2021

Effects of digitalization on growth of life insurance firms listed in the Nairobi Securities Exchange in Kenya.

Mulumbi, Aggrey
Strathmore Business School
Strathmore University

EFFECTS OF DIGITALIZATION ON GROWTH OF LIFE INSURANCE FIRMS LISTED IN THE NAIROBI SECURITIES EXCHANGE IN KENYA

AGGREY MULUMBI

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION OF STRATHMORE UNIVERSITY

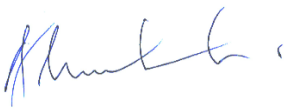
JULY 2021

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other university. To the best of my knowledge and belief, this dissertation contains no material previously published or written by another person except where due reference is made in the thesis itself.

AGGREY MULUMBI

MBA/99723/17

Signature  **Date: 22nd July, 2021**

APPROVAL

The dissertation of Aggrey Mulumbi was reviewed and approved for examination by:

DR. CHRISTOPHER OUMA ONYANGO

LECTURER,

STRATHMORE BUSINESS SCHOOL

Signature:  **Date: 22nd July , 2021**

ACKNOWLEDGEMENT

I wish to express my gratitude to the faculty team of Strathmore Business School, who has worked tirelessly to help me through this project. I reserve the greatest appreciation for my Supervisor Dr. Christopher Ouma with whom I have worked very closely in this project. Indeed, it would not have been possible were it not for his tireless guidance and counseling. I would also acknowledge the insightful input from Dr. Stella Nyongesa on making the amendments to the document following feedback from the final defense panel. The project idea was borne out of the desire of my then boss, Zahid Mustafa, who at the time was the Retail and Business Banking Director at Barclays Bank Kenya (now Absa Bank Kenya), who had a nagging desire to use our Bancassurance business to pioneer digitalized insurance distribution in the Kenyan market. Lastly, I am most thankful to my dear wife Rose who supported and encouraged me throughout the period of the study. I am also most grateful to our son Kelly, a schoolmate at the time, (then a final year Bachelor of Computer Science and Informatics student at Strathmore University), who made several rides with me to and from the Strathmore University, Ole Sangale road; and who always fixed my laptop. Our daughter Shirley, a beginner at the prestigious Stanford University has set for me a decent challenge to register for and complete my PhD course before she graduates in 2023. Our last born Rigobert Song, who was preparing to do his KSCE exams at the time, did undertake to get a better mean grade in his exams than I will achieve in this course. With his results now out, I look forward to outperforming him. With the help of God, I surely cannot let them down.

ABSTRACT

The purpose of this study was to examine the effects of digitalization on growth of life insurance firms listed in the Nairobi Securities Exchange in Kenya. To achieve this purpose, the study was guided by three specific objectives which were to; determine the influence of internal efficiency on growth of life insurance firms in Kenya, establish the effect of external opportunities on growth of life insurance firms in Kenya, and determine the effects of disruptive changes on growth of life insurance firms in Kenya. The study was based on the Competence-based theory of the firm, Porters Five forces theory, and Disruptive innovation theory. A descriptive survey research design was adopted where the target population was 5 life insurance firms listed at the Nairobi Stock Exchange make up the units of observation. The units of analysis in the study were 105 management staff consisting of chief executives officers, department heads, line managers, and team leaders. Census sampling approach was used to have the final sample size of 105 respondents from which 86 respondents were reached. The data was collected using a structured questionnaire which was pilot tested among a sample of 5 respondents to determine its reliability. The data was analyzed using descriptive and inferential statistics where the Pearson's r correlation indicated positive and significant association between disruptive changes and external opportunities as dimensions for digitalization on growth of life insurance firms. However, the internal efficiency dimension of digitalization did not have any association with growth of life insurance firms. The study concludes that internal efficiency does not have any effects on life insurance firms' growth. The study thus concludes that external opportunities and disruptive changes in the insurance industry influence firm growth. The study therefore recommends that life insurance firms should develop a digitalization strategy which is based on the market changes in the industry so that the model can be used to respond to these market changes and therefore enhance the internal processes of the firm. That life insurance firms should design their digitalization models to enhance user experience because this will result in enhanced customer loyalty thus sustaining their market share and contributing to their overall growth. That life insurance firms should reward innovation in the company since this will motivate staff to create and come up with new life insurance products and services that can create new market segments which may result in competitive advantage of the firm.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

AKI	Association of Kenya Insurers
CAGR	Compound Annual Growth Rate
CbTF	Competence-Based View of the Firm
CEO	Chief Executives Officer
IMC	Investment Management Company
IoT	Internet of Things
IRA	The Insurance Regulatory Authority
IT	Information Technology
KES	Kenya Shillings
M&A	Mergers and Acquisitions
NSE	Nairobi Stock Exchange
RBV	Resource-Based View
ROE	Return on Equity
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for the Social Sciences
SU-IERC	The Strathmore University Institutional Ethics Review Committee

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

The combination of digital technologies in the daily lives of people has been defined as digitalization where most of the activities we perform today can be digitized (Mahalder & Bhadra, 2015). This in the literal sense alludes to the creation of a world dependent on technology. Mahalder and Bhadra (2015) define digitalization as the computerization of jobs and systems for accessibility and ease. It means turning interaction, communication, and business models into digital models. This does imply the integration of physical and digital consumer services and integrated marketing or smart manufacturing with a combination of manual, semi-autonomous, and autonomous operations (Garner, 2013).

Gatzert and Osterrieder (2020) refer to digitalization as a complete trend with a wide range of economic implications and distinguish it from digitalization is used for technical investigations. According to Gartner (2013), in business, digitalization tends to be used in connection with enabling, to improve or transform business models and functions or business operations, activities and processes by deploying technologies and wider context and use of data that has been digitized transitioned into actionable and intelligence knowledge with particular benefits. At the end of it, digitalization leads to disruption, a shift in power and relationships. Digitization on the other hand is about the process of automating the present paper-based and manual processes enabled by digitization of information to digital to analog format (Gartner, 2013). Digitization is an important precursor to digitalization.

In the insurance sector, digitalization is the best and easy way to communicate with customers and the companies in the insurance sector are thus leveraging digitalization as a strategy to enhance performance (Kishori & Kumaran, 2019). It is the advanced technology of telecommunication in the insurance sector, and it is used to expand the business level of stage and also improve the customer level. This is increasing the financial position of the company and customers, it also used to increase the customer satisfaction about the digital insurance (Kishori & Kumaran, 2019). In the insurance sector digitalization is facing both merits and demerits. The global investments in

insurance digitalization increased and it signified strong attention to digitalization in the insurance industry (Łyskawa, Kędra, Klapkiv, & Klapkiv, 2019).

Companies are able to improve their quality of service and reach through digitalization. However, banks and other financial institutions have already established themselves in digitalization phase, but insurance industry was lagging (Acharya & Hebbar, 2016). Although digitalization has had a substantial transformation in many sectors, sector commentators believed that the change of the insurance sector has been late and it is yet to exploit the entire power of digital technologies (Muller et al., 2015).

Digitalization in insurance sector has become need of the hour. It makes the key operations and back-office functions more efficient and agile. Modern insurance market is driven largely by new consumer demand for simplicity, self-service, transparency, and choice. Digitalization is made at both supply side and demand side. Changes due to digitalization in supply side (company) are increased use of internet, mobile and social media to inform the offers, due dates and changes due to digitalization in demand side (customers) are, more informed and more demanding customers, who have more choices (Acharya & Hebbar, 2016).

Digitalization has the capability to transform the value chain and business model of insurers. There are many actors in the market and they believe that digitalization will enhance the creation of value in the supply chain thus bringing in new channels of interaction, new products; new business processes, and also contributes to facilitating consumer loyalty which is becoming prominent in the insurance sector (Bengtsson & Broström, 2018). In Sweden, conventional insurance companies have relished the unchallenged access to customers. However, the digitalization of the industry has seen the entry of startups that are technology driven have disrupted the competitive environment of the insurance industry. These changes have consisted of altering of delivery of insurance and means by which insurance products are presented through digital technologies and tools (Bengtsson & Broström, 2018).

The success in digitalization in Kenya was motivated by a flexible and adaptive regulatory framework, quick improvements in capacity and skills, and financial infrastructure reforms. This transformation can be identified into four stages: the growth of mobile phone platforms; entry of financial of digital platforms for financial services using virtual savings account supported by virtual banking services; utilization

of financial, savings, and transaction operations information from digital financial service providers to develop credit score and estimate microcredit risk and prices; and increase in cross-border payments and global remittances (Osoro & Olaka, 2016).

1.1.1 Digitalization

The concept of digitalization has been examined in the banking sector before and there are several models that have been proposed and studied in the literature. One of these models was proposed by Schmidt, Drews, and Schirmer (2017) who listed strategic management, customer requirements, and end-users of internal organization as digitalization models adopted in organizations. In a later research, Rachinger, Rauter, Müller, Vorraber, and Schirgi (2018) listed three digitalization business models that organizations may adopt, and these are value creation, value proposition, and value capture. According to Ritter and Pedersen (2020), any digitalized business model can be categorized into four components: capabilities, customers, value proposition, and value demonstration.

Digitalization contributes to changes for firms owing to the adoption of digital technologies in the operating environments (Sowmiya & Selvam, 2020). The potential benefits of digitalization include costs being cut to 90 % and turnaround periods enhanced by different degrees. Additionally, doing away with manual and paper processes with software enables a business to collect data automatically which means that these data can also be mined to understand the process performance better, reduce risks, and identify cost drivers (Ritter & Pedersen, 2020). The adoption of digitalization in the insurance sector can thus lead to the growth and the performance of insurance firms in Kenya.

Gatzert and Osterrieder concluded that in comparison to other sectors where digitalization has affected almost everything expect for the product, the core product of insurance forms is affected by digitalization. Ostagar (2018) identified that digitalization in the insurance sector was used for risk management, enhanced customer experience, technology for decision making, innovation in Insurtech, and technology in communicating customers. Hiendlmeier and Hertting (2015) determined that data, mobility, technology, business impact, processes, and analytics as the prts of digitalization for the insurance industry. These are customer experiences that have been digitally enhanced, an all distribution model and channel sales which performance has

been increased using advanced analytics, digital technologies, and big data application in the business, and technology used to create a digital change, and thus resulting in an innovation-ready organization.

Back, Berghaus and Kaltenrieder (2016) on the other hand, defined digitalization as consisting of digital analytics and decision making, strategy, customer centricity, digitize business processes, organize for digital, and technology. On their part, Eling and Lehmann (2018) defined digitalization as consisting of emerging technologies that transform the means through which clients and insurers interact; new technologies that can be utilized to standardize, automatize, and improve the effectiveness and efficiency of business processes; and new technologies used to bring forth chances to change current products and create new ones.

In their research, Parviainen Tihinen, Kääriäinen, and Teppola (2017) concluded digitalization and the aims of digitalization for a firm can be described from three perspectives One, the internal efficiency which is the enhanced means of working through re-planning internal processes and digital means. Second, the external opportunities where an existing business is able to realize new customers, new services are identified, and third is the disruptive change whereby digitalization causes changes in business roles completely. This study used these three criteria by Parviainen et al. (2017) as the constructs to measure digitalization in the context of the insurance sector in Kenya.

1.1.2 Growth of Life Insurance

Life insurance has a significant function in families and individuals financing by giving a hedge against income loss following the death of an income earner (Nderitu, Kung'u, & Gichuhi, 2018). The growth of life insurers has been measured using different indicators in the literature. For example, Arych and Darcy (2020) study in Australia used insurance premiums, penetration rates, and concentration ratios as measures of life insurance firms' growth. Tiena and Yang (2014) used asset size, age profitability and expense ratio, cross marketing, and product diversification as measured of growth of life insurance firms. Afza and Asghar (2010) study on efficiency of the insurance industry in Pakistan identified gross premium revenues as a measure of growth of life insurance firms.

In their research, Ajao and Ogieriakhi (2018) found that growth rate and premium growth are some of the parameters used to measure the growth of life insurance firms. The growth rate of a firm has always been measured by the performance of a firm in relation to total assets of an insurance company. On the other hand, premium growth measures indicate the degree of penetration into the market of insurance firms as it is related to gross written premiums.

In another study, the penetration of life insurance was used as an indicator for measuring life insurance growth in Ghana (Abaidoo, 2015). The above literature indicates that secondary sources of data have dominated the measurement of growth of life insurance firms, and these can be grouped as objective measurements (Santos & Brito, 2012). In this study, however, subjective measures of growth were used which included growth rate, insurance premiums, market penetration, product diversification, and total assets.

1.1.3 Insurance Sector in Kenya

The Kenya Insurance Act (1985) defines business of insurance as the taking upon the liability by way of insurance in relation to personal injury, loss of life, damage or loss, including liability to pay compensation or damage when the event occurs. The players in insurance business include the insurance firms, or insurers, intermediaries, reinsurance firms and loss settlement agencies. The Insurance Act (1985) defines an insurer as a person who carries out insurance business. An intermediary on the other hand refers to an individual who in the course of their career gives an invitation to make a proposal or offer to take action to enter a contract of insurance with a provider.

Insurance business is broadly classified into general insurance and long-term insurance (also known as life assurance) business. According to the Insurance Act (1985), general insurance means insurance business of any class that is long term insurance business. Such classes include property, personal, medical and liability insurance. Life business on the other hand means the taking the responsibility to pay money on death or occurrence of any eventuality depending on the continuance or termination of disability of human life. The products offered under long term insurance include ordinary life, group life covers, and unit linked insurance plans and deposit administration (pensions) business.

The Insurance Regulatory Authority (IRA) is a state-owned corporation under the Ministry of Finance, with the mandate to supervise, promote and regulate the advancement of the insurance industry (IRA, 2019). The Authority's strategic plan includes amongst other things, market, and policy development for enhanced access and inclusion to insurance services and products (IRA, 2019). According to the IRA (2019), in 2018, there were 53 insurance firms consisting of 5 Reinsurance Companies, 215 Insurance Brokers and 8,612 insurance agents of whom 29 were agents carrying out Bancassurance business.

The Association of Kenya Insurers (AKI) reports that of the 53 insurance firms operating in Kenya in 2018, 37 firms were general insurance companies whilst 23 were life insurance firms with the cross section of 7 companies representing composite insurance firms, those doing both life and general insurance business (AKI, 2018). Out of the 23 life insurance firms, 5 are listed in the Nairobi Stock Exchange (NSE). In 2019, the worldwide income from primary life insurance was 2,800 billion, with developing markets contributing 20% which had dropped from USD 2,900 in 2018 (AKI, 2019). The life reinsurance premiums increased to approximately USD 85 billion in 2019 with China, United Kingdom, Canada, and the United States contributing 70% from 62% in 2018 with 17% coming from emerging markets indicating a small drop from 20% the previous year (AKI, 2019).

In 2019, the international primary life insurance increased by 2% in real terms indicting an increase from the last five years average yearly growth despite stagnating in 2018 as reported by Swiss Re estimates (AKI, 2019). In China, an increase in protection products contributes to a 13% increase in premiums in 2019. Other Asian markets reported an increase of 7%. Africa and the Middle East recorded poor growth in life insurance while Latin America reported a growth of 4%. Generally, the Return on Equity (RoE) proxy for profitability of the five listed insurance firms in the NSE was 10% a small increase from that of 2018 (AKI, 2019).

The insurance industry reported a Compound Annual Growth Rate (CAGR) of 7.57% in gross premium income for the past five year (2015 – 2019). Life insurance accounted for 42.30% share of total premium income and the remaining total premium income share of 57.70% was in non-life insurance. The life penetration rate increased to 1.0 % from 0.98 % in 2019. The report, however, shows that life insurance is still behind in

regard to its penetration. As at the end of 2019, the IRA had listed 26 life insurance underwriters and three reinsurers. The top five life insurance companies accounted for nearly 63.5% of the gross premium income over the year (AKI, 2019).

Mudaki (2012) observed that the profitability of the insurance sector in Kenya is weakened due to the rise in mortality rates caused by the rising trend in morbidity, paucity of resources, food shortage and abject standards of living. Consequently, large segments of the population are unable to afford insurance protection as they cannot raise the requisite premiums. Going three decades back, the underperformance of insurance industry in Kenya can be explained by lack of a proper and functioning regulatory framework, and technology. This may be the reason why a number of insurance firms operated without adequate capital. The result of this was that several firms were placed under statutory management and subsequently collapsed (Mudaki, 2012).

According to Nderitu et al. (2018), insurance firms in the country have been accorded major impetus that has led to a change in fortunes, fomenting growth in size and profitability as they embraced technology, which reduced the cost of their products. This has given rise to improvements in the ability to afford insurance products by the customers. Langat, Naibei, and Getare (2017) do recommend that to improve profitability, insurance firms in Kenya need to adopt the best risk management processes starting with avoiding the risk, transfer of risks, adoption of risk control mechanisms, risk acceptance and mitigation practices. All these processes can be greatly improved through the process of digitalization.

1.2 Problem Statement

The insurance industry has been lagged in comparison to the other financial services in terms of digitalization and use of emerging technologies (World Bank Group, 2018). Kishori and Kumaran (2019) argued that digital change in the insurance sector is one of the constraints in its development and is a big opportunity for the industry to re-invent itself. There are several studies that have examined the nexus between digitalization and growth within the insurance sector. In a study conducted in Sweden, Bengtsson and Broström (2018) reported that insurance firms were facing challenges in terms of leveraging their digitalization strategies on increasing customer loyalty. Łyskawa et al. (2019) research found that digitalization in insurance companies

becomes an important phenomenon. It brings new opportunities for business development.

Sowmiya and Selvam (2020) study in India reported policyholders who opposed and were not satisfied on the digitalization drive and were further dissatisfied with the use of internet banking and mobile phone banking. In Egypt, Radwan (2019) study noted that one significate constraint to the insurance sector lack of standardize metrics and methodologies of assessing digital maturity. This results in leading insurance firms experiencing hardships in identifying which areas to give priority of investment or recognition of the convincing parts of the business case for digital transformation.

The evidence from these studies indicates that insurance firms are "missing out" on the opportunities that digitalization plays on company performance, and this is a gap that needs further empirical investigation. These and other studies have however not addressed the effect that digitalization has had on the growth of life insurance in firms, and this is a research gap that the current study sought to fill by contributing knowledge to how life insurance firms can leverage the digitalization trend to enhance their growth. Moreover, there is limited evidence of studies that have examined digitalization in the life insurance industry in the local context; hence this study contributes to this knowledge gap.

1.3 Objective of the Study

The main study objective was to determine the effects of digitalization on growth of life insurance firms listed in the Nairobi Securities Exchange in Kenya

1.4 Specific Objectives of the Study

The specific objectives of the study were:

i. To determine the influence of internal efficiency on growth of life insurance firms in Kenya.
ii. To establish the effect of external opportunities on growth of life insurance firms in Kenya.
iii. To determine the effects of disruptive changes on growth of life insurance firms in Kenya.

1.5 Research Questions

The study sought to answer the following research questions:

i. What is the influence of internal efficiency on growth of life insurance firms in Kenya?
ii. What is the influence of external opportunities on growth of life insurance firms in Kenya?
iii. What is the influence of disruptive changes on growth of life insurance firms in Kenya?

1.6 Significance of the Study

The findings of this study are intended to benefit various stakeholders in the life insurance industry. The Government of Kenya and the Insurance Regulatory Authority will derive input from the findings of this study to inform new policy formulation and review of some of the existing policies to support digitalization of life insurance firms as a key enabler to the improvement of life insurance penetration ratio, a measure of the growth of the insurance industry. The management and employees of insurance firms will find the study useful in guiding policy formulation towards better innovation capability and adoption of technology in insurance firms.

For the customers, digitalization will lead to ease of access and customization of insurance products to meet their risk mitigation needs, whereas the owners of insurance firms will derive, by adoption of the findings of this study, the benefits of increased uptake of insurance products and increased profitability. Additionally, the study will be useful to the academic fraternity as a source of reference and for identification of areas for further research. The research enhances the body of knowledge, and technology adoption capacity of insurance firms. This can be replicated in other areas of study in the local financial sector.

1.7 Scope of the Study

The study focused on the effect of digitalization on growth of life insurance in Kenya's insurance sector. In this case, the digitalization construct was limited to the insurance sector although the concept has been investigated more in the financial sector. Digitalization has been measured in many ways in past studies, but the study limited dimensions of digitalization to internal efficiency, external opportunities, and disruptive changes. The respondents of the study were limited to the management level staff of insurance firms and thus the support staff and low-level employees were not included in this study. The study was also limited to Nairobi County as the County with

the majority of the headquarters of insurance firms in Kenya and thus other branches of insurance firms were not included in the sample.

CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

This chapter presents the review of literature that focuses on the digitalization and its impact on the growth of insurance firms. The chapter is presented in a section that highlights the relevant theories for the study which is the theoretical framework section. The chapter further presents the knowledge gaps and winds up with the operationalization of variables.

2.1 Theoretical Framework

A theoretical framework is a set of theories proposed in an area of study which can be used to interpret and analyse results (Kivunja, 2018). It is a structure that summarized theories and a concept created from earlier published and tested knowledge which is combined to assist a researcher has a basis of data interpretation and analysis (Kivunja, 2018).

2.1.1 The Competence-Based Theory of the Firm

The study adopted the competence-based view of the firm (CbTF) which explains that an organisation can only be successful than its competitor if it uses the available resources efficiently or effectively than the competitor (Freiling, Gersch, & Goeke, 2008). The theory is an extension of resource-based view (RBV) to some as the success of a firm is contingent on its effective and efficient use of its resources (Barney, 1991; Hunt, 2000). This will rely on the availability and the utilization of competencies which may not be imitated or substituted by competitors (Teece et al., 1997).

The principles of the competence-based view are assets, resources, and competence (Freiling, 2004). An asset is described as similar internal or external factors that serve the organisation an input for value addition. The resources are the output from the successful asset transformation process that includes producing sustainable heterogeneity of the firm and allowing the firm to withstand rival's force. The competency of the firm refers to the repeatable, organizational, learning-based and non-random capability to maintain the integrated execution of resources and assets to enable the firm to defend and reach the level of competitiveness and to achieve its goals (Freiling, 2004).

The competence-based theory is thus suitable for this study as it aims to show the efficiency of life insurance firms considering the digitalization efforts that they are undertaking to enhance their performance in Kenya's context. The theory is useful as it espouses the leveraging of assets, resources, and competencies as internal resources of an organization to determine their strategic direction in a digitized external environment.

2.1.2 Porters Five Forces Theory

The study also adopted Porters (1979) five forces framework which is a straightforward and influential tool for identifying the power in an industry from the outward-inwards lens. These forces are threat of potential new entrants, bargaining power of suppliers, and the threat of substitute products or services, bargaining power of buyers, and competition among the existing competitors (Johnson, 2014). Significant competition between rivals results in low profits in an industry and firms must thus adopt measures such as product innovation, improve services, discount prices, and advertise campaigns.

Clients of leading companies in an industry determine the interaction with other companies by demanding goods of higher quality, switching to competitor and substitute products, and lower prices (Baburaj & Narayanan, 2016). The possible entrants into a market are a threat to existing firms by pushing down prices and increasing supply to a competitive level. Substitutes are services or goods that give the same satisfaction as others from leading firms. Supplier companies determine the competitive level of existing firms by controlling pricing, quality, and supply of inputs they provide to the existing firms (Baburaj & Narayanan, 2016).

Despite the applicability and relevance of the theory in the digitalization age, the model has faced criticisms from different scholars. According to Aktouf (2005), Porter's framework legitimized and justifies three popular trends that are critical to the major financial capitalism that includes capital concentration, excessive hierarchization centralization, and domination by large firms. Additionally, Porter does not provide any help to smaller actors in a specific sector, or to firms that want to get more from the knowledge of their staff and experience in the field so as to articulate their strategic direction (Aktouf, 2005).

In the context of this study, the theory is relevant as digitalization is one of the forces driving industry competition. Hence making the theory relevant in this case based on

four out of the five forces that can influence seizing opportunities through digitalization in the Kenyan insurance industry, these forces are threat of potential new entrants, bargaining power of buyers, the threat of substitute products or services, and competition among the existing competitors and will be used to analyze the insurance firms' ability to seize opportunities in the market.

2.1.3 Disruptive Innovation theory

The study adopted Christensen's (1997) theory of disruptive technology which discusses the effects of emerging and revolutionary technologies on the existence of a firm. The theory is a function of time and performance in regards to emerging technologies and identifies the lack of capability of large firms to match the effects of new technology. Because of the unpredictable feature of disruptive technology, well managed and successful organisation can also be affected negatively (Karimi & Walter, 2015).

The theory distinguishes disruptive technologies as those that redefine the levels of performance and this way create a new marketplace. Sustainable technologies are those that add value to established or existing products (Anthony, 2004). The disruptive innovation theory is important as it give information to managers on the effects of disruptive technologies and why most companies fail when they come across such technologies. The theory also assists managers to decide whether a technology or idea is disruptive or not; it also provides a guiding light for new companies to commercialize on disruptive technologies (Habtay & Holemen, 2012).

The disruptive theory of technology has received some criticisms in the literature. Lepore (2014) criticized Christensen's work on disruptive technology on several counts, including an arbitrary selection of cases and facts, lack of explanatory power regarding innovation and change, and lack of predictive power. Gobble (2016) explained that Christensen selected cases that matched His ideas while paying little attention to those that contradicted the theory. King and Baatartogtokh (2015) study on the theory established that only a few ideas of the model were in the data; thereby raising doubts on the data. The values, processes, and resources of a firm influence what a firm can achieve and cannot achieve (Christensen & Overdorf, 2000). The application of the theory is useful for this study as the values, resources and processes are a means through

which insurance firms' managers can be able to assess the weaknesses and strengths and how to respond to these disruptive changes.

2.2 Empirical Literature

This section of the review focuses on the empirical literature on the relationship between the independent and dependent variable. The section is also presented with literature from the global, regional, and local perspectives.

2.2.1 Internal Efficiency and Firm Growth

In a study, Eling and Lehmann (2018) analyzed the impact of digital transformation on the insurance sector using Porter's value chain from a sample of industry and paper studies dataset using a standardized and structured identification process that has been used to review journals and articles on digitalization and insurance from 2000-2017. The findings from the review revealed that emerging technologies can be adopted to improve, standardize, and automate efficiency and effectiveness of business processes and this consisted of using online sales and digital claims settlement.

In another literature review study, Eckert and Osterrieder (2020) conducted a desk research on how digitalization affected insurance companies. The study revealed several benefits of digitalization on growth of insurance firms and one of these was that cloud computing provided the required infrastructure to allow for efficient data streams within an insurance firm and to further reduce execution times of amended or new insurance products. Additionally, the use of block chain technology, data streams among parties (health care services, patient, surgeries, and pharmacies) was efficiently grouped due to the trust in exchanged data.

Other studies have used collection of primary data to show the influence of digitalization on growth of firms. One example of these studies is Rachinger et al's (2018) qualitative empirical study on influence of digitalization on business model innovation using data from twelve key informants in the automotive and media industries. The findings of the study indicated that digitalization was a means of improving consumer contacts efficiency. This efficiency was also manifested in terms of the new channels for communication with clients on social media and digitalization supported communication and showed value addition in products for consumers. However, a limitation of this study was that it was conducted in the automotive and

media industries and there is a need for examining efficiency realized from digitalization in the insurance industry.

In a research that examined the benefits from digitalization practice in organizations, Parviainen et al. (2017) used a two-thronged research strategy where the first involved conducting a number of cases studies and a literature review of these case studies. The findings showed that digitalization increase business processes efficiency, consistency by removal of steps to attain accuracy, and improved quality. Digitalization of operations also allowed real time viewing of results by combining unstructured and structured information, provision of enhanced views on firm information, and combining data from various sources. Additionally, improved job satisfaction among staff by automation of repetitive work allowing staff to free time to develop new skills was a benefit of digitalization. The firms that have adopted digitalization were also able to achieve compliance by standardizing records and enhancing recovery through distribution and back of storage.

Härtinga, Reichstein, and Schad (2018) conducted an empirical investigation of data driven impacts in industry adopting online methods to by administering a survey to German expatriates in Switzerland, Germany, and Austria. The results show there was a positive and significant effect of efficiency on digital business models as companies with digital business model had more agility and innovation which resulted in processes that were far efficient than companies with no digitalization.

Vuori, Helander, and Okkonen (2019) examined the outcomes of digitalization by collecting data from various workers in different industries. The findings indicated that efficiency was as a result of knowledge work performance and this was enhanced by adopting digitalization. The fast and efficient knowledge flow enhanced efficiency by making it possible to perform tasks with no delays. The study also found that task performance management asynchronously and autonomously increased efficiency.

Agboola et al. (2019) assessed the impact of digitalization on commercial banks performance in Nigeria collecting data from 370 non-management staff selected through random and non-random methods. The results revealed that there was a positive and significant association among performance and digitalization and this was also facilitated by innovation due to digitalization model. The bank was also able to enhance

efficiency in consumer relationships which boosted the level of revenue and sales of these institutions.

2.2.2 External Opportunities and Firm Growth

In a study that sought to identify digital transformation paths in the business model of Small and Medium Enterprises (SMEs) during the COVID-19 Pandemic in Indonesia, Priyono, Moin, and Putr (2020) conducted several case studies from 7 SMEs operating unique levels of digital technology maturity level. The findings revealed that firms that had adopted a digitalization strategy were able to identify and seize new opportunities and use existing assets and resources that belonged to other rivals. The study concluded that there was need for constant redirection so that companies were able to react to new trends in the short-term and anticipate long-term opportunities in the future.

Rachinger et al (2018) qualitative empirical study on innovation in media and automotive industry via digitalization found that personalization and social media platforms were able to create more revenue by extending a company's reach through its content. The findings suggested that digitalization provided opportunities that could exploit customer orientations and personalization of services to customers. This was possible because the media industry practices more focus on customers thus media firms were more interested in creating value capture and proposition aspects.

Almeida, Santos, and Monteiro (2020) conducted a study on the challenges and opportunities in the digitalization of companies in a post-COVID-19 World. The study explored the opportunities and challenges in terms of their labour and social relations; marketing and sales; and technology by adopting a digitalization strategy. The exploratory research study found that digitalization created new markets for new products and changed whole sectors lowering the value of existing products in the market. In terms of labour and social relations, the processes of work demanded new skills and knowledge and this was across boundaries. Additionally, privacy and cyber security were important in supporting the combined creation of the Internet of Things (IoT) artificial intelligence, technology solutions, robotics, and big data.

Hokkanen, Walker, and Donnelly (2020) explored the influence of digitalization in the space of mortar and brick companies. The exploratory study consisted of 26 qualitative interviews with Finland and United Kingdom top and mid-level managers. The results

revealed that there were seven business models that consisted of leveraging digital tools to improve efficiencies, providing convenience and speed through multiple channels, retailers' response to competition, improving efficiencies and delivering customer experiences through digital tools, adjusting organizational approaches, and rethinking management models.

Another study that investigated the influence of digitalization in SMEs was Westerlund's (2020) on quantitative investigation into digitalization in a sample of 535 SMEs. The results showed that the increase in digitalization in the international economy provided the opportunists for internationalization. Nevertheless, majority of the SMEs were not able to achieve internationalization digitally as they did not design digital tools to a level that fit the online environment.

In an assessment on the digitalization and financial and banking stability, Carbó-Valverde (2017) adopted a literature review research approach which involved a review of articles and published material on the benefits and opportunities that adopting a digitalization business model presented to banking and financial institutions. The outcome of this review revealed that digitalization was the ability of companies to increase productivity and lessen marginal costs in financial services.

2.2.3 Disruptive Changes and Firm Growth

Prevost, Johnston, and Tanner (2018) conducted a study on awareness and preparedness of information technology managers using an interpretive, exploratory, and qualitative design which was implemented using a case study in an Investment Management Company (IMC) in South Africa. The respondents for the study were 6 top level management staff using unstructured interviews. The findings indicated that managers perceived disruptive change as digitalization brought about new ways of working through use of technology and also created new forms of competition and increased challenges in attracting and retaining skilled IT professionals in the face of digitalization.

In Kenya, Owuor (2018) study focused on the insurance industry and sought to determine the impact of disruptive technology on the performance of insurance firms. Desktop literature reviews of previously published journals addressing insurance performance of firms were conducted. From the review, the use of mobile phone technology influenced the growth of micro-insurance in Kenya. Additionally,

technological innovation social digital trends, industrial convergence had an effect on financial performance of insurance firms.

Other studies on digital disruption have been done in the banking sector and this includes Aoko's (2018) study on the effect of digital disruption on the financial performance of Ecobank Bank Kenya Limited. A descriptive research design was adopted where the 100 employees of Ecobank made the population of the study from which a sample size of 56 was calculated. The dimensions for digital disruption were technology innovation, social digital trends, digital competition, and industrial convergence from which industrial convergence, social digital trends, technological innovation, had positive and significant effects however, digital competition had a negative and significant financial performance.

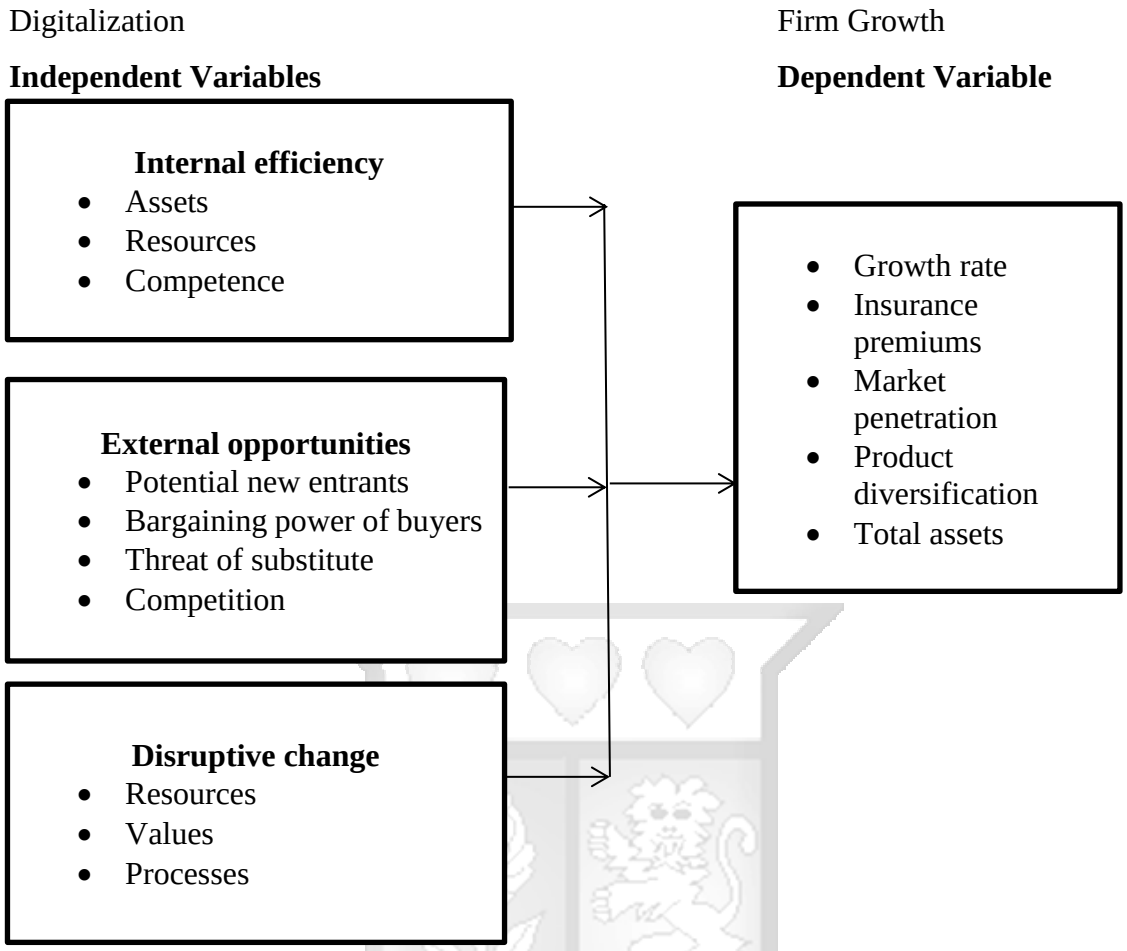
2.3 Summary of Knowledge Gaps

The review of empirical literature unearthed that there is evidence of studies that have examined the effects of digitalization on growth of companies. There are some knowledge gaps that this study fills. One of the research gaps is that there are few studies (Eling & Lehmann 2018; Eckert & Osterrieder, 2020; Owuor, 2018) that have been done on digitalization and growth of insurance firms. Out of these studies, two adopted the literature review or desk research design and thus lacked rigour as there was no empirical field day done to test relationships between variables and this is a gap that this study sought to fill.

A second research gap that the study sought to fill was the limited investigation of digitalization effects on the growth of insurance firms in the local context. Owuor (2018) and Aoko (2018) did a study on the disruptive nature of digitalization on Kenya's insurance sector but did not include other dimensions of digitalization which this study employed by including external opportunities and internal efficiency as explanatory variables.

2.4 Conceptual Framework

Figure 2.1 shows the independent variables as internal efficiency, external opportunities, and disruptive changes with their indicators included. The dependent variable for the study was firm growth measured by growth rate, insurance premiums, market penetration, product diversification, and total assets.



Source: Author (2020)

Figure 2.1: Conceptual Framework

2.5 Operationalization of Study variables

The operationalization of variables is a means through which a researcher develops for measuring and defining a variable as not all variables can be easily defined or measured (Tariq, 2015). Operationalization also assists in making a hypothesis strong, enhances clarity, and standardization of a variables adopted in a study (Tariq, 2015). Table 2.1 shows how the study variables were operationalized in this study.

Table 2.1: Operationalization of variables

Variables	Indicators	Scale	Source
Internal efficiency	• Assets • Resources • Competence	5-point Likert scale	Eling & Lehmann (2018); Parviainen et al. (2017); Rachinger et al's (2018)
External opportunities	• Potential new entrants • Bargaining power of buyers • Threat of substitute products or services • Competition among the existing competitors	5-point Likert scale	Bruijl (2018); Hokkanen et al. (2020); Almeida et al. (2020)
Disruptive change	• Resources • Values • Processes	5-point Likert scale	Prevost et al. (2018); Owuor (2018)
Firm growth	• Growth Rate • Insurance Premiums • Market Penetration • Product Diversification • Total Assets	5-point Likert scale	Tiena & Yang (2014); Ajao & Ogieriakhi (2018); Abaidoo (2015)

Source: Researcher (2020)

2.6 Chapter Summary

This chapter presented the theoretical framework of the study as porters five forces theory, disruptive innovation theory and the competence-based theory of the firm. The empirical literature was done based on the research variables and knowledge gaps were identified from this review. The measurement of variables was described under the operationalization of variables section and the conceptual framework was also introduced.

CHAPTER THREE
RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the description of the methodology that was adopted in executing the study. It provides details about the descriptive research design that the study adopted, the purposive selection of the five insurance firms and selection of management level staff into the sample. The justification and description for the questionnaire as the data collection tool, descriptive and inferential analysis of the data are also presented. The chapter also explains the process of establishing the reliability and validity of the instrument along with the ethical procedures conducted before the data collection.

3.1 Research Design

The research adopted descriptive survey research design. This is a method of scientific evaluation which consist of analysis and collection of information to provide a description of a present status, situation, or condition. According to Bryman and Bell (2015), descriptive research design focuses on establishing regularity of the occurrence of a variable, or how the variables relate. In a descriptive study, researchers observe, count, delineate and classify (Polit & Beck, 2013). Descriptive research studies' principal concern is the correct representation of the features of an individual, circumstances, or groups, and/or the regularity of the occurrence of the phenomena under investigation.

Kothari (2004) indicates that this design is preferable since it saves time, and makes it is easy and feasible for the researcher to secure current and information from the employees of an organization. The design enables the assessment of relationships between variables and accords the chance to note moderators in a relationship (Tashakkori &Teddie, 2013). This design was suitable for the study because it allowed for the use of quantitative techniques which were capable of analysis by collecting information from a selected population in an aim to describe what is going on in terms of the effects of digitalization on growth of firms in the insurance sector.

3.2 Population and Sampling

This section describes, explains, and justifies the population of the study and defends the choice of sampling methods adopted and determining the sample size for the study.

3.2.1 Target Population

According to Bryman and Bell (2015), target population is all members in a category who are related with a subject under study. The target population for the study was the five life insurance firms which were members of insurance group of companies listed at the Nairobi Stock Exchange as at 31st December 2018 as reported by the Nairobi Stock Exchange (NSE, 2018). These firms make up the unit of observation and are Jubilee, Pan Africa, Liberty Kenya, Britam, and CIC. The units of analysis in the study were the 105-management staff from these firms as summarized in Table 3.1.

Table 3.1: Target Population

Management staff	Target population
Top management	5
Middle management	35
Low level management	65
Total	**105**

Source: Field Data (2020)

3.2.2 Sampling Strategy and Sample Size

To arrive at the sample size of the study, the research adopted the census sampling approach which involves inclusion of the entire target population as the sample size for the study. This technique was suitable because any use of sampling formulas would reduce the sample size which is not desirable as the target population is manageable in terms of the time, budget, and resources available to the researcher. The respondents for this study were thus grouped into the top management, middle management, and low-level management. Top managers included the chief executive officer (CEO), while middle level managers included department heads and line managers, while lower-level managers were team leaders. Singh and Masuku (2014) recommend using the entire population as the sample since a census is more attractive for small populations of less than 200. Table 3.2 shows the study's target population and sample size.

Table 3.2: Study Sample Size

Management staff	Target population	Sample Size
Top management	5	5
Middle management	35	35
Low level management	65	65
Total	**105**	**105**

Source: Field Data (2020)

3.3 Research Instruments

The data for this study was collected using structured questionnaires. Questionnaires were adopted as they promote anonymity, whilst permitting the use of standardized questions and providing time for the subjects to think through their responses. They are easy to score (Saunders, 2012). Various sections addressing the specific objectives provided in chapter 1. In developing the questionnaires, the researcher used a blend of adapted questions in other questionnaires and developed own questions to cover areas of the study not covered by the questions from the other studies. According to Saunders, Lewis and Thornhill (2016), adopting or adapting questions is a more efficient way than developing own questions, but the researcher must assess each question carefully to align to the objectives of the study.

The questionnaire was structure into 5 sections. The sections were from A to E. Section A sought the background information about the respondent covering their age, academic qualifications, years of experience in the industry and their industry segment. Section B - E covered the objectives of the study. The respondents were requested to indicate the degree of their agreement to the questions raised in the Likert scale and to respond to give their response to a structured question at the end of each the sections.

3.3.1 Pilot Testing of Instruments

In preparation for the research, a pilot study of the research instrument was carried out amongst 5 members of the sample size. The members included in the pilot will not be included into the final sample size to avoid any contamination of the results. Cresswell (2008) observes that a pilot helps to identify questions that could have more than one interpretation to different respondents, thus enabling the researcher to review the questions till consistency in the meaning of the questions is achieved across all the subjects. The opinions and suggestions from respondents piloted were incorporated and

the draft questionnaire was then amended to arrive at the final instrument used in the study.

3.3.2 Validity of Research Instruments

Validity refers to the extent to which the research instruments provide quality, and the logical soundness of the measures of the variables under investigation in the study. This enables appropriate interpretation of the scores (Gay, 2009). The researcher consulted with the university supervisor and the defense panel members to align questions in the instruments with the objectives of the study in a bid to ascertain the validity of the research instrument. This study limited its validity to content and construct validity. The objective of content validity is to ensure that all respondents have a similar understanding of the items in the questionnaire (Gay, 2009). This helps to avoid misunderstanding. This makes it possible to have a logical assessment of if an instrument covers what it is intended to cover or not.

3.3.3 Reliability of Research Instruments

Reliability is the extent to which an instrument is able to measure the same thing in similar situations (Gay, 2009). The study utilised the Cronbach's Alpha Coefficient to measure the internal consistency of the Likeert scale items used in the data collection instrument. The advantage of this form of measuring reliability is its requirement for only one administration of the instrument (Gliem & Gliem, 2003). According to Goforth (2015), Cronbach's Alpha (α) is a tool that assesses the reliability of a set of scales or items and is the average association between a pair of items and a variance of the overall score.

George and Mallery (2003), provide a rule of thumb for the Cronbach's Alpha Coefficient interpretation as below 0.5 as unacceptable and those above 0.7 as acceptable. The Cronbach's Alpha was established for each of the variables before the final administration of the instrument where each of the variables measures for internal consistency met a minimum value of 0.70 at $\alpha = 0.05$ significance level of confidence. According to Hulin, Netemeyer and Cudeck (2001), a general accepted rule is that α of 0.6 – 0.7 is an adequate level of reliability, and 0.8 or greater a very good level. However, values that go beyond 0.95 are not necessarily good since they may be indicating of redundancies. The reliability test for the study was done using the Statistical Package for the Social Sciences (SPSS) and the results are presented in Table

3.3. The results show that the instrument was reliable as all the variables items indicate a value above 0.6 which is deemed acceptable.

Table 3.3: Cronbach Alpha Coefficient Statistics

Variables	Cronbach's Alpha	Items
Internal efficiency	0.832	9
External opportunities	0.734	12
Disruptive changes	0.710	9
Firm growth	0.712	5

Source: Pilot Results (2020)

3.4 Data Collection Procedure

The consent of the heads of departments and the administrators concerned was sought prior to the data collection exercise. Trained research assistants were engaged to administer the questionnaires and to collect the relevant data from the sampled respondents. These research assistants were rigorously trained to ensure they had proper comprehension of the research instruments, overall objective of the study and ethical considerations. The researcher and two research assistants were engaged in the questionnaire administration on working days when most respondents were available in their stations of work.

The approach used to administer the questionnaires was to wait for the respondent to complete the questionnaire at the time of meeting. "Drop and pick later" was used where the respondents were not able to respond immediately. In the first instance, the research assistants waited and helped the respondents who were available and able to fill in the questionnaires at the time they were delivered and left with the completed questionnaires. In the second instance, the research assistants left the questionnaires with the respondents to fill in and picked them later. The process of questionnaire administration and data collection was done in the period April - May 2020.

3.5 Data Analysis Techniques

The data was analysed in line with the set objectives and variables of the research. The data was entered into the SPSS Version 25 for analysis after the coding of the responses. The data analysis was done in two phases, the first phase included using frequency distribution to analyse the demographic information of the respondents and descriptive statistical measures for the Likert scale data. The descriptive statistics used for the

Likert scale data was mean and standard deviation. The second phase consisted of undertaking Pearson correlation to measure the association between the independent and dependent variables and a multiple regression analysis to determine the effects of the independent variable on the dependent variables. The following regression analysis equations were used to determine the individual relationships between the dependent variable and each of the independent variables:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + €}$$

Where:

Y represents the dependent variable (growth of insurance firms)

$\boldsymbol{\beta_0}$=constant

$\mathbf{X_1}$= Internal efficiency

$\mathbf{X_2}$= External opportunities

$\mathbf{X_3}$= Disruptive change

€ = Error Term normally distributed about a mean of 0 and for purpose of computation, the **€** is assumed to be 0.

3.6 Ethical Considerations

One of the cornerstones of research ethics is informed consent (Denzin & Lincoln, 2017) and this is defined as the need to informant respondents on what they are being asked, use of data, and any implications from participating in a study (Fleming & Zegwaard, 2018). This was done by informing respondents on their roles and use of data during the research process and was also informed that there are no rewards or sanctions for their participation in the study. The respondents were asked to give their verbal consent before the collection of data.

A second ethical consideration was to the anonymity and confidentiality in protecting the participants from potential harm. Anonymity describes the process of not revealing the identity of a respondent and confidentiality extends to the knowledge of the respondent to the researcher but not to the reader and other users of data and that the data provided is kept confidential (Fleming & Zegwaard, 2018). Anonymity and of respondents was assured by using anonymous surveys and no identification information was asked of respondents. Participant confidentiality was guaranteed by not sharing the respondents' raw data with any persons before analysis and presentation of the data.

Ethical approval was also provided for by The Strathmore University Institutional Ethics Review Committee (SU-IERC).

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.0 Introduction

This chapter presents the findings of the study beginning with the response rate, followed by the respondents' background information. This is then followed by a section on descriptive statistics analysis for the four variables of the study. A section on inferential analysis is presented as sub-sections of the correlation and linear regression statistical analysis.

4.1 Response Rate

A total of 100 questionnaires were administered and out of these, 86 questionnaires were returned indicating a non-response of 19 which means the response rate for the study was 86.0 % as illustrated in Table 4.1. Mugenda and Mugenda (2019) advice for researchers to achieve 50.0 % of the sample size as an adequate sample size.

Table 4.1: Study's Response Rate

Level of education	Frequency	Percent
Administered	100	100.0
Questionnaires returned	86	86.0
Non-response	19	19.0

Primary Data (2020)

4.2 Background Information

The researcher sought some background information from the respondents from their experience in the insurance industry, education level, and level of management in their respective firms. This background information was sought to make generalizations.

4.2.1 Industry Experience

In regard to their industry experience, the findings of the study illustrate that those respondents with 1-5 years' experience accounted for 12.8 %, respondents who had 6-10 years' experience represented 29.0 %, staff with 11-15 years' experience counted for 32.5 % while those with 15 years and above represented 11.7 % of the sample as shown in Table 4.2. The findings reveal that most respondents had more than 5 years' experience in the insurance industry, and this means that they had experienced the

influence of digitalization on the industry and thus were able to provide valid response to the instrument based on their knowledge and experience.

Table 4.2: Respondent experience in Insurance Industry

Years of experience	Frequency	Percent
1 – 5 Years	11	12.8
6 – 10 Years	25	29.0
11-15 Years	28	32.5
15 Years and above	22	11.7
Total	**86**	**100.**

Primary Data (2020)

4.2.2 Education Level

The level of education information on the respondents is shown in Table 4.3, where majority of the respondents had a master's degree as shown by 5.34 % of the sample. This was followed by those with a bachelor's degree representing 37.2 % of the sample, with 9.4 % having a PhD degree.

Table 4.3: Level of Education among Respondents

Level of management	Frequency	Percent
Bachelor's degree	32	37.2
Master's Degree	46	53.4
PhD degree	8	9.4
Total	**86**	**100.0**

Primary Data (2020)

4.2.3 Management Level

Top management was 4.0 representative of the sample, 9.4 of the sample as low-level management, and middle management consisted of 53.4 percent of the sample as summarized in Table 4.4.

Table 4.4: Management Level among Respondents

Management	Frequency	Percent
Top management	4	4.0
Middle management	34	53.4
Low level management	48	9.4
Total	**86**	**100.0**

Primary Data (2020)

4.3 Descriptive Analysis

This section of the analysis presented the descriptive findings from the analysis of the Likert scale for each of the study variables. The descriptive statistics presented are the mean and standard deviation for each of the statements.

4.3.1 Internal Efficiency

Table 4.5 illustrates that the highest ranked statements by management staff was that the company uses its digitalization strategy to enhance innovation to enhance efficiency of operations as shown by a 3.93 mean score out of a possible 5 which suggests moderate agreement with the statement.

The respondents were in moderate agreement that their company had leveraged its digitalization assets to create competitive advantage of the firm by a mean score of 3.58. The study found that respondent disagreed on the company adoption of digitalization models as shown by a 2.37 mean score. Respondents also disagreed that their company had leveraged its digitalization assets to adapt, respond, and perform well in the face of rapidly changing environments as shown by a 2.20 mean score.

Table 4.5: Internal Efficiency and Firm Growth Statements

Internal efficiency statements	Mean	Std. Deviation
The company has leveraged its digitalization assets to create value for the organization	2.83	1.497
The company has leveraged its digitalization assets to create competitive advantage of the firm	3.58	1.163
The company has leveraged its digitalization assets to adapt, respond, and perform well in the face of rapidly changing environments	2.20	1.413
The company has adopted digitalization business model to achieve the desired outcome	2.37	1.527
The company leverages its digitalization resources to enhance the coordination of its processes for increased efficiency	2.85	1.279
The company uses the digitalization process to productively combine skills and resources	3.40	1.425
The company's digitalization strategy has enabled the firm to integrate and coordinate the internal and external resources of the organization	3.42	1.451
The company uses its digitalization strategy to enhance staff learning to enhance efficiency of operations	3.09	1.539
The company uses its digitalization strategy to enhance innovation to enhance efficiency of operations	3.93	1.135

Primary Data (2020)

4.3.2 External Opportunities

The external opportunities variable was measured by several statements adapted to the study to show the relation between digitalization and seizing of market opportunities for firm growth among insurance companies. Table 4.6 shows respondents' agreement those insurance firms pricing strategies are aimed at reducing costs for consumers by adopting a digitalization strategy as shown by a 4.65 mean score and a 1.485 standard deviation.

Table 4.6: External opportunities and firm growth statements

External opportunities statements	Mean	Std. Deviation
The organization has partnered with other smaller firms that offer life insurance products and services	2.21	1.440
The organization depends on a digitalized differentiated life insurance products and services	1.94	1.152
The company keeps close communication and contact with customers on digital platforms	4.17	1.424
The organization promotes and rewards innovation in life insurance products and services to create new market segments	2.21	1.364
The company's pricing strategy is aimed at reducing costs for consumers by adopting a digitalization strategy	4.65	1.485
The company has focused its life insurance growth strategy on the customer preferences	2.38	1.440
The organization is continuously seeking feedback from customers to create new life insurance products and services	2.42	1.537
The organization has adopted digital platforms to offer life insurance services and products to customers over multiple channels	4.36	1.405
The organization puts their customers as a first priority in developing its strategy to develop specific features and value propositions	2.66	1.428
The organization has adopted digitalization as a strategy to increase market share of life insurance	2.77	1.547
The company enters into contracts with third party serviced providers to increase the switching costs	4.00	1.095
The company has entered into mergers and acquisitions to increase its market share in a digitized insurance industry	4.02	1.116

Primary Data (2020)

The results also show that insurance firms adopted digital platforms to offer life insurance services and products to customers over multiple channels according to the managers as seen by a 4.36 mean score. Insurance firms entered contracts with other parties in the market to increase market share of the digitalized industry and to increase the switching costs for existing customers as shown by mean score of 4 which indicated agreement with the statements. The firms however did not promote and reward innovation in life insurance products and services to create new market segments as evidenced by a mean score of 2.21.

4.3.3 Disruptive Change

Table 4.7 shows the digitalization disruptive change statements that were presented to respondents to indicate their level of agreement on a 5-point scale. The findings show respondents agreed that the firm was trying to use emerging technologies as shown by a mean score of 4.88 and standard deviation of 1.259.

Table 4.7: Disruptive changes and firm growth statements

Disruptive changes statements	Mean	Std. Deviation
The organization makes an effort to make use of emerging technologies	4.88	1.259
The organization has invested in a digital platform presence with a focus on user experience	2.42	1.491
The organization develops new capabilities within the businesses through the accumulation of new resources	3.05	1.762
The processes in the organizations should be refined to ensure that they are efficient and effective	4.43	1.058
The organization has adopted automation of routine processes as well as business process innovation	4.69	0.949
The organization has adopted cross-functional teams as a way of enhancing its processes	2.81	1.538
Digitalization has assisted salespeople in their day-to-day decisions about which product to push and which not to push	3.27	1.451
The employees prioritize decisions at every level of the organization	3.26	1.303
There is a culture of readiness to accept new opportunities as long as they are supported by sufficient evidence	3.69	1.130

Primary Data (2020)

The management staff also agreed that the processes in the organization should be refined to ensure that they are efficient and effective as indicated by a mean score of 4.43 and standard deviation of 1.058. The management staff also agreed that organization has adopted automation of routine processes as well as business process innovation as seen by a 4.69 mean score and 0.949 standard deviation.

4.3.4 Firm Growth

The dependent variable was firm growth of insurance companies, and this variable was measured by growth rate, number of customers, market share, product diversification, and total assets. The statements were adapted to the growth of life insurance companies and respondents were asked to indicate their level of agreement with the statements on a five-point Likert scale. The findings indicate that the digitalization has increased the growth rate of life insurance consumers as respondents were in moderate agreement with this statement as shown by a mean score of 3.45 out of a total of 5 and a standard deviation of 1.569. The findings show that respondents disagreed with the other statements as they all showed a score of 2 out of a possible 5 which indicates disagreement as shown in Table 4.8.

Table 4.8: Firm Growth Descriptive Results

Firm growth statements	N	Mean	Std. Deviation
The company's digitalization has increased the growth rate of life insurance consumers	86	3.45	1.569
The company's digitalization has increased the number of life insurance premiums	86	2.06	1.323
The company's digitalization has increased the market share of the organization in life insurance services	86	2.30	1.347
The company's digitalization has increased the product diversification of life insurance	86	2.73	1.560
The company's digitalization has increased the total assets of the organization	86	2.92	1.449

Primary Data (2020)

4.4 Inferential Analysis

This section presented the findings from the inferential analysis. The Pearson's r correlation coefficient was conducted between the digitalization and firm growth after which a multiple linear regression analysis was conducted to determine the direction and magnitude of digitalization variables on insurance firms' growth.

4.4.1 Bivariate Correlation

The findings from the Pearson's correlation revealed that there was a positive and significant association between external opportunities and firm growth where an increase in external opportunities resulted in a 0.213 increase in firm growth and this was significant at the 0.05 level (p = 0.006). The results also showed that an increase in disruptive changes resulted in a 0.237 increase in firm growth and this was significant at the 0.05 level (p = 0.033). Internal efficiency had a positive association with insurance firms' growth, but this was insignificant at the 0.05 level (p = 0.601) as shown in Table 4.9.

Table 4.9: Correlations

		Internal efficiency	**External opportunities**	**Disruptive changes**
Internal efficiency	Pearson Correlation	1		
	Sig. (2-tailed)			
External opportunities	Pearson Correlation	.384**	1	
	Sig. (2-tailed)	0.000		
Disruptive changes	Pearson Correlation	0.057	.426**	1
	Sig. (2-tailed)	0.613	0.000	
Firm growth	Pearson Correlation	0.059	0.213	.237*
	Sig. (2-tailed)	0.601	0.006	0.033

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

4.4.2 Multiple Linear Regression Analysis

Table 4.10 shows the output from the analysis which illustrates the model summary statistics which are used to show the model's explanation of changes in a dependent variable. In this case, the coefficient of determination (R square) indicates that digitalization explained 58.9 of change in insurance firms' growth. This means that there are unaccounted factors that influence 41.1 change on firm growth in the insurance industry.

Table 4.10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.768a	0.589	0.035	0.73355

a Predictors: (Constant), Disruptive changes, internal efficiency, external opportunities

Table 4.11 shows the ANOVA results from the regression analysis which is used to determine whether the effects of the model are statistically significant. In this case, the sig. column shows the p value is 0.024 which less than 0.05 which means that model is statistically significant.

Table 4.11: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.196	3	1.065	1.980	.024[b]
	Residual	41.433	77	.538		
	Total	44.629	80			

a. Dependent Variable: Firm Growth
b. Predictors: (Constant), Disruptive changes, internal efficiency, external opportunities

The findings indicated that the model explained 58.9 of change in insurance firms' growth and this was statistically significant at the 0.05 level. Thus, interpretation of Table 4.12 results shows the direction and size of effect that each of the indicators for digitalization has on firm growth of insurance companies. Disruptive changes (β = 0.241, p = 0.015) and external opportunities (β = 0.170, p = 0.029) dimensions of digitalization had positive and significant effects on insurance firms' growth. Internal

efficiency (β = -0.008, p = 0.956) had a negative but statistically insignificant effect on insurance firms' growth.

Table 4.12: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.580	.569		2.777	.007
	Internal efficiency	-.008	.134	-.007	-.056	.956
	External opportunities	.170	.163	.139	1.045	.029
	Disruptive changes	.241	.166	.178	1.456	.015

a Dependent Variable: Firm Growth

Growth of insurance firms = 1.580 + -0.008 + 0.170 + 0.241 + €

CHAPTER FIVE
SUMMARY, DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

5.0 Introduction

This chapter consists of the summary of the study, discussions of the findings in line with the research objectives and research questions. The conclusions of the study are presented together with the recommendations of the study.

5.1 Summary

The aim of this study was to examine the effects of digitalization on growth of life insurance firms listed in the Nairobi Securities Exchange in Kenya. To achieve this purpose, the study was guided by three specific objectives which were to; determine the influence of internal efficiency on growth of life insurance firms in Kenya, establish the effect of external opportunities on growth of life insurance firms in Kenya, and determine the effects of disruptive changes on growth of life insurance firms in Kenya. The study was based on the competence-based theory of the firm, porters five forces theory, and disruptive innovation theory. A descriptive survey research design was adopted where the target population was 5 life insurance firms listed at the Nairobi Stock Exchange make up the units of observation. The units of analysis in the study were 105 management staff consisting of chief executives' officers, department heads, line managers, and team leaders.

Census sampling approach was used to have the final sample size of 105 respondents from which 86 respondents were reached. The data was collected using a structured questionnaire which was pilot tested among a sample of 5 respondents to determine its reliability. The data was analyzed using descriptive and inferential statistics where the Pearson's *r* correlation indicated positive and significant association between disruptive changes and external opportunities as dimensions for digitalization on growth of life insurance firms. However, the internal efficiency dimension of digitalization did not have any association and effects on growth of life insurance firms. The study concludes that internal efficiency does not have any effects on life insurance firms' growth. The study thus concludes that external opportunities and disruptive changes in the insurance industry resulted in firm growth.

5.2 Discussion

5.2.1 Influence of internal efficiency on growth of life insurance firms in Kenya

According to Parviainen et al. (2017) the goals of digitalization for an organization can be identified from three different viewpoints. One is the internal efficiency which is the enhanced means of working through re-planning internal processes and digital means. Second, the external opportunities where an existing business is able to realize new customers, new services are identified, and third is the disruptive change whereby digitalization causes changes in business roles completely. The findings illustrate that internal efficiency did not have any association with growth of insurance firms and this was also evident from the regression analysis where no significant effects of internal efficiency were observed.

The findings go against previous studies that have found that a digitalization in organization processes does contribute significantly to the internal efficiency. One such study is Eling and Lehmann (2018) who found that new technologies can be used to standardize, improve, and automatize the effectiveness and efficiency of business processes and this consisted of using online sales and digital claims settlement. Another study by Eckert and Osterrieder (2020) concluded that in the long term there are advantages in cost savings and a great rise in efficiency and effectiveness thus indicating a positive effect of digitalization on internal efficiency of insurance firms.

These studies (Eckert & Osterrieder, 2020; Eling & Lehmann, 2018) however were limited to literature reviews and this need to identify studies that disagree with these research findings based on empirical research. In this case, a study by Rachinger et al. (2018) the findings indicated that respondents perceived that digitalization was a lever to improve efficiency of customer contact. This efficiency was also manifested in terms of the reported that digitalization opened new ways of customer relations via social media. A research conducted by Härtinga et al. (2018) found that efficiency has a positive and significant impact on the abilities of digital business models. Therefore, companies with digital business models have more agility and innovativeness which contributes to processes that are more efficient. The findings from this study's descriptive analysis showed that life insurance firms only adopted their digitalization strategy to enhance innovation to enhance efficiency of operations to a moderate extent and thus was not able to reap the benefits from an increased internal efficiency.

The findings do not corroborate those of Vuori et al. (2019) results which highlighted efficiency as a as a result of knowledge work performance and this was enhanced by adopting digitalization. The fast and efficient knowledge flow enhanced efficiency by making it possible to perform tasks with no delays. The descriptive statements show that staff disagreed that their organizations leveraged its digitalization resources to enhance the coordination of its processes for increased efficiency which can be useful in explaining the inability of the digitalization of insurance firms to not contribute to the growth of life insurance firms.

The positive effect of digitalization was also supported by the findings of Agboola et al. (2019) results that showed a positive and significant association among performance and digitalization and this was also facilitated by innovation due to digitalization model. The bank was also able to enhance efficiency in consumer relationships which boosted the level of revenue and sales of these institutions through innovation. The findings from the study disagree with previous studies that have found positive effects of digitalization on internal efficiencies.

The findings of the study do not support the arguments of the competence-based view of the firm (CbTF) theory that explains organisations can only be successful than its competitor if it uses the available resources efficiently or effectively than the competitor (Freiling, Gersch, & Goeke, 2008). The theory is an extension of resource-based view (RBV) to some as the success of a firm is contingent on its effective and efficient use of its resources. However, the results showed that life insurance firms were not using their digitalization model to enhance their internal efficiency, and this thus limited their growth.

5.2.2 Effect of external opportunities on growth of life insurance firms in Kenya

The external opportunities are defined as the external opportunities whereby fresh business openings in prevailing business domain by acquiring new services and new customers are identified (Parviainen et al., 2017). The findings from the study indicate that there existed a positive and statistically significant association between the external opportunities provided for by digitalization on the growth of life insurance firms. The external opportunities component of digitalization was determined to have a positive and statistically significant effect on growth of life insurance firms.

The findings agree with past studies that established a positive effect of digitalization on organizations ability to realize and pursue market opportunities in their industry. One such study was conducted among SMEs in Indonesia where Priyono et al. (2020) revealed that firms that had adopted a digitalization strategy were able to identify and seize new opportunities and use existing assets and resources that belonged to other rivals. Indeed, the respondents indicated by their agreement, that their company entered contracts with third party serviced providers to increase the switching costs and also entered into mergers and acquisitions (M&A) to increase its market share in a digitized insurance industry.

Another study conducted by Westerlund (2020) among online SMEs found that increase in digitalization in the international economy provided the opportunists for internationalization. The outcome of this review revealed that digitalization was the ability of companies to increase productivity and lessen marginal costs in financial services. The results also agree with those of Almeida et al. (2020) study on challenges and opportunities in the digitalization of companies in a post-COVID-19 World. The study explored the opportunities and challenges in terms of their labour and social relations; marketing and sales; and technology by adopting a digitalization strategy. The exploratory research study found that digitalization created new markets for new products and changed whole sectors lowering the value of existing products in the market. Carbó-Valverde (2017) found that digitalization was the ability of companies to increase productivity and lessen marginal costs in financial services. The findings of the study thus agree with previous studies that established positive effects of digitalization on the ability of life insurance firms to leverage their digitalization processes to achieve growth.

The findings of the study support Porter's (1979) five forces framework described as threat of potential new entrants, bargaining power of suppliers, bargaining power of buyers, and the threat of substitute products or services, and competition among the existing competitors (Johnson, 2014). The results show that life insurance firms were able to leverage their digitalization on the market opportunities by merging with other firms to increase the switching costs for consumers thereby being able to retain their customer base thus contributing to their overall growth.

5.2.3 Effects of disruptive changes on growth of life insurance firms in Kenya

According to Parviainen et al. (2017), disruptive changes occur when digitalization causes changes in business roles completely. The finding indicated a positive and significant association between disruptive changes and growth of life insurance firms. The regression analysis indicated that an increase in disruptive changes had a positive and significant effect on growth of life insurance firms.

The outcome of this study is congruent to that of Owuor (2018) study that established that the use of mobile phone technology influenced the growth of micro-insurance in Kenya. Additionally, technological innovation social digital trends, industrial convergence had an effect on financial performance of insurance firms. As per the descriptive findings, the respondents indicated that their organization made efforts to make use of emerging technologies, and this supports those findings that using technologies such as Smartphones has increased the growth of insurance firms by providing smaller and accessible forms of insurance among untapped market of Smartphone users.

The findings also corroborate the findings from Aoko (2018) research that established dimensions of disruptive changes had a positive and significant effect on financial performance and thereby had an impact on the overall growth of the firm. The descriptive findings indicated that the insurance firms sampled did adopt automation of routine processes as well as business process innovation and this can be associated with the positive effects of disruptive changes on their growth. The findings support disruptive innovation theory (Christensen, 1997) as results suggests firms refined the organization processes and adopted automation of routine processes as well as business process innovation by making use of emerging technologies and this enabled the firm to find new ways of performing tasks and operations and this thus increased their growth.

5.3 Conclusion

5.3.1 Influence of internal efficiency on growth of life insurance firms in Kenya

One of the objectives of the study was determine the influence of internal efficiency on growth of life insurance firms in Kenya. The findings show no association between internal efficiency and growth of life insurance firms nor did the output indicate any effects of internal efficiency on growth of life insurance firms. The study thus concludes

that internal efficiency in the insurance industry does not have any effects on their growth.

5.3.2 Effect of external opportunities on growth of life insurance firms in Kenya

This research aimed to establish the effect of external opportunities on growth of life insurance firms in Kenya. The results indicated a positive and significant association between external opportunities and growth of life insurance firms, and this was confirmed by the positive and significant effects of external opportunities on growth of life insurance firms as per the regression analysis. The study thus concludes that digitalization enables life insurance firms to realize and along their business in the external opportunities and this contributed to their growth.

5.3.3 Effects of disruptive changes on growth of life insurance firms in Kenya

The third objective of the study was to determine the effects of disruptive changes on growth of life insurance firms in Kenya. The results indicated a positive and significant association between disruptive changes and growth of life insurance firms, and this was confirmed by the positive and significant effects of disruptive changes on growth of life insurance firms as per the regression analysis. The conclusion of the study is that digitalization in the insurance industry contributed to the insurance firms' adaptation to the disruptive changes in the industry and this contributed to the growth of the firm.

5.4 Recommendations

First, descriptive findings show that life insurance companies had not leveraged their digitalization assets to adapt, respond, and perform in the market thus limiting their internal efficiency. Thus, the study therefore recommends that life insurance firms should develop a digitalization strategy which is based on the market changes in the industry so that the model can be used to respond to these market changes and therefore enhance the internal processes of the firm.

Second, the descriptive findings showed that life insurance firms performed poorly in rewarding innovation on life insurance products and services, and this limited their capacity to identify and seize market opportunities. The study therefore recommends that life insurance firms should reward innovation in the company, and this will motivate staff to create and come up with new life insurance products and services that can create new market segments that result in competitive advantage of the firm.

Third, the descriptive findings indicated that life insurance firms had not invested in a digital platform presence with a focus on user experience and thus were not able to maximize the benefits of disruptive changes on their growth. The study therefore recommends that life insurance firms should design their digitalization models to enhance user experience and this will result in enhance customer loyalty thus sustaining their market share and thus contributing to their overall growth.

5.5 Limitations of the Study

One limitation of the study was the administration of questionnaires that was undertaken using online methods of administration thereby limiting the interaction between interviewer and respondent. This method of administering the instrument was adopted due to the government guidelines for reducing spread of COVID-19 pandemic. Due to these guidelines, the researcher was not able to use qualitative methods of data collection that could have enriched the study by gaining in-depth and personal experience stories from respondents on the digitalization in insurance firms.

5.6 Areas of Further Research

This study examined the effects of digitalization on growth of life insurance firms listed in the Nairobi Securities Exchange in Kenya. There is need for future research to conduct a similar study and to include all firms in the insurance industry. The study was limited to the growth indicators of insurance firms; there is need for future studies to include other parameters of performance such as profitability and market share using data from financial statements and industry annual reports.

REFERENCES

Abaidoo, G. G. (2015). *Customer Satisfaction Factors in Life Insurance Growth in Ghana. Unpublished doctoral dissertation*. Walden University. Minneapolis, Minnesota.

Acharya, M., & Hebbar, C. K. (2016). Digitalization of Insurance Sector: Issues and Challenges to an Insurance Advisor. *International Journal of Advanced Trends in Engineering and Technology, 1*(1), 5-9.

Afza, T., & Asghar, M. J. A. (2010). Efficiency of the Insurance Industry in Pakistan: An Application of Non-parametric Approach. *Interdisciplinary journal of contemporary research in business,* 2(8), 84-98.

Agboola, M. G., Awobajo, K. A., Oluwatobi, S. O., Akinbode, M. O., Fagbohun, M. O., Betek, C. M. (2019). Effect of digitalization on the performance of commercial banks in Nigeria. *IOP Conf. Series: Earth and Environmental Science, 331,* 1-9.

Ajao, M. G., & Ogieriakhi, E. (2018). Firm Specific Factors and Performance of Insurance Firms in Nigeria. *Amity Journal of Finance, 3*(1), 14-28.

Aktouf, O. (2004). The False Expectations of Michael Porter's Strategic Management Framework. *Univ. Empresa, Bogotá (Colombia), 3*(6), 9-41.

Almeida, F., Santos, J. D., & Monteiro, J. O. (2020). The Challenges and Opportunities in the Digitalization of Companies in a Post-COVID-19 World. *IEEE Engineering Management Review, 48*(3), 97-103.

Aoko, L. P. (2018). *Effect of Digital Disruption on the Financial Performance of Commercial Banks in Kenya: A Case of Ecobank Bank Kenya Limited.* Unpublished research project. The Catholic University of Eastern Africa. Nairobi. Kenya.

Arych, M., & Darcy, W. (2020). General trends and competitiveness of Australian life insurance industry. *Journal of International Studies, 13*(1), 212-233.

Baburaj, Y., & Narayanan, V. K. (2016). Five Forces Framework. In M. Augier, D. J. Teece (eds.), *The Palgrave Encyclopedia of Strategic Management.* Palgrave Macmillan, London. https://doi.org/10.1057/978-1-349-94848-2_632-1

Back, A., Berghaus, S., & Kaltenrieder, B. (2016). *Digital Maturity and Transformation Report 2016*. St. Gallen, Switzerland: IWI-HSG and Crosswalk.

Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management, 17*(1), 99-120.

Bengtsson, V., & Broström, E. (2018). *Growing Customer Loyalty in the light of Digitalization: A study on the Swedish P&C Insurance Industry.* Master thesis. Chalmers University of Technology. Gothenburg, Sweden.

Bruijl, G. H. (2018). The Relevance of Porter's Five Forces in Today's Innovative and Changing Business Environment. *SSRN electronic journal* .doi.org/10.2139/ssrn.3192207

Bughin, J., & van Zeebroeck, N. (2017). The best response to digital disruption. *MIT Sloan Management Review, 58*(4), 80–86.

Carbó-Valverde, S. (2017). The Impact on Digitalization on Banking and Financial Stability. Journal of Financial Management, Markets and Institutions. *Journal of Financial Management, Markets and Institutions, 1,* 133-140

Christensen, C. (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail.* Boston, MA:Harvard Business Press.

Denzin, N., & Lincoln, Y. (2017). *The SAGE handbook of qualitative research*. Thousand Oaks, CA: SAGE

Eckert, C., & Osterrieder, K. (2020). How digitalization affects insurance companies: overview and use cases of digital technologies. *ZVersWiss* (2020). https://doi.org/10.1007/s12297-020-00475-9

Eling, M., & Lehmann, M. (2018). The Impact of Digitalization on the Insurance Value Chain and the Insurability of Risks. *The Geneva Papers, 43,* 359–396.

Fleming, J., & Zegwaard, K. E. (2018). Methodologies, methods and ethical considerations for conducting research in work-integrated learning. *International Journal of Work-Integrated Learning*, *21*(4), 401-414.

Freiling, J. (2004). A Competence-based Theory of the Firm. *Management revue, 15*(1) 27-52.

Freiling, J., Gersch, M., & Goeke, C. (2008). On the Path towards a Competence-based Theory of the Firm. *Organization studies, 29*(8/9), 1143-1164.

Gobble, M. M. (2016). Defining disruptive innovation. *Research-Technology Management, 59*(4), 66-71.

Habtay, R. S., & Holmen, M. (2012). *From disruptive technology to disruptive business model innovation: In need for an integrated conceptual framework.* Unpublished Paper. University of Witwatersrand: South Africa.

Härtinga, R. C., Reichstein, C., & Schad, M. (2018). Potentials of Digital Business Models – Empirical investigation of data driven impacts in industry. *Procedia Computer Science, 126*, 1495–1506.

Hiendlmeier, S., & Hertting, M. (2015). *The Impacts of Digitization on the Management of Insurance Companies: Steering Business in a Digital World.* Stuttgart, Germany: Horvath & Partners.

Hokkanen, H., Walker, C., & Donnelly, A. (2020). Business Model Opportunities in Brick and Mortar Retailing Through Digitalization. *Journal of Business Models, 8*(3), 33-61.

Hunt, S. D. (2000). *A General Theory of Competition*. Thousand Oaks, CA: Sage.

Johnson, M. L. S. L. F. (2014). *The 5 Competitive Forces Framework in a technology mediated environment. Do these forces still hold in the industry of the 21st century?* Unpublished bachelor thesis. University of Twente. The Netherlands.

Karimi, J., & Walter, Z. (2015). The Role of Dynamic Capabilities in Responding to Digital Disruption: A Factor-Based Study of the Newspaper Industry. *Journal of Management Information Systems, 32*(1), 39–81.

King, A. A., & Baatartogtokh, B. (2015). How useful is the theory of disruptive innovation?. *MIT Sloan Management Review, 57*(1), 77-90.

Kishori, B., & Kumaran, R. (2019). A Study on Digitalization of Insurance Industry: Customer's Opportunities and Challenges. *Pramana Research Journal, 9*(5), 462-466.

Kivunja, C. (2018). Distinguishing between Theory, Theoretical Framework, and Conceptual Framework: A Systematic Review of Lessons from the Field. *International Journal of Higher Education, 7*(6), 44-53.

Langat, W. K., Naibei, I., & Getare, C. M. (2017). Determinants of Insurance uptake in developing countries: Evidence from CIC insurance, Kericho Branch, Kenya. *International Journal of Scientific and Research Publications, 7*(12), 703-715.

Lepore, J. (2014, June 16). The disruption machine: What the gospel of innovation gets wrong. *New Yorker*. Retrieved from https://www.newyorker.com/magazine/2014/06/23/the-disruption-machine

ller, F., Naujoks, H., Singh, H., Schwarz, G., Schwedel, A., & Thomson, K. (2015). *Global Digital Insurance Benchmarking Report 2015*. Boston. MA: Bain & Company.

Łyskawa, K., Kędra, A., Klapkiv, L., & Klapkiv, J. (2019). *Digitalization in insurance companies.* Contemporary Issues in Business, Management and Economics Engineering. 9–10 May 2019, Vilnius, Lithuania.

Mugenda, O. M., & Mugenda, A. G. (2019). *Research Methods: Quantitative and Qualitative Approaches.* (3rd edn.), Nairobi. African Centre for Technology Studies.

Nderitu, F., Kung'u, J. N., & Gichuhi, D. M. (2018). Does the Price of Life Insurance Influence the Uptake of Life Insurance in Kenya? *IOSR Journal of Economics and Finance, 9*(5), 64-71.

Ostagar, A. M. (2018). Impact of Technology and Innovation in Insurance Sector. *International Journal of Management, IT & Engineering, 8*(12), 253-258.

Owuor, E. (2018). Impact of Disruptive Technology on the Performance of Insurance Firms in Kenya. *Journal of Strategic Management, 3*(1), 72-82.

Parviainen, P., Tihinen, M., Kääriäinen, J., & Teppola, S. (2017). Tackling the digitalization challenge: how to benefit from digitalization in practice. *International Journal of Information Systems and Project Management, 5*(1), 63-77.

Porter, M. E. (1979). *How competitive forces shape strategy,* Boston. MA: Harvard Business Review.

Prevost, M., Johnston, K. A., & Tanner, M. C. (2018). Awareness and Preparedness of IT managers to digital disruption: A South African Exploratory Case Study. *The African Journal of Information Systems, 10*(4), 280-294.

Priyono, A., Moin, A., & Putr, V. N. A. O. (2020). Identifying Digital Transformation Paths in the Business Model of SMEs during the COVID-19 Pandemic. *Journal of Open Innovation: Technology, Market, and Complexity, 6*(104), 1-22.

Rachinger, M., Rauter, R., Müller, C., Vorraber, W., & Schirgi, E. (2018). Digitalization and its influence on business model innovation. *Journal of Manufacturing Technology Management, 30*(8), 1143-1160.

Radwan, S. M. (2019). *The Impact of digital Technologies on Insurance Industry in light of digital transformation.* Cairo. Egypt. Blom Egypt investments and Insurance Brokerage & Consultancy.

Santos, J. B., & Brito, L. A. L. (2012). Toward a Subjective Measurement Model for Firm Performance. *Brazilian Administration Review, 9*(6), 95-117.

Sharma, G. (2017). Pros and cons of different sampling techniques. *International Journal of Applied Research, 3*(7), 749-752

Singh, A., & Masuku, M. (2014). Sampling Techniques & Determination of Sample Size in Applied Statistics Research: an Overview. *International Journal of Economics, Commerce and Management, 2(*11), 1-22.

Sowmiya, G., & Selvam, V. (2020). Drive to Digitalization in Insurance: A Study On Policyholders' Attitude Towards Using Mobile Banking. *Journal of Critical Reviews, 7*(9), 134-136.

Tariq, M. U. (2015). Operationalizing Variables in Theoretical Frameworks: A Comparative Analysis. *Durresamin journal, 1*(1), 2-11.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal, 18,* 509-533.

Tiena, J. J., & Yang, S. S. (2014). The Determinants of Life Insurer's Growth for a Developing Insurance Market: Domestic vs Foreign Insurance Firms. *The Geneva Papers, 39,* 1–24.

Vuori, V., Helander, N., & Okkonen, J. (2019). Digitalization in knowledge work: the dream of enhanced performance. *Cognition, Technology & Work, 21*(2), 1-16.

Westerlund, M. (2020). Digitalization, Internationalization and Scaling of Online SMEs. *Technology Innovation Management Review, 10*(4), 48-57.

World Bank Group (2018). How technology can make insurance more inclusive. Finance, Competitiveness & Innovation Global Practice. Washington, DC: World Bank Group.

APPENDICES

Appendix I: Introduction Letter

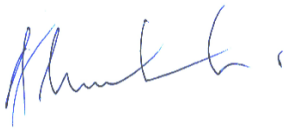
Dear respondent,

RE: DATA COLLECTION

I am a postgraduate student at Strathmore University pursuing a Degree in Master of Business Administration. As a requisite for the award of the degree, I am carrying out a study on **EFFECTS OF DIGITALIZATION ON GROWTH OF LIFE INSURANCE FIRMS LISTED IN THE NAIROBI SECURITIES EXCHANGE IN KENYA.** You and your organization have been selected to participate in this study. The attached questionnaire has been designed to help gather data from respondents. The purpose of this letter is to kindly inform you that you have been identified as one of the respondents.

I therefore kindly request you to facilitate the collection of the necessary data by answering the questions as precisely and factually as possible. The information sought is purely for academic purposes. I assure that the information provided will strictly be treated as confidential and will be used only for the purpose of carrying out the study.

Yours faithfully



AGGREY MULUMBI

MBA/99723/17

Appendix II: Research Questionnaire

This questionnaire consists of seven major sections (Section A, B, C, D, E, F and G). Kindly respond to all questions by putting a tick [√] in the box matching your answer or write your answer in the space provided if it is not included in the choices. The information given here will only be used for purposes of academic study and will be treated with utmost confidentiality. Your cooperation will be highly appreciated.

SECTION A: BACKGROUND INFORMATION

1) How long have you been engaged with the insurance industry?

Less than 1 year [ ]
1 – 5 Years [ ]
6 – 10 Years [ ]
11-15 Years [ ]
25 Years and above [ ]

2) What is your highest level of education?

Bachelor's Degree [ ]
Master's Degree [ ]
PhD Degree [ ]

3. Please indicate your level of management

Top management [ ]
Middle management [ ]
Low level management [ ]

SECTION B: INTERNAL EFFICIENCY

Please indicate the extent to which the organization has adopted the following internal efficiency statements. Use 1- Very low extent, 2-Low extent, 3-Moderate extent, 4-Large extent, 5- Very large extent.

Statements	1	2	3	4	5
Assets					
The company has leveraged its digitalization assets to create value for the organization					
The company has leveraged its digitalization assets to create competitive advantage of the firm					
The company has leveraged its digitalization assets to adapt, respond, and perform well in the face of rapidly changing environments					
Resources					
The company has adopted digitalization business model to achieve the desired outcome					
The company leverages its digitalization resources to enhance the coordination of its processes for increased efficiency					
The company uses the digitalization process to productively combine skills and resources					
Competencies					
The company's digitalization strategy has enabled the firm to integrate and coordinate the internal and external resources of the organization					
The company uses its digitalization strategy to enhance staff learning to enhance efficiency of operations					
The company uses its digitalization strategy to enhance innovation to enhance efficiency of operations					

SECTION C: EXTERNAL OPPORTUNITIES

Please indicate the extent to which the organization responds to the following external opportunities experienced by insurance firms due to digitalization. Use 1- Very low extent, 2-Low extent, 3-Moderate extent, 4- Large extent, 5- Very large extent.

Statements	1	2	3	4	5
Threat of potential new entrants					
The organization has partnered with other smaller firms that offer life insurance products and services					
The organization depends on a digitalized differentiated life insurance products and services					
The company keeps close communication and contact with customers on digital platforms					
Threat of substitute products or services					
The organization promotes and rewards innovation in life insurance products and services to create new market segments					
The company's pricing strategy is aimed at reducing costs for consumers by adopting a digitalization strategy					
The company has focused its life insurance growth strategy on the customer preferences					
Bargaining power of buyers					
The organization is continuously seeking feedback from customers to create new life insurance products and services					
The organization has adopted digital platforms to offer life insurance services and products to customers over multiple channels					
The organization puts their customers as a first priority in developing its strategy to develop specific features and value propositions					
Competition among the existing competitors					
The organization has adopted digitalization as a strategy to increase market share of life insurance					
The company enters into contracts with third party serviced providers to increase the switching costs					
The company has entered into mergers and acquisitions to increase its market share in a digitized insurance industry					

SECTION D: DISRUPTIVE CHANGES

Please indicate the extent to which the organization responds to the following disruptive changes experienced by insurance firms. Use 1- Very low extent, 2-Low extent, 3- Moderate extent, 4- Large extent, 5- Very large extent.

Statements	**1**	**2**	**3**	**4**	**5**
Resources					
The organization makes an effort to make use of emerging technologies					
The organization has invested in a digital platform presence with a focus on user experience					
The organization develops new capabilities within the businesses through the accumulation of new resources					
Processes					
The processes in the organizations should be refined to ensure that they are efficient and effective					
The organization has adopted automation of routine processes as well as business process innovation					
The organization has adopted cross-functional teams as a way of enhancing its processes					
Values					
Salespeople their day-to-day decisions about which product to push and which not					
The employees prioritize decisions at every level of the organization					
There is a culture of readiness to accept new opportunities as long as they are supported by sufficient evidence					

SECTION E: GROWTH OF LIFE INSURANCE

Please indicate the extent to which the organization responds to the following disruptive changes experienced by insurance firms. Use 1- Very low extent, 2-Low extent, 3- Moderate extent, 4- Large extent, 5- Very large extent.

Statements	**1**	**2**	**3**	**4**	**5**
The company's digitalization has increased the growth rate of life insurance consumers					
The company's digitalization has increased the number of life insurance premiums					
The company's digitalization has increased the market share of the organization in life insurance services					
The company's digitalization has increased the product diversification of life insurance					
The company's digitalization has increased the total assets of the organization					

Thank you for your time.

Appendix III: List of Sampled Insurance Companies Listed in the NSE

1. Jubilee Holdings Ltd
2. Sanlam Kenya PLC 0rd 5.00
3. Kenya Re-Insurance Corporation Ltd
4. Liberty Kenya Holdings Ltd
5. Britam Holdings Ltd
6. CIC Insurance Group Ltd

Appendix IV: Ethics Review Approval Letter

Strathmore UNIVERSITY

24th April 2019

Mr. Mulumbi, Aggrey
Aggreymulumbi@gmail.com

Dear Mr. Mulumbi,

REF Protocol ID: SU-IERC0342/19 **Student NO**: MBA/99723/17

EFFECTS OF DIGITALISATION ON GROWTH OF LIFE INSUARANCE AMONGST INSUARANCE FIRMS IN KENYA

We acknowledge receipt of your application documents to the Strathmore University Institutional Ethics Review Committee (SU-IERC) which includes:

1. Study Protocol submitted 5th March 2019
2. Cover letter listing all submitted documents 5th March 2019
3. Proposal declaration Page signed by supervisors 5th March 2019

The committee has reviewed your application, and your study "*Effects of Digitalisation on Growth of Life Insurance amongst insurance firms in Kenya" has* been granted **approval**.

This approval is valid for one year beginning **24thApril 2019** until **24thApril 2020**

In case the study extends beyond one year, you are required to seek an extension of the Ethics approval prior to its expiry. You are required to submit any proposed changes to this proposal to SU-IERC for review and approval prior to implementation of any change.

SU-IERC should be notified when your study is complete.

Thank you.

STRATHMORE UNIVERSITY INSTITUTIONAL ETHICS REVIEW COMMITTEE (SU-IERC)
24 APR 2019
TEL: +254 (0)703 034 000
P. O. Box 59857 - 00200
NAIROBI - KENYA

pp

Sincerely,
Prof. Florence Oloo
Secretary
Strathmore University Institutional Ethics Review Committee

Appendix V: Introduction Letter

Strathmore Business School

29th April 2019

To Whom It May Concern

Dear Sir/ Madam

RE: FACILITATION OF RESEARCH – AGGREY MULUMBI

This is to introduce Aggrey Mulumbi who is a Master of Business Administration student at Strathmore Business School, admission number MBA/99723/17**.** As part of our MBA Program, Aggrey is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MBA course. To this effect, he would like to request for appropriate data from your organization.

Aggrey is undertaking a research paper on **"Effects of Digitalization on Growth of Life Insurance Amongst Insurance Firms in Kenya".** The information obtained from your organization shall be treated confidentially and shall be used for academic purposes only.

Our MBA seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

We appreciate your support and shall be willing to provide any further information if required.

Yours sincerely,

Caroline Tiara.
Manager, MBA Programs.

Strathmore UNIVERSITY

Ole Sangale Road, Madaraka Estate
P.O Box 59857 00200 Nairobi, Kenya
Cell: +254 703 414//6/7
Email: info@sbs.ac.ke or Visit www.sbs.strathmore.edu
Twitter:@SBSKenya

Appendix VI: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 836292

Date of Issue: 28/July/2021

RESEARCH LICENSE

This is to Certify that Mr.. Aggrey James Emp Mulumbi of Strathmore University, has been licensed to conduct research in Nairobi on the topic: Effects of Digitalization on the Growth of Life Insurance Firms in Kenya for the period ending : 28/July/2022.

License No: NACOSTI/P/21/12016

836292

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix VII: Research Permit Conditions

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearence from relevant Government Agencies
5. The License does not give authority to tranfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one year of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
off Waiyaki Way, Upper Kabete,
P. O. Box 30623, 00100 Nairobi, KENYA
Land line: 020 4007000, 020 2241349, 020 3310571, 020 8001077
Mobile: 0713 788 787 / 0735 404 245
E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke