

**CHANGES IN TECHNOLOGY AND PERFORMANCE OF E-SERVICES ONLINE STORE
IN KENYA**

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DECLARATION

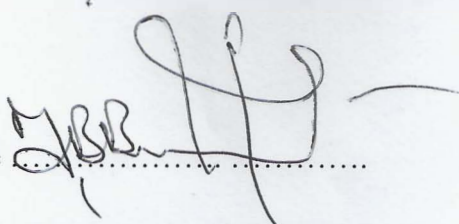
I hereby declare that this research project is my authentic work and has not been submitted to any other institution.

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DEDICATION

To my daughter Khloe Njoki, immediate family, and friends this research project is dedicated to you, thank you for encouraging and inspiring me to become a better version of myself.

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ABBREVIATIONS AND ACRONYMS

BSC	Balanced Score Card
FDI	Foreign Direct Investments
IBM	International Business Machines
ICT	Information and Communication Technology
ISP	Internet Service Provider
KRCS	Kenya Red Cross Society
RBV	Resource Based View
SAP	Systems Applications and Products
SME	Small and Medium Enterprise
TAM	Technology Acceptance Model
UNCTAD	United Nations Conference on Trade and Development.

ABSTRACT

E -Services Online Store in Kenya operates in an environment of continuous technological changes. These changes have compelled the need to bring about responses that can address performance in the midst of turbulence. Several technological advancements have been on a continuous basis in the e-commerce space and this study sought to analyze the technological changes and explore its effect on performance. The research was guided by the technology acceptance model, the diffusion innovation theory and the resource-based theory. The research employed the qualitative research design targeting top management officials namely the CEO, strategy manager, business manager, ICT manager, risk manager marketing manager and operations manager. During the case study process, data was collected using interview guides that were personally carried by the researcher. The collected data was cleaned and subjected to content analysis to make conclusions and recommendations. The findings revealed that changes have occurred in various areas of technology application ranging from the use of social media platforms to introduction of various applications to enhance the capabilities of the E -Services Online Store platform. This include the use of business intelligence and analytics for reporting, use of integrated systems and On Time Passwords (OTP) to enhance security, the use of virtual internet to respond to customer needs, contactless deliveries, E -Services Online Store and AWS among others. These changes have been implemented to respond to the changing customer need and to survive in the constantly evolving technological environment. The changes in technology were found to have affected various functional areas in the organization such as human resource, finance, production, culture and infrastructure as well as the management structure. Whereas technological changes have been attributed to improvements such as increased innovation, broader customer base and increased sales, other performance indicators such as profitability were found to be in a deep. The study recommends investing in technology strategically to maintain positive performances. Since E -Services Online Store Kenya is undisputedly the leading e-commerce platform in the Country, it should optimize on the existing technologies to reap maximum benefit rather than spending resources and attempting to adopt technologies that may not translate to verifiable results in the Kenyan market. Secondly, to ensure high employee retention, the company should innovate new areas of production and service offerings to create more jobs hence retaining the best talent and adopt a practical return policy that is friendly to customers to ensure continued customer satisfaction.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Technological changes have significantly affected the operation of firms and created the foundation for organizations to differentiate between their products and their competitors (Rasheed, Law, Chin & Habibullah, 2016). Kotler (2007) observed the existence of technological changes in the business environment can orchestrate a situation where businesses that were of repute in yesteryears lose their relevance today. To enhance their performance, businesses should come up with strategic response to the technological changes as their interaction with their surroundings is a key factor determining their ability to survive (Noor, 2012). Ansoff (2016) argues that the strategy adopted depends on the technological change but the end goal for all the responses is to achieve the desired level of performance.

Organizational aims and objectives are impacted by technological changes and other macroeconomic happenings. This makes it difficult for organizations to remain viable. As a way to remain competitive, businesses must constantly monitor their surroundings for threats. To respond to changes in their operating environment, the organization may modify its strategic responses as necessary to meet those changes. Proper strategic answers will provide an advantage in the market. The last ten years have witnessed tremendous changes in the technological environment. These changes have greatly impacted on all industries operating in the country (Kipngetich, 2016).

The Technology Acceptance Model (TAM) provides clarity on how organizations and clients incorporate and exploit an innovative concept (Davis, 1989). To learn how Information and Communication Technology (ICT) firms in Kenya absorb new technologies, TAM will be used in this study. In relation to the resource-based view (RBV), firms in a given sector may be diverse in terms

of the resources they manage. However, they will exhibit differences in their reactions to developments within the environments depending on the resources they control (Barney, 1991). Diffusion of innovation by Rogers (1995) is about the mechanism via which a new thought is disseminated to a particular societal system relies on utilizing a specific preference channel.

E -Services Online Store is the largest, fastest and most successful African internet group. In Kenya, it is the number one online shopping site with 15 million monthly visitors and over 820 international and local brands (Balamurugan & Nadu, 2018). Competition has however risen drastically, driven by the addition of new companies in the marketplace. Due to the ever-evolving technological changes and emerging economies in the industry, E -Services Online Store in Kenya has responsibility of keeping track with current environment in order to build its client base. Disregarding or overlooking reinvention will lead to losses in the long run. The ability of E -Services Online Store in Kenya to anticipate dynamic and unexpected technological changes will decide its ability to outsmart its competition and sustain a competitive advantage in its sector.

1.1.1 Technological Changes

Technological changes refer to a shift of a platform based on unique scientific principle on which firms create products used to serve the needs of consumers in a specific market (Sood & Tellis, 2010). Noor (2012) points out that the technological change necessitates for establishment of flexible organizational approaches in order to enhance competitiveness. Furthermore, the existence of turbulence in the technological environment creates an increase in uncertainty making it increasingly difficult to predict the repercussions of one's actions (Deloitte, 2010). As Brown and Eisenhardt (2008) observed, the unpredictable nature of the technological change provides a situation where management have to always be concerned about the continuous and sometimes substantial changes.

According to Burnes (2000), since the industrial era, organizations have experienced constant change and upheaval as the result of technology developments. Evidently, the pace and uncertainty of such change varies from organization to organization. Hence, some seem to function under stable circumstances while others appear to operate in the midst of significant instability. Organizations therefore need to establish the degree of turbulence experienced in the setting and align themselves to these changes. It is no wonder that Schendel and Hofer (1979), conclude that strategy is a blend of the capabilities, the resources, the external environmental opportunities, the dangers an organization confronts as well as the goal it has set out to achieve.

Organizations are defined as being related to the surrounding environment. The correlation between organizations versus their setting is one-way and yet on-going. The idea is that inputs (or input materials) are obtained from the environment which transform (or is added to) these inputs such that the outputs are either products or services to be given back to the environment. Affected and controlled by external factors, the organization's success or failure is completely out of their hands. When there is a significant shift in the environment, there is more demand on organizations to adjust and this increases the need for them to react to external change (Ansoff & McDonnell, 2011).

1.1.2 Organizational Performance

Performance entails goals attainment set by an organisation according to Huang (2018). And Daft & Marcic (2013) gives further details of a company achieving its goals through efficiency and effectiveness of its resource utilisation. Bharadwaj, Chauhan and Raman (2015) ascertain that there are seven aspects which complicate a firms performance; efficiency, reliability, productivity, effectiveness, quality of work, creativity and profitability. Ultimately, performance is a correct mixture of achievement by each of the seven criteria. These seven criteria can also be likened to

performance goals. Although performance varies in meaning, organizations must have documented objectives which can be measured against the outcomes.

An organisations performance is critical because it determines the productivity, efficiency and competency of a firm. Bain (2016) argues that it is seen as a measurement of the efficacy of resources which creates products required by customers and society at large. Clearly performance proves profits of a firm by showcasing the income and expense. Therefore, as Chakravarthy (2016) points out, promoting organisational performance by managers makes the company survive because it is profit making. Chakravarthy (2016) continues to state that performance is immeasurable by a single index. Thus there is reluctance in using monetary and non-monetary performance measures for an organisation.

In the past, researchers have often used the Balanced Scorecard (BSC) developed by Kaplan and Norton (1992) to evaluate performance. The BSC generates performance measures based on the organization's goals, vision, and strategy. It is used as a criterion to evaluate the overall performance of the company. Financial considerations, customer factors, internal processes, and learning and growth are all factors that must be considered (Kaplan & Norton, 1996). Because it is widely accepted as a performance measure, the balance scorecard is used in this research.

1.1.3 Technological Changes and Organizational Performance

The diffusion of innovation hypothesis says that every economically impactful change centers on entrepreneurship, market power and innovation. From this reasoning come theories about technological revolution. Rogers (1995) believes that invention briefly establishes a monopoly, wherein imitators compete and remove monopolies. Therefore, if organizations utilize technological

changes and secure hedging over other firms using new goods and services, they will certainly have an effect on performance.

Jin et al. (2014) found that adapting to technological changes helps companies improve their performance and make them more advantageous. Kuratko et al. (2015) argued that technological change creates cross-functional teams comprised of organizational change agents that help identify new revenue streams, develop sound growth strategies, formulate new products, services, and business models, foster new business connections, and adopt current new practices (Kaplan & Palmer, 2017).

The uncertain economic circumstances and accelerating technological development have created an increasingly dysfunctional workplace, prompting organizational employees to adopt adaptive behavior (Blackmore & Nesbitt, 2009). Yet environmental change has the effect of undermining institutions, which are seen as a source of order and stability (Scott, 2001). For institutionalism, the issue is: How does an institution react to demand to change its structures or practices in response to environmental challenges? Functional pressure that arises out of difficulties in performance has the ability to instigate institutional change (Bourgeois & Eisenhardt, 1988).

1.1.4 ICT Firms in Kenya

According to ICT board of Kenya, Kenya now has over 100 Internet Service Providers (ISP) with over 3 million internet subscribers. Besides the large number of ICT SMEs in the country, there are a number of ICT multinationals like Google, Amazon, Oracle, SAP and IBM among others who have brought Foreign Direct Investment (FDI) into the country. The FDI possess a directly positive effect on the economy (Communications Authority of Kenya, 2019).

Over the last five years, the Kenya ICT sector has seen many new entrants that have ventured into the ICT sector through outsourcing, franchises and joint ventures. The sector is extremely competitive

and dynamic requiring each firm to be strategic in driving its organizational performance and growing its return on investment. The Nairobi City County Government also acknowledged that ICT services have a role in providing public services. In this way, ICT services have a major role in making service delivery swift and dependable for the citizens. The County recognizes that it will benefit from operational savings brought about by strategic investments in ICT, with the aim of reducing delivery times, connecting with the community, and improving the County's public relations image (CA, 2019).

ICT firms in Kenya comprise of varied types; software developers, Internet Service providers, Cloud Storage providers, cyber security consultants, system integrators, Data recovery, ICT product retailers among others. Examples of these firms include Comztech East Africa and Techbiz Africa that have partnered with global players like IBM, Oracle, Cisco and others in providing ICT solutions. Internet Solutions Ltd and MTN sell internet and storage solutions. Safaricom, a mobile phone service provider has created competition from top level business companies to entry level companies. For the ICT firms to thrive in an environment of continuous policy changes there is need to develop business policies which shall enhance the firms' competitive edge and in essence improve their performance.

1.1.5 E -SERVICES ONLINE STORE,

E -SERVICES ONLINE STORE is among one of the renowned online stores in Africa. E -Services Online Store was first founded in Lagos in the year 2012, and currently spread in 23 African states. The firm was created on the conviction that the Internet can significantly enhance lives of people in Africa, both socially and economically. The founders saw a huge opportunity to leverage the Internet and use it to connect people and provide them with a solution to fulfill their daily needs after closely observing the challenges that people face every day, such as poor infrastructures, bad traffic, limited information, limited choice, expensive products and services, and so on. As a result, the adventure to

create a corporation with the basic objective of broadening Africa's perspectives began (Ecart Services Kenya Limited, 2020).

E -SERVICES ONLINE STORE is the largest, fastest and most successful African internet group. It operates currently several branches that have larger share in the market at their respective locations. Three out of the nine ventures are operational in Kenya; Ecart Services Kenya Limited, Lamudi and Hello food. In Kenya, it is the number one online shopping site with 15 million monthly visitors and over 820 international and local brands. It has extended its offering to include food, household goods, fashion, car deals, travel and electronic accessories. Over three-quarters of E -Services Online Store technology transactions in Kenya are done via mobile phones as opposed to other devices such as computers, supporting Balamurugan and Nadu (2018) assertion that mobile phones play a pivotal role in the adoption of technology.

The various service lines include E -Services Online Store market, E -Services online Food, E -Services online Travel, E - E -Services online Jobs, E - E -Services online House, E -Services online Deals, E -Services online Services and E -Services Online Store Car. It delivers products to clients right where they are. E -Services Online Store provides a range of products 24/7 every day with about 100 per cent convenience as clients can easily access their website and make payments online via bank, mobile money or payment of cash on delivery. They have a large following of about 1.5 million likes on Facebook due to their best customer service (Ecart Services Kenya Limited, 2020).

1.2 Research Problem

Since it has been ascertained that management is essential to a firm's performance, it is a concern that firms operating in the same environment exhibit differences in their performance. These inconsistencies have generated interest for several researchers to establish whether the performance

difference is due to internal or external factors. Therefore, management of organizations have to establish external components that can change in the near future. Since organisations serve the environment Abashe (2016), its untenable to survive by excluding external environment aspects Technological changes are expected to have an influence on performance of firms.

E-Services online store established its operations in Kenya in the year 2012 and since then technological advancements have been happening on a continuous basis. For survival in this environment, E-Services online store has increased its digitization efforts, putting strategic innovations at the forefront, to strengthen its network base, decrease staff expenses, operate competitively with staff and enhance profitability (Ecart Services Kenya Limited, 2020). However, despite this strategy, E-Services online store has been reporting losses year after year.

In this field, research has been done. SMEs in Ghana were examined by Nkuah, Tanyeh, and Gaeten (2013) to see how technology affected their performance. The study's most crucial results revealed that some performance characteristics have significant, positive relationships tied to them when it comes to technology. A significant connection was found between technology use and performance in the research. A conceptual gap exists in the research since it concentrated on technology usage rather than technological change. Further, the study presents a methodological gap as it was quantitative in nature leaving the qualitative aspects unattended. Additionally, the research undertaken in Ghana has a distinct technological environment from Kenya.

In Nigeria, Okechukwu and Okoronkwo (2018) investigated whether the technological environment has an impact on an organization's performance. Researchers also wanted to find out how technology impacts customer satisfaction and market share among Enugu's small and medium-sized businesses. The research found that technology environment had no significant impact on organizational customer satisfaction, but technological environment had a substantial impact on organizational market share. The study presents a conceptual gap as it addressed technological environment which is a different

concept from technological change. The study also presents a contextual gap as it was conducted in Nigeria whose social and economic setting is different from Kenya. Methodologically, the study relied on quantitative data and therefore might have failed to capture some important dimensions that can be analyzed qualitatively.

In China, Ting, Wang, and Wang (2012) investigated the impact of environmental dynamism in modulating the link between innovation strategy and company performance, concluding that environmental dynamism modifies the link between innovation strategy and firm performance. The study presents a methodological gap as environmental dynamism was considered as a moderating variable and therefore its direct effect on performance was not examined. The study also presents another methodological gap as it was a review of literature and therefore need for an empirical study to confirm the findings in a specific sector. The research also offers a conceptual gap as it failed addressing the effect of technology change on firm performance. The study also presents a contextual gap as it was not specific to any firm or industry and therefore findings cannot be generalized in a given organization or firms.

Mashhadi and Rehman (2012) investigated the impact of the external environment on the performance of Islamabad's fast food business in Indonesia. The study revealed that external environment namely political changes, technological changes, economic changes and social-cultural changes impacts on performance of fast food firms significantly. This study presents a contextual gap as this study was conducted among fast food firms whose operations are different from ICT firms. In addition, the study presents a conceptual gap as the influence of technology changes on performance which is the current research focus was not addressed. The study also presents a methodological gap as it was quantitative in nature leaving a gap on the qualitative aspects.

Locally, Mwaniki (2015) on studying Kenya Red Cross observed that the strategy of developing internal competencies and resources particularly income generation resources, to offset decreasing

donor contributions is a good one. When comparing to profit-making enterprises, the technological changes and volatility connected with non-profit organizations like KRCS are considerably different. In the aftermath of disasters, competing nonprofit organizations team together. This generates a contextual gap, necessitating additional research. The study also presents a conceptual gap as it did not address the link between technology changes with performance. Methodologically, the study relied on quantitative data and therefore might have failed to capture some important dimensions that can be analyzed qualitatively.

Mwangi and Wekesa (2017) investigated the impact of technological factors on Kenya Airways' overall performance. According to the findings of the research, technological factors have an impact on Kenya Airways Limited's overall performance. According to the findings, management at Kenya Airways must embrace cutting-edge technology in the aviation sector. The research offers a conceptual gap as it did not address technology changes. This study was addressing the Kenya Airways and therefore a contextual gap. Methodologically, the study relied on quantitative data and therefore might have failed to capture some important dimensions that can be analyzed qualitatively

Kimaiyo (2018) study was on strategic responses by state corporations in Kenya to environmental changes. The study revealed that state corporations are responsive to environmental changes. The study presents a contextual gap as it was conducted in state corporations which are not for profits and their operations differ from those of ICT firms which are profit making. In addition, the study poses a conceptual gap as technology changes was not into account. Methodologically, the study relied on quantitative data and therefore might have failed to capture some important dimensions that can be analyzed qualitatively.

The studies reviewed have shown that conceptually, there is no consensus on the impact of technological changes on performance. Contextually, most of the local studies done on technological changes have focused on other industries whose operations are distinct from those of E-Services

online store online. In addition, the studies carried out on technological changes used a different methodology as they did not take into account the effect of technological changes on performance using a qualitative approach. This therefore justifies the need for further research in this field. This research thus seeks to answer question: what is the effect of technological changes on performance of E-Services online store in Kenya?

1.3 Research Objective

The research aimed at establishing the effect of technological changes on organization performance of E-Services online store in Kenya.

1.4 Value of the Study

Because of the study, the findings are of tremendous significance to future scholars. The study is going to aid in development of theories relating to technological changes and business strategy. The results may also be important to academics and scholars, revealing gaps in research linked to the study's subjects as well as research done to expand empirical literature.

The study results are going be helpful to the development of policies that concern the ICT sector's growth in the economy. As a result of this research, the policy makers gain because it illuminates how performance of E-Services online store is dependent on technological changes. This study's results are going to be relevant to organizational performance and technological changes that take place in E-Services online store in Kenya. This kind of data may very well be used in the development and refining of policy.

The research is going to help the chosen companies' management and employees by illustrating the significant changes in technology and by providing them with new ideas on how to steer their

businesses in a new direction. The management is going to be in a position to align their strategies with the changes in the technological environment and this is going to aid their survival and enhance their competitive edge.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Literature review goes through the theory and evidence from literature that pertains to technological shifts, organization performance, and how they relate. The chapter begins by discussing the concepts that have provided these theories with credibility and flaws, empirical literature review display correlations and inconsistencies, as well as research gaps that describes the conceptualized correlation between study variables.

The theories which will feature in the review will particularly be TAM. TAM clarifies how customers together with organizations incorporate and exploit innovate concepts (Davis, 1989). Therefore, TAM will be referenced in this study to expound on how Information and Communication Technology (ICT) firms in Kenya adopt foreign technologies. In relation to the resource-based view (RBV), firms in a given sector may be diverse in terms of the resources they manage. However, (Barney 1991) firms react differently when exposed to developments mostly due to the resources under their control. Additionally, the researcher will exploit diffusion of innovation by Rogers (1995) on the mechanism through which a new thought is established in a societal system

The theoretically anticipated connection between technological changes and performance is also discussed in this chapter because the two ideas constitute the foundation of the present research. Previous study has been done on this subject, and the findings are also provided in this chapter. Additionally, this chapter highlights the research gaps that the present study aims to address.

2.2 Theoretical Foundation

A literature review finds and evaluates previous research and scholarly work on the variables studied in ICT companies. This review provides a thorough understanding of what has been done so far and serves as a basis for interpreting the research findings and overcoming the limitations of previous research. In the following section, various theories such as TAM, the resource-based view and the theory of innovation diffusion are described and discussed.

2.2.1 Technology Acceptance Model

Davis (1989) developed the technology acceptance model which goes by Davis model in some citations. Its utilization is in selecting a system that is of benefit and convenient to a customer while adopting a behaviour. In exploring the models validity Moon and Kim (2015) found use of technology and other usability facets are the major influences to users acceptance. Davis (1989) affirms that the anticipated utility of a computer systems' utility considerably improves work performance.

The simplicity with which a system may be used continues to be prioritized. Thus, running and employing the new technology continuously signifies the user has learned. Consequently, the tam model focus is on how simple a system is in predicting system utility (Gefen, Karahanna & Straub, 2013). For example, the believe that electronic banking is effective by customers makes it more likely to be used (Potaloglu & Ekin, 2015). Therefore, aspects such as perceived usability simplicity and perceived utility are seen as essential to the promotion of technology.

Theory of technology acceptance has changed how researchers do their work. Key aspects of the current investigation are to discover benefits and drawbacks of incorporating technology change into the operations and strategy of E-Services online store in Kenya and other ICT firms in general and to

look at how easy or difficult it is for technological change to be used within the ICT sector in Kenya to enhance performance.

2.2.2 Resource Based View

Penrose (1959) stated that the variety of productive resources accessible to a corporation generates its uniqueness instead of the homogeneity of those resources. According to Penrose (1959), how effectively an organization's resources are used determines both internal and external development via methods such as mergers, acquisitions and diversification. A company is made up of a range of valuable resources, and all these resources can only assist a firm obtain a competitive advantage if they are placed and used in such a way that they are easy to access to the company. As a result, businesses must recognize their strengths and weaknesses in order to devise methods for outsmarting their competitors while using the resources at their disposal (Wernefelt, 1984).

According to RBV, the most valuable resources in an organization are the ones that influence the firm's success and competitiveness. RBV continues to point out that the main factors that affect and effect competitive advantage and how well an organization operates are generated from the company's skills as well as its resources, which are difficult to duplicate and highly valued (Barney, 1991). Firms may use RBV to develop and implement their business strategy by assessing their skills and internal resources (Sheehan & Foss, 2007).

Only when resources are deployed to implement strategies do they become valuable. Only by measuring the value fostered by strategies and attaching the gained value to the capabilities and resources can the value of the resources be determined. Controlling the factors that generate growth possibilities as well as change, as well as those that emerge as threats as well as demand reactions, is essential for a company's growth, change, and development. Management should not only be conscious of environmental changing, but also control the resources of a firm in order to capitalize on

chances as well as mitigate risks. The strategic leader must guarantee that this occurs, as well as ensuring the organization's values and culture are suitable for meeting the key success criteria.

2.2.3 Diffusion of Innovation Theory

The pioneer of this idea was Rogers (1962). An innovation is any newly introduced ideas, practices or item into a social structure whereas, on the contrary, innovation dissemination is the way the new concept is transmitted over a period of time to the social system via a default route. In this regard, this theory attempts to outline how new innovations are accepted and utilized in a social system such as mobile banking and online banking (Clarke, 1995). Rogers (1995) broadened the idea by saying that the study on technological diffusion was insufficient, further explaining that the technology cluster had additional distinctive characteristics that were thought to be fully linked. That is why the advantages and repercussions of embracing or refusing to embrace innovation should be notified to people and societies at large. Rogers (2003) says plainly that interpersonal connections are necessary because dissemination includes a social process.

Robinson (2009) criticizes the theory for taking a dramatically different view of other theories of change. It is not about attempting to persuade people to change, but about making progress or re-inventing goods and character, so that they can better suit what the person wants or needs. In this idea, people do not change, but innovations have to adapt to the demands of the people. The invention process takes time, as per Sevcik (2004), and it does not happen immediately. He also believes that the spread of innovation and the opposition to changes has the greatest impact on the process of innovation because it delays it down.

Rogers (2003) argues that the perception of these characteristics by an organization affects the degree of breakthrough technology adoption. If an organization realizes the benefits arising from online commerce, these innovations will be considered when additional technologies are available.

Innovation is quicker adopted in companies having internet access and information technology than in those without. The theory supports the present research, which shows how technological changes influence performance.

2.3 Technological Changes and Performance of ICT Firms

The benefits of technology have been found to widespread in general. Several researchers concur that technology use increases productivity, enhances cash flow and bolster competitiveness by attainment new clients (Abou-Shouk, Megicks, & Lim, 2020). Electronic commerce has the ability to significantly increase company productivity more specifically when used in business to business relationships, it is claimed to streamline corporate procedures and create a lot of savings. These technologies possess immediate impact by automating routine tasks including sales, distribution, after-sales service, and stock control (Savrul, Incekara, & Sener, 2019).

By lowering costs, enhancing product quality, gaining more customers and suppliers, and innovating in how they offer their products or services, technology allows businesses to gain new competitive advantages. Small businesses may become more competitive if they used ecommerce business concepts. Ecommerce would reduce their operating and transaction expenses, as well as their advertising costs. It would also increase communication and coordination with clients, suppliers, and partners, as well as reduce transportation barriers (DiRusso, Mudambi, & Schuff, 2021). Technology has the ability to provide a competitive advantage to small and medium businesses. Technology offers a low-cost means of reaching out to clients all over the world and competing on an equal footing with huge corporations.

The advantages offered by technology are believed to be one of the factors that have made technology popular for businesses and this can be seen from the significant growth of technology users year to

year (Nkwo, Orji, Nwokeji, & Ndulue, 2020). According to Shemi and Procter (2019), electronic commerce has radically transformed the business environment's dynamics and the way people and companies conduct business. Technology has the ability to provide a competitive advantage to small and medium-sized businesses. Technology has been considered as a catalyst and an innovation that may help SMEs in both developed and developing nations improve their entrepreneurial traits.

2.4 Empirical Studies and Knowledge Gaps

Within the European Union for example, Matejun (2020) investigated influence of technology innovation potential on small micro enterprises performance. This research utilized a sample of 1,741 firms. Its findings demonstrated a moderate level of innovative potential of the targeted firms increases in direct proportionality with growth of firm size. The firms' innovative technology potential had a significant positive qualitative effect than quantitative performance. This study presents a contextual gap as it was conducted in a developed context. The study also presents a conceptual gap as it did not focus on technology change. Methodologically, the study relied on quantitative data and therefore might have failed to capture some important dimensions that can be analyzed qualitatively.

In Brazil, Russia, China, India and South Africa, Cui, Jiao and Jiao (2021) investigated how engagement in technological innovation in these countries has shaped their organizational attributes. The study was anchored on organizational ecology theory. This theory assumes that a businesses' involvement in technological innovation is affected by factors such as organizational resource and capability which involves employee training. The study findings showed that firms that trained their employees stood higher chances of engaging in technological innovation. This study presents a contextual gap as this study was conducted among countries whose context is different from Kenya. In addition, the study presents a conceptual gap as the influence of technology changes on

performance which is the current research focus was not addressed. The study also presents a methodological gap as it was quantitative in nature leaving a gap on the qualitative aspects.

Mwangi and Wekesa (2017) investigated the impact of technical variables on Kenya Airways' overall performance. In this research, 74 respondents were chosen at random using stratified random sampling. One of the main ways the researcher gathered data was through administering a questionnaire to participants. There was a mix of content analysis and descriptive analysis done. According to the findings of the research, technical variables have an impact on Kenya Airways Limited's overall performance. Kenya Airways must embrace cutting-edge technology in the aviation sector. This research has a contextual gap since it focuses on Kenya Airways, which operates differently from Ecart Services Kenya Limited.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

A research technique is required to set up the study variables' alignment. This chapter presents an overview of the research design to be used in this study. The chapter includes details on data collecting, analyzing of data, and also presentation methods that will be utilized in the research. The chapter begins by presenting the research approach that will be used in studying the connection between performance and technological changes in E -Services Online Store Kenya. The research design is the timeline of processes which lead to a research topic being answered.

The study discussed the gathering and analysis of data. The data to be collected focused primarily on the research topic and was gathered via an interview guide that has been designed to address this particular inquiry. The interview guide is preferred as it contains open ended questions and therefore gives the researcher to prod the respondent further and by so doing gain additional information.

When it comes to data processing, the investigator provided a thorough explanation of the methodology to be used in handling the gathered data so that meaningful information may be produced. Content analysis was used to identify changes in technological and how they influence organizational performance of E -Services Online Store in Kenya. The process involved derivation of themes in the collected data.

3.2 Research Design

As a technique, research design is repetitive procedure that is acquired by a researcher overtime and it enables one to answer questions in a correct, effective, objective and cheap manner Cooper and Schindler (2014). Additionally, research design improves the research capacity in designing an operational plan that embarks on several techniques Khan (2008). Khan continues to describes the use

of research design to accomplish the tasks needed while employing adequate valid, objective and reliable answers to research concerns

To ensure the validity, accuracy, objectivity, and economy of research, you should use a rigorous study design. When conducting a research study, one should strive to design a study to better conceptualize an operational plan and enable the researcher to utilize a number of different techniques. Equally, it is crucial to ensure the procedures utilized are satisfactory enough to obtain accurate, objective, and accurate answers to the study questions.

The research employed a case study research design to reach valid reliable answers. A case study is used to investigate an entity, person or phenomena (Cooper & Schindler, 2014). The inclusion of a thorough evaluation made the case study appropriate in the research. Another factor for the case study is the ability focus on depth analysis instead of broad analysis and its comprehensive examination of distinct research unit. A case study by Yin (2018) highlights how diligent monitoring of social units can highlight a firsthand examination of a topic with unrecognisable features. Therefore, a case study offers to examine almost everyone to unearth patterns of behaviour.

3.3 Data Collection

This research used primary data. The interview guide provided in Appendix I was the main mode of data collection. The researcher chose interview guide for this case study because it is able to collect information from respondents and provide a better grasp of the research findings. Interview guide also provided the researcher with more up-to-date information and information that may not have been obtained by previous data collecting methods.

The targeted respondents for this research are seven senior managers at E -Services Online Store in Kenya namely; the CEO, strategy manager, business manager, ICT manager, risk manager marketing

manager and operations manager. The interview guide was split into several segments. The first focuses on the bio data of the participants, while the remaining parts concentrate on research goals. The researcher asked open questions whereby, if no answer is obvious, then it gave rise to additional inquiries and this warrants that the investigative tool collected information from participants as anticipated.

3.4 Data Analysis

This research was a case study. The chapter also emphasized the data gathering technique, which depended on primary data. The research targeted senior managers in E -Services Online Store Kenya who are in a better position to shed insight on technological changes and organization performance. The chapter also demonstrated how content analysis was used to analyze data.

Qualitative analysis was conducted using content investigation. All the input collected using the interview guide was scrutinised qualitatively providing a rough overview of how the data categories were linked. Qualitative analysis was chosen for the study because the researcher was able to describe, interpret, and critique the research topic, which is gruelling task to produce quantitatively. Content analysis was used to evaluate the responses, draw conclusions, and provide recommendations. The process of content analysis included getting to know the input, allocating preliminary data codes to outline the content, examining for similar concepts in the codes through countless dialogues, exploring similarities, defining and identifying the issues, and finally portraying interpretations from the results

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The study's objective was to examine the effect of technology changes on performance of E -services online store in Kenya. In this section, the analysis of results is presented based on the objectives. Data was collected through face to face interviews from Senior Managers at Ecart Services Kenya Limited, Kenya. The qualitative data was subjected to content analysis and the findings used to draw inferences. The findings were as discussed below;

4.2 Technological Changes at E -SERVICES ONLINE STORE Kenya

The study sought to examine the trends with respect to use of different technological applications in response to changing customer preferences and digitalization. The respondents stated that E -Services Online Store had witnessed astounding revolution in the use of platforms from use of social platforms such as Facebook for marketing and trading to development of its own eCommerce website application to facilitate trade. In his response, the operations manager stated *“we have had to transition gradually more so in the field of application and software, our customers are seeking for simplicity and variety which is convenient to deliver through a tailor made platform hence through the E - Services Online Store application, customers are able to view our products, discounts, offers, make inquiries and arrive at informed decisions”*

Another major breakthrough at E -Services Online Store was the use of business intelligence and analytics for reporting through the use of Microsoft Power BI Software. This entailed extensive use of data to figure out market and business trends which was crucial for decision making and enhancement of organizational performance. The respondents lauded the organization for introducing

the data entry unit that is responsible for data gathering, integration and visualization of different market indicators on a weekly basis which was useful in developing predictive models and responding effectively market changes.

The respondents further detailed significant improvements in security through various mechanisms such as integrated systems where customers can access various resources in the platform by mail and see the security of all the systems. The respondents reported increasing data privacy concerns from customers arising from data usage concerns by the consumers who felt that the information fed into the platforms such as emails, contacts and shopping trends was not secure. The ICT manager was quoted saying, *“the matter of information security has become a crisis to the organization, customers come complaining that they are receiving notifications of items they shopped through our website and want to attribute the blame to us. As the saying goes the customer is always right, we have strengthened our security systems including a review of our privacy policy to ensure that the customer is confident that the information is safe and secure”*. To avoid excessive downtimes in the application, E -Services Online Store was found to have deployed Incapsula which is a cloud based delivery platform. In addition to protecting the application against malicious attempt to disrupt normal traffic in the website, the company had attained cost reductions through low maintenance and continuous detections of risks hence diverting resources to other functions of e-commerce rather than security.

It also emerged that E -Services Online Store is using virtual internet to respond to customers and create more traffic to the application, respond to customer needs and market its brand in a sincere, creative and visually engaging manner. The ICT manager reiterated the use of virtual machine to facilitate operations without necessarily deploying many different hardwares and excessive overhead. In his statement he argued *“we had to adopt virtual machine to eliminate the customer pain points of having to download several applications to access some of the features in the platform, currently, an*

android user, Ios user or even a Microsoft user can download the E -Services Online Store app to his or her phone which is an improvement from the previous where it was only limited to android users”

According to the findings, E -Services Online Store uses Amazon Web Services (AWS) which blends different infrastructure as a service, platform as a service and packaged software as a service offering to enhance its compute power, database storage and content delivery services. According to the respondents, AWS was adopted to centralize authentication of all E -Services Online Store users from the 9 companies operating in the 22 different countries given the fact that each had its own data base and technology implementation procedures. The deployment of AWS had helped the company to design an architecture that does not require a server or dedicated time yet delivers the best services and an intelligent pricing model. According to a respondent who requested for anonymity, AWS had reduced duplication, and resulted to centralization where users can login to the apps using the same username and password in the different companies and countries.

The respondents commented increased adoption of technology by customers in ensuring sustainability of e-commerce. As such, E -Services Online Store was found to leverage on social media to for marketing and creation of more traffic to the platform. A report published through the E -Services Online Store platform indicates that E -Services Online Store receives direct traffic from 55.92% and search 37.71%. The social media was mentioned to have made it easier for the customers to obtain information about the company’s product offerings hence building trust, intimacy and customer loyalty. Additionally, the realization that customers seek the best customer experience have compelled E -Services Online Store to Launch technological solutions such as virtual and augmented reality which has brought the store experience to customer’s homes while limiting physical interaction. *“With the technology advancements offered by Ecart Services Kenya Limited, the shopping experience is increasingly becoming frictionless and interesting as the company is introducing more digital*

payment options such as the Ecart Services Kenya Limited Pay which facilitates payment facilitation outside Ecart Services Kenya Limited's main platform” said the Ict manager

In the wake of the Covid-19 pandemic, E -Services Online Store was found to have introduced contactless delivery for prepaid packages on the platform to ensure the safety of the delivery agents and partners. The interviewees attributed this milestone to the newly launched payment platform, the Ecart Services Kenya Limited Pay where the customers made prepaid payments for the products which were delivered without body contact or cash exchange. When interviewed regarding the same, the sales manager said *“the health and safety of our customers and delivery agents is our absolute priority. As part of the strategy to the pandemic, we implemented contactless delivery which eliminates any possibility of physical contact, she added that, convenience, social distancing and cashless payment were crucial in combating the situation”*

The respondents noted that the company's customer acquisition cost was reducing due to the gradual acceptance of online shopping and was reaping big being the biggest player in e-commerce in Kenya. It was well demonstrated that the company was making great strides from its auxiliary services such as Ecart Services Kenya Limited Pay, E -Services Online Store Food, travel bookings and discount vouchers due to increasing number of active customers.

The study established that there was increased adoption of personalization techniques of servicing the customer courtesy of technology. For instance, the respondents stated that the company uses the purchase history of the user to determine the products to be displayed every time the customer visits the website. Additionally, E -Services Online Store was found to have increased the use of cookies to track user browsing history for delivery of targeted or personalized contents to the customer. To understand the preferences of the customer, the respondents acknowledged the use of the E -Services

Online Store ChatBot to assist the customers in making informed decisions and track user preferences on a real time basis.

4.3 Effects of Technological Changes on Functional Areas

4.3.1 Management structure of E -Services Online Store in Kenya

The results established that the technological advances have reduced the labour intensive practices at E -Services Online Store as most functions have become automated hence significantly reducing the labour force. This has resulted to loss of jobs in some units. A respondent was captured saying *“hardly a month goes without the introduction of a new feature which is obviously good for the company in cutting costs but will cost someone’s job”*. Consequently, the employees registered a high turnover rate due to the fear of uncertainty.

A small talent pool was also cited as a consequence of technological changes within the management structure since the dynamism in the company does not attract competent individuals who will take the company to the next step. On the other hand, experienced employees leave the company to seek for greener pastures that have a higher employee retention. Despite the aforementioned cons, technology advancements have accelerated decision making due to a few players in the decision table and the use of data to make decisions. It was reported that decision making was autonomous. As a result, the long hierarchy for decision making had been eliminated and decisions were made by different divisions based on data and facts hence fact implementation of interventions and technologies.

4.3.2 Culture of E -Services Online Store in Kenya

The respondents applauded technology for positive changes in the culture of the organization especially with respect to adoption of new progressive practices. It was observed that the organization was more attracted to young and energetic workforce who were considered to be more innovative and flexible in accommodating new ways of doing things and embracing changes in technology. Working under one roof in open office spaces was also the new norm at E -Services Online Store and this was meant to encourage more employee engagement, inculcate the spirit of teamwork, cut on costs of partitioning offices and sharing of resources resources such as telephones. Remote working was another new practice cited by the respondents where the respondents were allowed to work from home or any other place without necessarily reporting to the office as long as the deliverables are met. In light of this, the overall productivity per employee had increased due more time spent working than time spent travelling to work in traffic. When interviewed on the subject, the operations manager said *“I find the new norm of working remotely as beneficial to both the company and myself since I save myself the hustles of coming to work and direct the same to working and in my view the company also cuts on the expenses of cleaning my office every day, serving tea and so forth, hence everybody stands to win”*. In another submission, it was noted that technological changes have created more self-accountability since it is easy to track the undertakings of every person. Practically, the users were expected to login to the systems before executing any task thus will be committed to perform the expected duties without malice as any attempts of sabotage were noticed. Finally, less emphasize was directed to the dress code with the employees being allowed to dress in casual even during the mind. This was largely attributed to a digital mind-set where performance was key hence the employees were allowed to be in an outfit that makes them most comfortable and productive at work.

4.3.3 Human resources of E -Services Online Store in Kenya

The study established that the growth of E -Services Online Store family has led to recruitment of more personnel to handle different functions. The black Friday events have for instance increased the number of orders hence the company had engaged more riders to make deliveries. The increasing customer base has added to the complexities of managing inventories thus more personnel had been deployed the warehouses to control the inventories to perform duties such as inventory automation (serialization), invoicing and inventory tracking. The increasing competition has also compelled the company to recruit a dedicated team in charge of promos and marketing.

In her statement, the operations manager stated that despite the increased use of digital marketing, they still needed people to develop the contents to be broadcasted in the digital platforms such as the social media hence a dedicated team was needed for the same. Nonetheless, the respondents appreciated significant reduction of personnel in other units to reduce operational costs and leverage on technology. It was also stated that the company's decision to exit some markets such as Tanzania had a human resource implication through loss of jobs. This was in the backdrop of the company's efforts to evaluate their positions in different markets, scaling operations down or intensify the application of technology. Apart from the company led initiatives, the human resource function at E -Services Online Store had been hit by high turnover due to the dynamism in the industry. It also came out that the employees were empowered through quality learning via well facilitated trainings. Finally, continuous digital advancements led to creations of new positions and job opportunities. For instance, the recent launch of E -Services Online Store ipay created two 2 positions to tackle the 14 roles.

4.3.4 Infrastructure of E -Services Online Store in Kenya

When asked whether technology changes have led to any changes in infrastructure, the respondents stated that the growth of ecommerce has led to development of infrastructures that meet the

international warehousing standards. They further reiterated that the company had opened hubs where picks up are done and set drop off hubs close to the sellers. Another major milestone was the decentralization of the collection and delivery points. The company had also invested in more trucks and delivery bikes timely delivery and efficiency.

To attain efficiency, most of the functions have been decentralization from the main collection stores which have meant the establishment of more infrastructure in the new areas. Notably, significant investments have been made by the company in building a more robust network infrastructure with through the installation of 400 Cameras, integrated with all modules. The incorporation of a central view with huge capabilities to detect technological change and provide instant technology solution change was another remarkable milestone. Massive communication infrastructure has been laid in the company's call centre which can accommodate up to 150 personnel. The company was also found to have deployed more servers to track order movements and network. Finally, the company has made substantial improvements in research and development to expand online boundaries and continuously discover new applications of e-commerce.

4.3.5 Products of E -Services Online Store in Kenya

As to whether technology had driven any changes in product offerings at Ecart Services Kenya Limited, the study established that E -SERVICES ONLINE STORE which initially begun as an electronics platform now offers a range of items including groceries, health and beauty products, baby products, computing, sporting goods and books among others. The ability to add items into Ecart Services Kenya Limited's checklist was attributed to the expansion of technology across its platforms which have optimized the website capabilities allowing it to deliver app like experiences to the users

prompting them to seek more services through the application. In his response, the ICT manager said more than one million different products are now available in the application.

4.3.6 Production of E -Services Online Store in Kenya

According to the respondents, when E -Services Online Store started off, they were strict on the content to be uploaded on the website hence the sellers would bring images of the samples where the company would take photos and upload which was found to be unsustainable and un- scalable. In recent past, sellers are allowed to eventually do within there standards,e.g white background, training, quality control. Product approvals was done using a back end system linked to account where the seller is able to view the approval status on a real time basis and get feedback promptly whether the products will proceed to the market or not once fully vetted. see orders and fulfil. *“the fact that the customer actually gets to view the actual item to expect instead of a sample is an important step in the E -Services Online Store Value chain with respect to delivering what the customer expects and reducing the number of defects and returns”*

4.3.7 Finance of E -Services Online Store in Kenya

When asked about the transitions in finance, the respondents argued that tremendous changes had been witnessed in the area of finance with remarkable improvements from writing cheques to pay sellers to opening up seller payment accounts e.g bank transfers, MPESA. Shortened payment periods for the sellers was also mentioned courtesy of faster verification and clearance processes. The respondents further cited the adoption of digital payment and fintech platform E -Services Online Store Pay which facilitates online payments and the distribution of a broad range of digital and

financial services. Technology changes have also improved Audit trails through easy consolidation of financial statements improving for processes.

4.4 Technological Changes and Performance

In your view, how has the performance at E -Services Online Store been as a result of technological changes?

When asked about the indicators of performance that were as a result of technological change, the respondents highlighted the increased number of customers seeking services through the e-commerce platform which had translated to more sales and revenues. In the same vain, increased number sellers marketing and transacting their products through the platform was a clear indicator of higher performance. Being an online platform, the respondents cited significant improvements in the functioning of the system and introduction of new features that give the customer an ultimate shopping experience e.g flash sales that presented more challenges ago has fully been streamlined. Additionally, it came out that several improvements had been realized in delivery which were now faster with added options such as contactless delivery. In his response the operations manager was quoted saying “*when we started, the customers picked the orders from the stores, then we moved to making deliveries and now we are already making contactless deliveries, the lead time for delivery has also significantly reduced*”. Other factors used to gauge performance faster return rate which had significantly improved but still with a few issues on how soon to return a defective product and the duration of refund or replacement.

The responses on whether technological changes have improved the financial performance of E - Services Online Store were mixed and varied. Looking at it from a broader perspective, the ICT sector

in which E -Services Online Store is accustomed is a great player and has been making annual growth in GDP contribution hence some points are scored from that perspective. With respect with operational excellence, most of the functions were automated hence elimination of labour intensive processes and operations translating to cost cuts and revenue gains. Investment in programmers and web developers have led to discovery of more lean and efficient processes translating to more areas of service provision where the company can tap into to generate more revenues

In an assessment of whether technology changes have led to improved non-financial performance, the respondents were undisputedly in concurrence mentioning different areas of such improvements. Improved customer satisfaction due to the seamless service offerings including affordable products, cashless modes of payment and home deliveries were all possible courtesy of technology. This in turn resulted to a higher conversion rate. The growth in the number of customer volumes was also an evidence of high customer retention rates. The respondents argued that the company has progressively recorded a reduction in product defect percentage due to verifications and qualify assessments enabled by technology. Teamwork was mentioned as another great strength in boosting performance where the employees are dedicated to learning and applying the technologies on a continuous basis.

In an exploration on whether E -Services Online Store achieved increased innovativeness as a result of technological changes, the respondents mentioned various areas of innovation such as fintech or digital payment where the company uses Ecart Services Kenya Limited pay for digital payments. Other features such as beauty shades allowed the users to shop the correct product by allowing users to take a photo and the product will generate a look of how the customer will appear in the specific shade. The use of On Time Password (OTP codes) was also cited as a great innovation where the customer uses the code to track the delivery of the product and only presents the code to the delivery

agent at the time of receipt to confirm that he or she is the designated recipient. This has boosted the delivery security.

Another remarkable innovation by E -SERVICES ONLINE STORE is the recent investment in electric bikes for delivery which is cost saving for customers with respect to reduced delivery charges and crucial in protecting the environment as well. In support of the company's innovativeness in logistics the respondents stated that Ecart Services Kenya Limited's logistics arm was exclusively available to vendors on its marketplace. The company was in the process of opening up its logistics services to third party users across all the countries where it registers presence to quickly gaining traction by winning potential customers through its years of experience in logistics, from product handling to last mile delivery.

When asked whether customer base of E -SERVICES ONLINE STORE has improved as a result of technological changes, the respondents stated that there was a broader customer base attributed to increased internet penetration. The increasing technology uptake and acceptance of online shopping due to the convenience it offers. The use of promotion initiatives to such as the E -SERVICES ONLINE STORE black Friday to capitalize sales.

When asked about the customer base, the operations manager said, *“it is undeniable that the e-commerce sector is experiencing increasing competition due to entry of many players but we continue to be the leading industry players in Kenya due to our amazing discounts, quality products as well as a well-established infrastructure. Having said this, it is automatic that customers will continue to stream into the platform to source our distinct and unique products”*

4.5 Discussion of Findings

E -Services online store in Kenya operate in an environment of continuous technological changes which has necessitated the need to develop responses to these changes to enhance its performance in the midst of the turbulence E -Services online store established its operations in Kenya in the year 2012 and since then technological advancements have been happening on a continuous basis. The study sought to analyze the technological changes E -Services online store Kenya and the findings are presented above. From the results it is evident that changes have occurred in various areas of technology application ranging from the use of social media platforms to introduction of various applications to enhance the capabilities of the e-commerce platform. This include the use of business intelligence and analytics for reporting, use of integrated systems and On Time Passwords (OTP) to enhance security, the use of virtual internet to respond to customer needs, contactless deliveries, E -Services online store pay and AWS among others. These changes have been implemented to respond to the changing customer needs and to survive in the constantly evolving technological environment. The adoption of these technologies imply that E -Services online store understands the advantages offered by these technologies.

The results agree with Nkwo, Orji, Nwokeji, & Ndulue (2020) the growth of technology in firms on an annual basis is motivated by the need to survive in the highly dynamic business environment and Shemi and Procter (2019) who argues that technology has radically transformed the business environment's dynamics and the way people and companies conduct business.

In an assessment on the extent to which technology has affected different aspects of the organization. It emerged that technology changes had resulted to radical shifts in the management structure demonstrated through changes in human resource structure as a result of dropping of labour intensive functions substituted by automation, cultural changes through practices such as remote working and more accountability and a more experienced human resource function to manage the increasingly

sophisticated e-commerce business. Additionally, the significant investments had been dedicated towards physical and network infrastructures, improvements in finance through digital payments as well as major changes in products and production demonstrated through variety and seamless transactions. From the discussion, it is clear that technology changes have occurred in nearly all functional areas of E -Services online store which support the finding by Brown and Eisenhardt (2008) that the unpredictable nature of the technological change provides a situation where management have to always be concerned about the continuous and sometimes substantial changes.

It emerged from the results that technological changes had improved the performance of the organization with respect to various indicators such as improved customer base, higher innovation, some aspects of financial performance such as increased sales, some components of non-financial performance such as higher conversion rate and customer satisfaction. The benefits of technology were found to widespread in general. These findings concur with Abou-Shouk, Megicks, & Lim, (2020) that technology use increases productivity, enhances cash flow and bolster competitiveness by attainment new clients and Savrul, Incekara, & Sener (2019) that technologies possess immediate impact by automating routine tasks including sales, distribution, after-sales service, and stock control.

CHAPTER FIVE: SUMMARY CONCLUSION AND RECCOMENDATIONS

5.1 Introduction

The chapter presents a summary of findings, conclusions, recommendations. The section further outlines the limitations and suggestions for further studies

5.2 Summary of Findings

The study established that various technological changes have occurred at Ecart Services Kenya Limited. This include use of social platforms such as facebook for marketing and trading to development of its own eCommerce website application to facilitate trade. Another major breakthrough at E -Services online store was the use of business intelligence and analytics for reporting through the use of Microsoft Power Software. This entailed extensive use of data to figure out market and business trends which was crucial for decision making and enhancement of organizational performance. Security improvements have also been realized through various mechanisms such as integrated systems where customers can access various resources in the platform by mail and see the security of all the systems. Other areas of new technology application include It the use of virtual internet to respond to customers and create more traffic to the application, respond to customer needs and market its brand in a sincere, creative and visually engaging manner and the Amazon Web Services (AWS) which blends different infrastructure as a service, platform as a service and packaged software as a service offering to enhance its compute power, database storage and content delivery services. Last but not least, there was launch of new payment platform namely the Ecart Services Kenya Limited Pay which facilitates digital payments and increased personalization techniques of servicing the customer courtesy of technology.

On how technology has influenced various aspects of the business, the study found that the impact of technology had been felt in nearly every functional area of the business. In the management structure, the results established that the technological advances have reduced the labour intensive practices at E -Services online store as most functions have become automated hence significantly reducing the labour force. Changes in culture through practices such as remote working, flexi work arrangements and more accountability and responsibility had been realized courtesy of technology. The human resource function had also undergone revolutions through creation of more opportunities in some sections such as deliveries and loss of opportunities in some technical areas due to automation which have resulted to high turnover rates. The changes in infrastructures was paramount with huge investments in the network infrastructure such as warehousing standards, decentralization and robust communication infrastructures. Technology changes were also found to have expanded the company's handling capabilities hence more product offerings while significant innovations such as E -Services online store Pay and improved audit trails have taken place in finance.

It emerged from the results that technological changes had improved the performance of the organization with respect to various indicators such as improved customer base, higher innovation, some aspects of financial performance such as increased sales, some components of non-financial performance such as higher conversion rate and customer satisfaction. The benefits of technology were found to widespread in general.

5.3 Conclusion

The findings prove that rapid technological changes have occurred at E -SERVICES ONLINE STORE Kenya since its introduction in 2012. The findings reveal that the technological changes have has an impact on different functional areas at E -SERVICES ONLINE STORE and have to a large extent transformed the manner in which services are delivered. Whereas the changes have resulted to

significant improvements especially on the part of improving customer experience through for instance facilitating digital payments and implementation of more security features during deliveries through OTP, the company had registered losses over the last two years citing operational challenges.

Overall, the technological changes in the different functional areas such as finance, production, infrastructure and management structure and culture were good signs of growth and sustainability except for a few areas in for instance human resource where the changes were the cause of higher turnover and lower retention which led to loss of talent needed to maintain the technological pace for the company. Despite the milestones made in the uptake of technology, the making of losses instead of profits which is in essence the key measure of performance implicate that the company is missing out on something and must reflect on the benefits derived from the different technologies and ensure that the technologies implemented translate to profits by the company.

5.4 Recommendations

The study makes the following recommendations based on the conclusions;

The company should consider a balance between technology investments and results to maintain excellent performance. Since E -Services online store is undisputedly the leading e-commerce platform in the Country, it should optimize on the existing technologies to reap maximum benefit rather than spending resources attempting to replicate technologies that increase costs and may not translate to results in the short-run which the investors are interested in. This will spare sufficient cash flows needed in running daily operations of the business in a seamless manner and respond to customer needs hence effectiveness and higher profitability.

The study established that technology changes have resulted to layoffs and high turnover in the human resource function hence loss of talent that is useful in steering the company to the next level. To

ensure high employee retention and lower turnover, the company should innovate new areas of production and service to create more jobs hence retaining the best talent. The handling of customer information should be treated seriously to avoid loss of trust which may reduce uptake of services from the platforms. This may be achieved through strict adherence to the privacy policy and investment in software to enhance the security of the data and prevent access from unauthorized persons.

The handling of complains related to defects and returns appeared to present a challenge to the company and was a major cause of conflict between the customer and the company. To minimize the instances of such occurring, the company should intensify quality checks on products from suppliers to ensure quality standards are met and that the specifications of the customer are fully considered during orders. Deliveries should also be made using trusted agents with excellent handling capabilities and infrastructure to avoid damages on products during deliveries. If the company cannot handle deliveries, then they may outsource third party delivery agents who may offer the service better. Features such as the OTP are a milestone, but more needs to be done. Better handling of returns may also involve adopting the return policies of successful e-commerce companies such as Alibaba.

5.5 Limitations of the Study

Resource and time constraints were among the major challenges faced in the study. The study only focussed on E -Services online store and targeted the top management mainly the managers hence the results may be biased. Focussing solely on E -Services online store limits the scope of the study hence better results would have been obtained if other e-commerce players in the country were considered. The respondents were also not willing to provide some information regarding some aspects which they considered as their main sources of competitive advantage which limits the understanding of various aspects of technology regarding the company thus the conclusions and recommendations

made may not provide an elaborate guide to fix the problems. Due to remote working, some respondents were not available hence the researcher had to reschedule the dates.

5.6 Suggestions for Further Studies

The study examined the effect of technological changes in performance at E -SERVICES ONLINE STORE Kenya limited. Future studies may consider other e-commerce companies in Kenya or expand the scope to other E -SERVICES ONLINE STORE outlets in Africa to draw comparisons. In such a scenario, secondary data may be considered.

For more comprehensive insights and conclusions, similar studies examining technology changes and performance can be executed using other analytical techniques supporting the use of quantitative data such as regression analysis, factor analysis and the results compared and contrasted for more robust inferences to be made.

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APPENDICES

Appendix I: Interview Guide

This interview guide is designed to collect data that will help in better understanding technological changes and organization performance at E -Services online store Kenya. The data collected by this interview guide will be held with strict confidentiality.

The purpose of this interview is to:

- i) Establish the technological changes facing E -Services online store in Kenya.
- ii) Establish the effect of technological changes on organization performance of E -Services online store Kenya.

Appendix ii: List of firms in the E-commerce industry in Kenya

The number and size of e-commerce platforms in the region has gradually increased over the last 5 years making Kenya ranked as the 88th fastest growing e-commerce economy in the world according to the 2020 UNCTAD commerce index.

Some of the e-commerce firms include; Mydawa, Masoko, chekikenya, Gadzone, Naivas online supermarket, Sky garden, Jijikenya, Kilimall among others.

PART A: RESPONDENT PROFILE

- 1) What is your current position in the firm?
- 2) For how long have you been with the firm overseeing this function?
- 3) Are you involved in strategies of the firm?

PART B: TECHNOLOGICAL CHANGES AT E -SERVICES ONLINE STORE KENYA

4) Please describe some technological changes facing E -SERVICES ONLINE STORE in Kenya?

5) How has these technological changes affected the following aspects?

- Management structure
- Culture
- Human resources
- Infrastructure
- Products
- Production
- Finance

PART C: TECHNOLOGICAL CHANGES AND PERFORMANCE

6) In your view, how has the performance at E -SERVICES ONLINE STORE been as a result of technological changes?

7) Can you conclude that technological changes have improved financial performance in your firm?

8) Can you conclude that technological changes have improved non-financial performance in your firm?

9) Has E -SERVICES ONLINE STORE achieved increased innovativeness as a result of technological changes?

10) In your view, has customer base of E -SERVICES ONLINE STORE improved as a result of technological changes?

Thank you for your co-operation