth of empirical research in the realm of service process innovation and its likely impact on growth of commercial banks. The current study explored into the concept of process innovation and array the underlying connection between strategic process innovation and performance of commercial banks in Mombasa County.

Objectives of the Study

The general objective of the study was to establish the strategic process innovation on performance of commercial banks in Mombasa County. The specific objectives were;

- To establish the influence of online banking innovation on performance of commercial banks in Mombasa County
- To determine the influence of credit processing automation on performance of commercial banks in Mombasa County
- To examine the influence of back-office processes automation on performance of commercial banks in Mombasa County
- To establish the influence of automated queue management on performance of commercial banks in Mombasa County

The study was guided by the following null hypotheses;

- **$H_0$1:** There is no significant influence of online banking innovation on performance of commercial banks in Mombasa County
- **$H_0$2:** There is no significant influence of credit processing automation on performance of commercial banks in Mombasa County
- **$H_0$3:** There is no significant influence of back-office processes automation on performance of commercial banks in Mombasa County
- **$H_0$4:** There is no significant influence of automated queue management on performance of commercial banks in Mombasa County

LITERATURE REVIEW

Theoretical Framework

Resource Based View Theory

The resource-based theory suggests that firms can achieve a competitive advantage by leveraging their unique resources and capabilities. This theory can be applied to understand how commercial banks in Kenya can use their resources to achieve better performance through process innovation.

According to Boso, Adeleye, Donbesuur, and Gyensare (2018), process innovation is one of the critical resources that can help commercial banks in Kenya to achieve a competitive advantage. By improving their processes, banks can provide better customer service, reduce costs, and improve efficiency, which can lead to higher profits and increased market share.

Furthermore, strategic process innovation requires not only investments in technology but also in human capital, which is another essential resource. As noted by Chepkoech, Lagat, and Tanui (2021), banks in Kenya need to invest in their employees' skills and knowledge to implement strategic process innovation successfully. This investment in human capital can be a valuable resource that helps banks achieve a competitive advantage over their rivals.

In conclusion, the resource-based theory provides a useful framework for understanding how

commercial banks in Kenya can leverage their unique resources, including process innovation and human capital, to achieve better performance. By investing in these resources, banks can improve their competitiveness and increase their market share, which can lead to long-term success.

Customer Relationship Management (CRM) Theory

Customer Relationship Management (CRM) theory is a strategy that aims to build long-term relationships with customers, leading to customer loyalty and profitability for the business. In the context of commercial banks in Kenya, implementing CRM is crucial for improving customer satisfaction, reducing churn rates, and increasing profitability.

One way to apply CRM theory to commercial banks in Kenya is by leveraging customer data to personalize services and offerings. According to a study by Kimani et al. (2018), data analytics can help banks segment customers based on their needs and preferences, allowing them to provide personalized services that meet individual needs. This enhances the customer experience and fosters loyalty, leading to improved performance.

Furthermore, the theory of relationship marketing, which is closely related to CRM, emphasizes the importance of building long-term relationships with customers through two-way communication and mutual trust (Hennig-Thurau et al., 2010). By engaging customers through various channels such as social media, email, and mobile apps, banks in Kenya can build a strong rapport with customers, leading to customer loyalty and increased profitability.

Moreover, implementing CRM theory can lead to process innovation, which can improve the overall performance of commercial banks in Kenya. For instance, by automating processes such as loan application and approval, banks can improve efficiency, reduce operational costs, and enhance the customer experience (Mugambi et al., 2019).

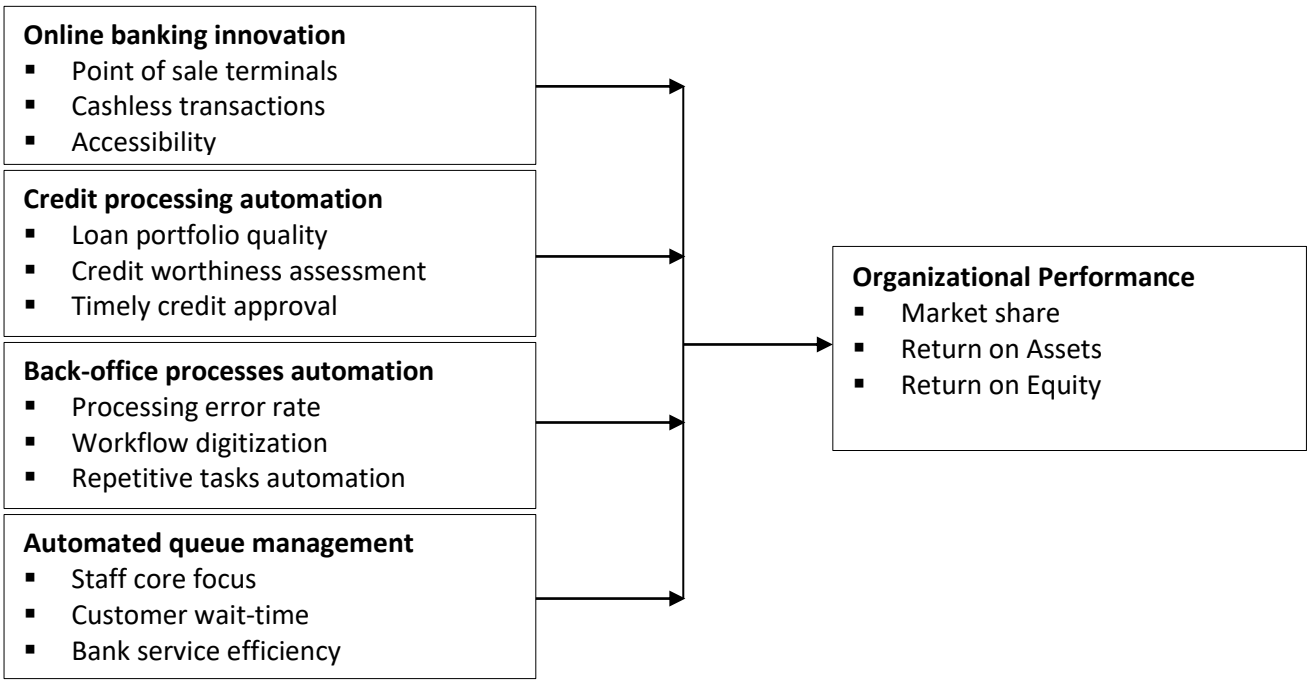
In conclusion, the CRM theory is applicable in the context of strategic process innovation and performance of commercial banks in Kenya. By leveraging customer data to personalize services, building long-term relationships with customers, and implementing process innovations, commercial banks in Kenya can enhance customer satisfaction, reduce churn rates, and increase profitability.

Diffusion of Innovation Theory

Diffusion of Innovation (DOI) Theory, developed by Rogers in 1962 explains how, over time, an idea or product gains momentum and diffuses through a specific population or social system. Through the diffusion people adopt the product, behavior, or new idea. The theory presumes that a new idea, practice or object has a perceived channel, time and mode of being adopted by individuals or organizations. For adoption to take place, the person must perceive the idea, behavior, or product as new or innovative. In this theory therefore adoption means the decision to fully use an innovation as the best alternative and thus the person does things differently from the way they did previously.

The theory of diffusion of innovation is important in understanding innovation as it explains how new ideas or innovations are adopted. Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 2015). The rates of adoption for innovations are determined by an individual's adopter category. According to Lieberman and Montgomery (2014), inventions are by definition, only introduced by one firm, or at most by a small handful of firms that bring a new product or service to market simultaneously. Companies that succeed in commercializing an invention are sometimes known as first movers. If an invention involves proprietary technology, then the first firm to obtain the patent or copyright wins the exclusive right to market the product. The diffusion of innovation theory is suitable to explain how online banking innovation is embraced by the bank users since its success or failure affects growth of commercial banks.

Conceptual Framework



Independent Variables **Dependent Variable**

Figure 1: Conceptual Framework

Review of Literature on Variables

Online Banking Innovation

Online banking is a method of banking in which transactions are conducted electronically over the internet. The main benefit of applying information technology and innovative solutions in the banking sector is the improvement of the efficiency and effectiveness of services (Mahmoodi & Naderi, 2016) because traditional banking activities are all accomplished manually, and factors related to human mistakes can have a negative effect on banking transactions. Some of the benefits of new banking services include the reduction of the customer wait times at physical branches, a decrease of banks' physical extensions need, a reduction in the delivery service time, progress in banking transactions and customer tranquility, and a decrease of human-generated mistakes (Hosseini & Mohammadi, 2016). Moreover, due to all of these advantages, and despite the trust issues in applying innovative electronic channels, there has been growth in the number of e-banking users (Laukkanen & Lauronen, 2016).

One of the most prevalent channels of providing new banking services is the POS terminal, which is an electronic device used for credit and/or debit cards transactions at retail locations, such as shops, restaurants, and hotels. It enables customers to perform banking transactions using their credit or debit cards, 24 h a day (Kajuju, 2016). A POS terminal generally connects to the bank's main server through a telephone line or other types of communication, like wireless connections, and transfers money from a buyer's account to the merchant's account (Hosseini & Mohammadi, 2016).

Recently, Li et al. (2017) performed research on the effect of digital banking start-ups on the efficiency of the retail banking system in the United States. They discovered that funding digital banking start-ups (FinTech) has a positive effect on a bank's stock returns. They asserted that instead of substitution, FinTech can be complementary to traditional banking.

Credit Processing Automation

Credit processing automation is application of a solution that is based on software that uses the latest cloud and web technologies to digitise and automate all stages of a loan cycle (Hanif & Asgher, 2018). Unlike its legacy system, the automated loan processing system offers a quick processing mechanism and eliminates the need for paperwork or face-to-face contact. As a result, it helps streamline the loan system by quickly identifying the applications that meet the lending criteria, underwrite efficiently, and promptly fund the loan. It also enhances the overall decision-making accuracy. In addition, an automated loan management system offers better security features plus a 24×7 online support system, thus lending a new concept to loan management (Kariuki, 2017).

In the current commercial lending market, there are many software applications that serve the loan origination and credit assessment requirements of traditional and non-traditional lenders. Financial institutions are increasingly mindful of improving their practices in these areas to increase efficiency, decision speed, and productivity, and to enhance their customer experience. Credit decisions can be automated for critical processes that will help banks reduce data manipulation by end-users or sourcing agents**.** In the current pandemic situation, banks have to proactively identify target customers and offer them products that will lead to enhancing the banks' revenue and profitability without compromising the credit process.

Banks and lending institutions are currently performing various activities on different applications such as CRM (Customer Relationship Management), LOS (Loan Origination), and credit scoring to arrive at the final credit decision. Given the multi-faceted nature of this process, it involves more time and utilizes multiple teams to process a credit file. However, by digitizing themselves, banks and lending institutions can meet the needs of various customers by enabling Real-time onboarding of customer through omni-channel platforms for getting credit loans, facilitating the uploading of documents digitally on an onboarding platform, which will make it simpler to process the credit files, implementing process automation tools (such as UiPath/Automation Anywhere) at the backend to validate customer documents and process the credit files as per requirements (Hanif & Asgher, 2018).

Back-office Processes Automation

Back-office refers to business activities that take place behind the scenes and serve more of a supportive function. Lending and back-office processes have a high potential for automation due to the repetitive nature and strict bank rules for the execution. Especially in the Retail segment exceptions are unlikely to happen and the number of the scenarios is limited. For that reason, automation would be a more sustainable option providing quick returns (Hosseini & Mohammadi, 2016).

Banks have enhanced many of their customer-facing, front-end operations with digital solutions. Online banking, for example, offers consumers enormous convenience, and the rise of mobile payments is slowly eliminating the need for cash. But too many processes at banks still rely on people and paper. Often, back-offices have thousands of people processing customer requests (Dias, Patnaik, Scopa, & van Bommel, 2019).

The back-office may not be the first place that comes to mind when discussing what improvements, the banks must make to deliver a stellar front-office customer experience, but banks realize that the front office and back-office are inextricably linked in the delivery of customer experience excellence.

This high degree of manual processing is costly and slow, and it can lead to inconsistent results and a high error rate. Hundreds of manual, disconnected, paper-based processes and siloed data sources prevent banks from quickly bringing new offerings to market, delays customer response times, and results in disjointed experiences and unhappy customers. It's easy to see why optimizing the back-

office through automation plays a critical role in determining a financial institution's long-term success (Kariuki, 2017).

A European bank recently decided to automate its account-switching process. First, a team of IT, operations, and business-process experts analyzed existing processes from customer, efficiency, and risk perspectives (Dias, Patnaik, Scopa, & van Bommel, 2019). The analysis uncovered several issues: more than 70 percent of the applications were paper based, and of those, 30 to 40 percent contained errors and required reworking; applications often got stuck in one data-verification step for more than five days before being processed; and because of a lack of any IT integration, branch and back-office staff had to enter data manually from several systems into the work flow.

As a result, the amount of time back-office staff spent handling account changeovers fell by 70 percent; the time customers needed to adjust to the switch was reduced by more than 25 percent. The cost-benefit ratio for this project was also significantly better than it had been in previous automation efforts: the project generated a return on investment of 75 percent and payback in just 15 months. Rapid process automation in banking used to be a fantasy. But in a world marked by financial and economic woes, banks need to find faster, more economical, and lower-risk approaches to reducing costs and improving customer service. Fortunately, the market for integration support solutions and alternative IT-development approaches has become more reliable over the past ten years, unlocking the key to rapid, large-scale automation of business processes (Wanjiku, Koori & Atheru, 2020).

Automated Queue Management

Queue management is the process of managing the experiences of customers waiting in the queue to improve business. Queue management innovations are vital for many businesses and organizations such as banks and government service offices. Queue management innovations help businesses address and improve productivity and turnover, all while improving client satisfaction. Queues are never fun for customers, but they are necessary for a lot of situations (Dias, Patnaik, Scopa, & van Bommel, 2019). Fortunately, companies can manage queues so that they provide a more streamlined experience and engage customers. Using queues effectively is a must for successful companies today. Customers never enjoy waiting in line to get goods and services. However, when demand exceeds the ability to supply, queues are inevitable. The average person spends five years waiting in lines—and anything that businesses can do to cut down on that time, or enhance that time, is integral.

Roughly 72% of customers surveyed have indicated that valuing the customer's time is the most important aspect of any company. In addition, some research indicates that the human attention span is dropping-decreasing 25% in just a few years. As a result, minimizing wait times is critical for thriving companies. When long lines appear, staff may feel compelled to manage the lines, such as by ensuring that people stay in line or by creating physical barriers. When businesses already have the mechanisms in place to deal with queues, staff can focus on serving customers rather than performing queue management tasks (Dias, Patnaik, Scopa, & van Bommel, 2019).

Organizational Performance

Most organizations validate their performance based on how best they were able to achieve their set goals and objectives. They compare how much they have improved from one stage to the other during the past years (Heikal, Khaddafi & Ummah, 2014). Efficient utilization of assets can be used to gauge the effectiveness with which a firm is utilizing its assets to generate income. The ratio used to measure this effectiveness is referred to as Return on Assets which is computed by dividing net profit over total assets. This ratio has a positive relationship with a business enterprise's future potential growth (Jami & Bahar, 2016). The bank

growth will be measured by return on equity and market share.

Empirical Review

Hanif and Asgher (2018) did a study on service process innovation and service innovation performance in banking services in Pakistan. The study used quantitative data gathered through cross-sectional self-administered survey questionnaire on a 5 -point Likert-type scale from a sample of 220 managers from the banking organizations to predict the impact of service innovation on service innovation performance. Data are analyzed through SPSS-19 and Amos-18 by means of bivariate correlation and regression. Results indicate a strong impact of multi-dimensional service innovation on service innovation performance.

Kariuki (2017) investigated effects of innovation strategy in enhancing competitive advantage in Kenyan commercial banks. The study employed a descriptive survey research design. The population of the study wass 330 composed of managers from 44 commercial banks in Kenya. Stratified sampling was used to select a sample size of 118. The study used a structured questionnaire to collect primary data, which was analyzed using Statistical Package for Social Sciences (SPSS) version 22 for descriptive and inferential statistics. The findings on the effect of process innovation on competitive advantage revealed the existence of a positive significant relationship.

Wanjiku, Koori and Atheru (2020) study on technological innovation and financial inclusion by commercial banks in Nairobi. A descriptive research design and a positivism philosophy were used. For the purpose of this investigation, the target population included all the 42 registered commercial banks operating in Nairobi County, Kenya in the year 2016. Purposive sampling technique was used to determine the sample size. Both primary and secondary data was used in this study. Questionnaires were administered to randomly selected respondents. Multiple regression model was employed in this study. Results of the study indicated that the predictor variables; mobile banking, agency banking, electronic banking outlets and internet banking have an influence on financial inclusion. Correlation results also indicated that mobile banking, agency banking, electronic banking outlets and internet banking were positively associated with financial inclusion.

Nyamoita (2016) investigated the effect of process innovation on performance of utility companies in Kenya. A case study was done on Kenya Power and Lighting Company on their prepaid service process innovation. Descriptive research design was used in the study. Secondary data used in this study was from year end 2005 to 2014 for KPLC. Data collected was analyzed using descriptive and inferential statistics to interpret the data. The results of r2 implied that the variations of process innovation, asset structure and debt ratio explained 95.7 % of the variations in KPLC return on asset.

Peter, Munga, and Nzili (2021) did a study on the effect of process innovation strategies on performance of tier one commercial banks in Kenya. The study adopted a descriptive survey research design. The target population consisted of 494 senior, middle and lower management staff from the 8 Tier One Commercial Banks. A sample size of 221 was reached using stratified random sampling technique Primary data was collected using structured questionnaires distributed to all management staffs of the tier one commercial banks in Nairobi. Secondary data on the other hand was collected from journals and published financial statements within the period of 5 years from 2014 to 2019. Data was presented using tables. The study found that improved queuing; electronic funds transfer; and number and distribution of ATMs had improved the financial performance of the banks to a great extent.

Munyiva, and Wachira, (2021) investigated the effect of process innovation on performance of commercial banks branches in Kitui town. The study adopted a descriptive research design and random sampling method to determine the sample size of 99 bank staff and 80 bank customers. Study data

was based on primary data which was collected by use of questionnaires. The data was analyzed using qualitative and quantitative data analysis techniques and presented in tables and figures. The study established that mobile and agency banking has a positive significant effect on the bank's performance.

METHODOLOGY

The study used a descriptive cross-sectional survey research design. This study targeted the management staff of all the seven commercial banks who received the Think Business Banking Award in 2020. The sampling frame for this study was the management staff of all the seven commercial banks who received the Think Business Banking Award in 2020 which include Standard Chartered bank, Equity Bank, KCB Bank, Sidian Bank, Bank of India, Bank of Baroda and I&M Bank were feted as the best banks in digital and service efficient banks. The study adopted the Yamane statistical formula to calculate the sample proportion of 82. Stratified random sampling and simple random sampling techniques were used in the study.

A structured questionnaire was used to solicit the primary information from the respondents. The questionnaire in this study comprised of closed ended questionnaire items carefully worded to capture and solicit the intended information.

The data collected was coded and analyzed using the Statistical Package for Social Sciences (SPSS) version 26 as a data analysis tool. In this study, both descriptive and inferential data analysis techniques were used. Descriptive statistics was used as a measure of central tendencies and measures of dispersion (mean and standard deviation). Regression analysis was conducted to test whether the strength of the relationship between the independent variables and the dependent variable are statistically significant. The following regression model was adopted:

$$Y = \beta_\Theta + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

Y= is the dependent variable (performance of commercial banks)

β_Θ = will be regression coefficient (intercept)

β1, β2, β3 and **β4** are the coefficient function of the independent variables,

X_1= Online banking innovation

X_2= Credit processing automation

X_3= Back-office processes automation

X_4= Automated queue management

ε is the error term

FINDINGS AND DISCUSSION

Descriptive Results

Descriptive analysis was conducted on collected data to establish the mean and standard deviations.

Online Banking Innovation

The first objective of this study was to determine the extent to which online banking innovation affects organizational performance of commercial banks. In order to achieve this objective, respondents were required to indicate the extent to which they had adopted selected online banking innovation on a five-point Likert scale where 1 represents strongly disagree and 5 represents strongly agree. The results are discussed in Table 1.

Table 1: Online Banking Innovation

	Mean	Std. deviation
The bank has installed point of sale terminals in all areas in Mombasa	4.17	.231
The bank has wholly transitioned to cash less transactions	4.23	.536
The bank systems accessibility to customers has improved	4.02	.444
The bank account holders have been connected to electronic banking platform	4.26	.703

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The results in Table 1 showed that respondents agreed that the bank has installed point of sale terminals in all areas in Mombasa and that the bank has wholly transitioned to cash less transactions as indicated by a mean of 4.17 and mean of 4.23 respectively. Respondents also agreed that the bank systems accessibility to customers has improved (mean=4.02) and that the bank account holders have been connected to electronic banking platform (mean=4.26).

Credit Processing Automation

The second objective of this study was to determine the extent to which credit processing automation affects organizational performance of commercial banks. In order to achieve this objective, respondents were required to indicate the extent to which they had adopted selected credit processing automation aspects on a five-point Likert scale where 1 represents strongly disagree and 5 represents strongly agree. The results are discussed in Table 2.

Table 2: Credit Processing Automation

	Mean	Std. Deviation
There is parallel loan application processing and optimal workflow distribution	4.41	.817
The bank has experienced lower turnaround time of credit processing	4.15	.634
The credit worthiness of the applicants is effectively ascertained	4.26	.509
The bank has experienced timely credit approval for customers	3.01	.822

The results in Table 2 showed that respondents agreed that there is parallel loan application processing and optimal workflow distribution and that the bank has experienced lower turnaround time of credit processing as indicated by a mean of 4.41 and mean of 4.26 respectively. Respondents agreed that the credit worthiness of the applicants is effectively ascertained (mean=4.15). Respondents were indifferent to the statement that the bank has experienced timely credit approval for customers (mean=3.01).

Back-office Processes Automation

The third objective of this study was to determine the extent to which back-office processes automation affects organizational performance of commercial banks. In order to achieve this objective, respondents were required to indicate the extent to which they had adopted selected back-office processes automation aspects on a five-point Likert scale where 1 represents strongly disagree and 5 represents strongly agree. The results are discussed in Table 3.

Table 3: Back-office Processes Automation

	Mean	Std. Deviation
The bank has recorded decreased transactions processing error rate	4.13	.882
The bank has digitized and automated all its backend work flow	4.20	.887
The human factor in handling repetitive tasks in the back-office has reduced	4.82	.883
There is increased efficiency in back-office operations	4.89	.881

The results in Table 3 showed that respondents agreed that the bank has recorded decreased transactions processing error rate and that the bank has digitized and automated all its backend work flow as indicated by a mean of 4.13 and mean of 4.20 respectively. Respondents also agreed that the human factor in handling repetitive tasks in the back-office has reduced (mean=4.82) and that there is increased efficiency in back-office operations (mean=4.89).

Automated Queue Management

The fourth objective of this study was to determine the extent to which automated queue management affects organizational performance of commercial banks. In order to achieve this objective, respondents were required to indicate the extent to

which they had adopted selected automated queue management aspects on a five-point Likert scale where 1 represents strongly disagree and 5 represents strongly agree. The results are discussed in Table 4.

Table 4: Automated Queue Management

	Mean	Std. Deviation
Queue management systems in the bank have made staff to focus on core tasks	3.66	.753
The queue turnaround time has reduced significantly	4.66	.748
The customer service has increased its efficiency	4.52	.741
The number of customer complaints due service delays has reduced	3.64	.756

The results in Table 4 revealed that respondents agreed that queue management systems in the bank have made staff to focus on core tasks and that the queue turnaround time has reduced significantly as indicated by a mean of 3.66 and mean of 4.66 respectively. Respondents also agreed that the customer service has increased its efficiency (mean=4.52) and that the number of customer complaints due service delays has reduced.

Multiple Regression Analysis

Growth of commercial banks was regressed on strategic process innovation and the results of regression analysis are presented as follows.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.693a	.481	.329	.40822

a. Predictors: (Constant), Online banking innovation, Credit processing automation, Back-office processes automation, Automated queue management

From Table 5, the correlation coefficient (R) for strategic process innovation and performance is 0.693 indicating that there is a strong positive correlation. The coefficient of determination (R^2) is 0.481 revealed that 48.1% change in commercial banks growth is explained by strategic process innovation indicators.

Table 6: Model Validity (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.702	4	.9255	17.363	.012[b]
	Residual	4.000	75	.0533		
	Total	7.701	79			

a. Dependent Variable: Performance

b. Predictors: (Constant), Online banking innovation, Credit processing innovation, Back-office automation, Queue management innovation

Analysis of variance results in Table 6 showed that the predicted relationship under the model is statistically significant at p–value of 0.016 which is less than the significance level of 0.05. This shows that the model between strategic process innovation and commercial banks performance is statistically significant. The model coefficient is shown in Table 7.

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Table 7: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.289	.984		.294	.000
Online banking innovation	.150	.174	.143	.863	.036
Credit processing automation	.063	.160	.065	.396	.022
Back-office processes automation	.184	.141	.223	1.301	.006
Automated queue management	.254	.242	.219	1.047	.000

a. Dependent Variable: Performance

From Table 7, the model would appear as follows:

$$Y = 0.289 + 0.150X_1 + 0.063X_2 + 0.184X_3 + 0.254X_4$$

The regression model indicates that commercial banks performance would increase by 0.289, given that all the other factors are held constant at zero. Further in the regression model it shows that a unit increase in online banking innovation would lead to an increase in commercial banks performance by 0.150. A unit increase in credit processing automation would lead to a positive increase in commercial banks performance by 0.063, and a unit increase in back-office processes automation would lead to an increase in commercial banks performance by 0.184. Further, regression results showed that a unit increase in automated queue management would lead to an increase in commercial banks performance by 0.254. The predictors had significance levels of 0.05 and above implying that they had significant effect in explaining the variation in commercial banks performance.

Discussion of Key Findings and Hypothesis Testing

The regression coefficients served as the foundation for fulfilling the study's goals. This was achieved by considering the P-values that are associated with the relevant regression coefficients and t-values. The first objective of the study was to find out how online banking innovation affects organizational performance of commercial banks in Mombasa County. The regression results for online banking innovation were β1=0.150, t=.863, and p<0.05 showing that there was a favorably significant relationship between the variables. Further in the regression model it shows that a unit increase in online banking innovation would lead to an increase in commercial banks performance by 0.150. The null hypothesis that online banking innovation has no meaningful effect on organizational performance is rejected since the p-value is less than 0.05.

The second objective of the study was to determine how credit processes automation affects organizational performance. According to the regression analysis's findings (β2 = 0.063, t=.396, p<0.05), credit processing automation significantly affects organizational performance. According to the study, a unit increase in credit processing automation would lead to a positive increase in commercial banks performance by 0.063. The null hypothesis that credit processing automation has no meaningful effect on organizational performance is rejected since the p-value is less than 0.05.

The third objective was to investigate the effect of back-office processes automation on organizational performance. According to β3 = 0.184, t=1.301, and p<0.05, the regression analysis results showed a substantial positive relationship between back-office processes automation and organizational performance. According to the findings, a unit increase in back-office processes automation would lead to an increase in commercial banks performance by 0.184. The null hypothesis that back-office processes automation has no meaningful effect on organizational performance is rejected since the p-value is less than 0.05.

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The study also aimed to determine how automated queue management affects organizational performance of commercial banks. According to regression analysis, automated queue management and organizational performance has a significant positive connection (β4 = 0.254, t=1.047, and p<0.05), which means that a unit increase in automated queue management would lead to an increase in commercial banks performance by 0.254. The null hypothesis that automated queue management has no meaningful effect on organizational performance is rejected since the p-value is less than 0.05.

CONCLUSSIONS AND RECOMMENDATIONS

The study concluded that the bank has installed point of sale terminals in all areas in Mombasa. This means that the point-of-sale terminals are widely accessible within Mombasa. The study also concludes that the bank has wholly transitioned to cash less transactions meaning that customers of the bank has switched to digital transactions. The bank systems accessibility to customers has improved and that the bank account holders have been connected to electronic banking platform.

The analysis came to the conclusion that there is parallel loan application processing and optimal workflow distribution and that the bank has experienced lower turnaround time of credit processing. The study concludes that the credit worthiness of the applicants is effectively ascertained. Also, the commercial bank has experienced timely credit approval for customers.

The study came to the conclusion that the bank has recorded decreased transactions processing error rate. This implies that the automation of back-office processes has been successful in reducing common oversight mistakes. It is concluded that the bank has digitized and automated all its backend work flow. The human factor in handling repetitive tasks in the back-office has reduced and that there is increased efficiency in back-office operations.

The study came to the conclusion that queue management systems in the bank has made staff to focus on core tasks. This has greatly enhanced employee productivity hence overal bank performance. The queue turnaround time has reduced significantly thus improving banking services efficiency. It is concluded that the customer service has increased its efficiency and that the number of customer complaints due service delays has reduced.

The study recommended that the management of commercial banks install point of sale terminals in all areas in Mombasa. This would increase coverage and ease banking services accessibility. The study also recommends that the commercial banks make plans to completely transition to cash less transactions and the bank systems accessibility should be improved so as to give customers seamless banking services remotely. The commercial bank should connect all bank account holders to electronic banking platform.

The study recommended that the management of commercial banks install a parallel loan application processing and optimal workflow distribution. This is to safeguard client's confidential data from loss. The bank should update its credit processing systems so as to reduce credit processing turnaround time. The study recommends that the credit worthiness of the applicants should be effectively ascertained so as to root out risky applicants and the commercial banks should provide timely credit approval for customers.

The study recommended that the commercial banks work towards zero rating transactions processing error rate. This would save the banks unnecessary costs occasioned by transactions human errors. The study recommends that the commercial banks endeavor in digitizing and automating all its backend work flow to increase efficiency and effectiveness in banking services. The human factor in handling repetitive tasks in the back-office should be significantly reduced as this would lead to increase in efficiency in back-office operations.

The study recommended that the management of commercial banks should prioritize queue

management systems in the bank so as to free bank staff time to other core banking activities. This would greatly enhance employee productivity hence overal bank performance. The queue turnaround time should be gradually reduced so as to enhance customer experience with the bank. This would increase efficiency in customer service and reduce the customer complaints rate occasioned by service delays in the banks.

Suggestions for Further Research

The study was limited in investigating strategic process innovations in the context of commercial banks performance. Nonetheless, the researcher recommends that further research be done on other strategic process innovations not factored in the current study and that can have effect on commercial banks performance since only 48.1% of the variation in performance of commercial banks were explained by the predictor variables in this study. Additional research could be focused on strategic process innovations in other processes reliant industries like manufacturing and hotels industry.

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