

**DETERMINING THE EFFECT OF COVID-19 PANDEMIC ON THE
PERFORMANCE OF THE INFORMATION COMMUNICATION
TECHNOLOGY SECTOR IN KENYA, A CASE OF STRANTHMORE
UNIVERSITY**

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DECLARATION

This project is my original work and has not been presented for a degree in any University

Signature.....Date.....

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This project has been submitted for examination with my approval as University Supervisor

Signature.....Date.....

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DEDICATION

This research is dedicated to my family especially my father Nick who has continued to show me unwavering support and guidance throughout my study period. They have assisted me every step of the way, answering my questions and giving me the motivation, I need to finish my diploma.

ACKNOWLEDGMENT

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ABSTRACT

The main goal of the investigation was to determine how the Coronavirus pandemic affected Kenya's Information and Communication Technology industry's performance. Several studies have been conducted on the subject both locally and internationally, offering varying results and recommendations. By gathering respondents comments on the dependent factor and independent factors, this investigation aimed to supplement the body of existing knowledge. Technology acceptance theory and diffusion innovation theory served as the investigation's foundations. Descriptive research methods was employed in the investigation to look at how the independent and dependent factors related to one another. There were 122 individuals in the survey's target population, and 38 of them were chosen at random to participate. Using both primary and secondary data, the investigation came to a conclusion about the topic. The primary data for the investigation was gathered through surveys. In chapter 4, the investigation mainly examines the participants' general data. Pie charts, bar graphs, and tables are used to illustrate this data. The respondent replies to each independent factor utilized in the investigation are presented in the section along with a detailed examination of the factors. The investigator employs four claims for each independent factor to determine its impact on the success of the ICT industry. The investigation's limitations and a summary of the section are included at the section's concluding part. The investigation results are summarized in the chapter five. According to the investigation's outcomes, the summary demonstrates each independent factor and how it affects the dependent factor. The section examines investigation outcomes in more detail and offers suggestions for how to reduce overall impact of independent factors on dependent factor. The section concludes with a suggestion for future study.

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ABBREVIATIONS AND ACRONYMS

AI	:	Artificial Intelligence
CUE	:	Commission of University Education
GDP	:	Gross Domestic Product
ICT	:	Information Communication Technology
IDC	:	International Data Corporation
KIPPRA:		Kenya institute for public policy research and analysis
ML	:	Machine learning
MoH	:	Ministry of Health
SMEs	:	Small and Medium enterprises
SU	:	Strathmore University
TAM	:	Technology Acceptance Model

OPERATIONAL DEFINITION OF TERMS

Artificial Intelligence:	Refers to a computer's capacity to perform duties that are typically performed by individuals since they call for humans' judgment and knowledge.
E-learning:	Corresponds to a systematic teaching-based learning approach that also uses electronic infrastructure.
ICT:	refers to the hardware and software that make up contemporary computer technology.
Performance:	Applies to the ICT's capacity to significantly increase a business's efficiency growth, which can be measured using both non-monetary and monetary criteria.
Cost of Equipment:	This relates to the upfront investment expense for any organization, such as ICT.
Government policies:	A strategy or road map, whether by a corporation, political organization, or state, to influence or determine judgments, intentions, and other concerns.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The background of the investigation, the problem statement to be tackled by the investigation, the research objectives, the study questions, the importance of the investigation demonstrating the significance of this investigation to various individuals and organizations, and the investigation's scope are all included in this section.

1.1 Background of Research

The coronavirus epidemic has virtually stopped all human activity. The crisis is still improving and has had a huge influence on Kenya's not only economic progress but also different sectors. Consumers, states, and organizations are experiencing tremendous change, and the ICT sector is suffering the consequences. The ICT industry patterns have changed as a result, both globally and locally. For individuals throughout the planet, the coronavirus epidemic was an unforeseen but also unthinkable phenomenon. Individuals experienced dread and anxiety as a result of the crisis, not just regarding the threats associated with the infection but also regarding welfare programs, living standards, employment, pay, and other facets of individuals' social lives. The epidemic caused movement constraints, which drove many businesses to completely switch their investments in ICT to continue operating.

The promise that ICT hold for enhancing the macroeconomic sustainability of enterprises has rarely been more highlighted than it has been by present unusual conditions. When an organization's capabilities could be accessed remotely, such as through online connectivity to e-mail or other ICT infrastructure, it gave workers the ability to keep carrying out respective duties thus keeping the organization's operations running.

Nyale (2020) asserts that the deployment of online connectivity software enabled both internal company connections inside the firms and external connectivity with other parties. As numerous nations continue to be influenced by the crisis, which is now proving to be worse than recent crucial political, geopolitical, and socioeconomic conflicts like the Russia-Ukraine war. All sectors, notably the ICT industry, have been and continue to be impacted by the crisis. Due to the outbreak, tech firms have paused their promotional initiatives, postponed or cancelled crucial meetings and activities, and reported profitability outcomes that fell short of sector forecasts.

According to Yang et al. (2020), the social organization and organizational structures of modern global network civilization are mostly composed of information systems that are propelled by ICT. ICTs have played a crucial role in modernization. ICTs' various transcendental and potent uses have permitted good, long-lasting transformations in individuals' lifestyles on both a small and big scale. ICTs have been increasingly used for years in many regions of the globe to develop solutions and technologies that are focused on the needs of individuals for other economic industries. The combination of smartphone and digital services fueled by ICTs is quickly spreading throughout the globe due to the tremendous growth of online adoption, phone networks, and social media. The globe is still witnessing numerous ICT breakthroughs and solutions for the ongoing coronavirus dilemma. ICT has so far been used for a variety of citizen solutions. ICTs are being used by individuals all over the world to flawlessly share information on the most recent crisis-related data to individuals to identify possibility infected individuals, forecast prospective breakouts, and create protective equipment to handle the vast portion of delicate health data, etc.

According to a recent survey by KIPRRA (2022), Kenya's ICT sector has grown by 23 percent during the past ten years, with an average yearly expansion pace of roughly 10.8% since 2016. Additionally, the ICT industry benefited from forced digitization, especially in the first quarter of 2020 attributable to an increase in the need for online data. When the initial coronavirus case was discovered in the nation in March 2020, the demand grew. The worldwide coronavirus epidemic has undoubtedly altered the complicated worldwide economic system and will transform all industries soon, according to Maleka (2020), who notes that the Industry is witnessing tremendous expansion due to the digitized economy and the interconnected character of economic

models. Kenya is not exempt from the disruptions brought by the crisis, and as the percentage of verified local infection situations rises, as sector economic interruptions worsen, and as constricted economic operation as a result of contagion remediation persists, it will have a significant consequence on the country's already fragile economic system. The crisis exemplifies how crucial ICTs have grown to be in today's civilization and commerce. The modern economic operation, social contact, developmental initiatives, and the production of cultural and entertaining materials are all made possible by ICT facilities and capabilities. As a result, the crisis has a special focus on the ICT sector. Without a doubt, the epidemic has left behind significant economic disruption and profound wounds that will likely have a greater impact on Kenya's economy. The ICT is viewed as a key instrument that enabled and sustained all industries throughout the quarantine restrictions, enabling the state to run smoothly, white-collar jobs to thrive, and crucial avenues of communication and data transmission to be continued in previously impossible methods.

The unique coronavirus virus's global occurrence serves as a reminder of how interdependent and interrelated nations are. The effects of the crisis make it clear that numerous Kenyans currently lack accessibility to digitized gadgets that would allow them to operate remotely and conduct additional areas of their lifestyles through digital platforms, in addition to an online connection. The influence of the new coronavirus pandemic highlights the significance of ICT in numerous sectors of the Kenyan economy because the crisis forced individuals to work and learn from home. In this perspective, the investigation intends to explore the effects of the coronavirus on e-learning, the cost of purchasing ICT equipment, the influence of government policies implemented during the crisis on the ICT industry, and the performance of the ICT industry in Kenya as a result of the usages of AI during the crisis.

1.1.1 E-Learning

ICT is primarily used in academics to improve pupil or educator accessibility to knowledge and to encourage student-educator interaction when studying is taking place remotely. As the globe quickly adopts online technology, it is impossible to overlook the importance of ICT, particularly in the academic world. The coronavirus crisis,

which affected Kenya as it did the rest of the globe, forced the closing of all educational facilities. To engage students while they remained at home, some schools adopted e-learning programs as a result of the disruption caused by school closures that hindered traditional teaching and learning in the educational sector. Nevertheless, little remained known about the percentage of students who could utilize these capabilities due to the focus on e-learning as a substitute for in-person teaching. Since many students were kept out of the educational process due to a lack of this information, this encouraged inequity in education and studying, especially at this time of the Coronavirus epidemic Mutegi (2020).

1.1.2 Cost of acquiring ICT Equipment

Organizations have no choice but to utilize ICT in their service delivery even though the original investment cost in any company, such as ICT, is exorbitant considering the long-term and significant benefits that may be realized. The solution is guaranteed to be of high quality, promptness, decrease bureaucracy, and ultimately be less expensive because it increases output by reducing resource waste.

1.1.3 Government policies

When poorly written and executed, government policies can occasionally act as a barrier to investment. Government policy ought to be adaptable and consistent with those of other countries to function in the international market, which every country aspires to join in the attempt to conduct efficient and competitive commerce.

1.1.4 Use of AI

Numerous technological developments, notably processing, software creation, and data transmission, are supported by AI. Voice detection, automating, and fingerprint authentication are just a few examples of innovations that incorporate AI. ICT is one of the many industries that AI touches Surya (2017). Some publications define AI as a computer's ability to interpret and comprehend the information provided to intelligent systems. Many people think that using AI to manage data in a company structure is new. When evaluating the productivity of the ICT industry, the significance of AI can be disregarded.

1.1.5 ICT sector in Kenya

According to a report by the Communication Authority of Kenya, published in 2021, the Kenyan ICT industry was robust throughout the coronavirus crisis and proved to be a crucial driver of organizational continuation in the nation throughout the outbreak. Despite the outbreak's disruptions and difficulties, there has emerged a significant movement in the adoption of technological equipment and solutions. Online usage has increased in Kenya as a result of necessities. ICT is expected to aid Kenya in achieving its goal of increasing GDP by 5% by 2022, with cutting-edge internet technologies being crucial to advancing production, employment generation, and economic expansion. Nevertheless, the state, working with other relevant parties, will require to accelerate Internet access throughout the nation, enhance the current ICT policy initiatives, and legal and regulative structures, and sustain the advancement of computerized capabilities, particularly in remote Kenya, in an attempt to revitalize the economic system and rapidly recoup from the pessimistic consequences of the coronavirus crisis.

1.1.6 Profile of Strathmore University

As a non-profit private university, Strathmore University was established in 2002 and is situated in Nairobi's city environment. SU is a university co-founded in Kenya that has received formal recognition from the CUE of Kenya. In numerous fields of education, SU offers training and programs culminating in credentials in tertiary education that are formally recognized, including "pre-bachelor, bachelor, masters, and doctorate degrees". This 18-year-old Kenyan tertiary education school offers strict admissions criteria depending on applicants' prior academic achievement and results as well as entrance exams. This Kenyan university education organization is exceptionally competitive, with an acceptance rate spectrum of 30% to 40%. The university also welcomes applications for admission from foreign learners.

1.2 Statement of the Problem

ICT is the term used to describe the unification of computers, mobile phones, and video connections over a unified connection infrastructure. It is a broad phrase encompassing many types of communications equipment, encompassing radios, televisions, mobile phones, computing and networking devices, communications satellites, and more, and

the different solutions and tools they are used with, notably teleconferencing and distant education.

Digitization, change, and connection have become more prominent amid the outbreak as a means or remedy to improve the potential of the economy and society to recuperate. One such instance would be the use of new technologies like AI, robotics, and Online learning during the outbreak. While technology such as 3D printing technology is utilized to manufacture healthcare equipment, AI and ML are employed to identify and monitor situations. Over time, the way people continue to do commerce has evolved as a result of organizations implementing new technologies. Multiple firms were forced to increase their dependency on digital media or even make a full changeover to remain functioning owing to movement restrictions imposed by MoH to curb the coronavirus outbreak in 2020. These peculiar conditions have never been more illustrative of the possibilities that digitization represents for boosting the economic sustainability of businesses. Workers could proceed to do their jobs when a company's facilities could be accessed remotely, for instance through internet connectivity to emails or similar ICT platforms. This maintained the company's processes ongoing. Web communications technologies made it possible to communicate both inside and externally within businesses.

The outbreak's detrimental implications include a widespread drop in technological investments across sectors. The total amount invested in 2019 was predicted to be 5.06 trillion US dollars, but the IDC predicted that worldwide expenditure would fall by about 1.6 percent, to 4.1 trillion US dollars. Comprehending the ICT context before and during the outbreak is crucial to comprehending the trend that the ICT industry is headed in on a nationwide and international level as well as strategies to manage such catastrophes should they arise again. The relationship involving people and ICT has gotten closer across the globe, and the crisis has made it necessary for individuals to know more about the philosophy. The study, therefore, aims to look into the effects that the coronavirus has on the performance of the ICT sector in Kenya.

1.3 Objectives of Study

1.3.1 Main Objective

To examine the effect of the Coronavirus pandemic on the performance of the Information Communication Technology sector in Kenya

1.3.2 Specific Objectives

1. To investigate how the adoption of e-learning during the coronavirus crisis affected the performance of the ICT sector in Kenya.
2. To find out how the cost of acquiring IT equipment amid the coronavirus crisis affected the performance of the ICT sector in Kenya.
3. To look into the effect of government policies enacted during the coronavirus crisis on the performance of the ICT sector in Kenya
4. To assess the effect of the use of AI amid the coronavirus pandemic on the performance of the ICT sector in Kenya.

1.4 Research Questions

1. How does E-learning affect the performance of the ICT sector in Kenya?
2. To what extent does the Cost of equipment affect the performance of the ICT sector in Kenya?
3. What is the effect of the Government policies on the performance of the ICT sector in Kenya?
4. How do the use and access of AI affect the performance of the ICT sector in Kenya?

1.5 Significance of Study

The relevant parties will gain the following from the investigation: To start, the management of companies would realize the survey's conclusions useful because it will help them comprehend how the coronavirus outbreak has affected their ICT divisions. They will then be in a position to decide what is best for the ICT division. The investigation will also be helpful to scholars because it will expand the body of existing information and offer thoughts for further investigation. In addition, the investigation's findings will be helpful to the Kenyan government and other ICT sector policymakers as they formulate their upcoming judgments. The relevant authorities will be able to

determine how best to contribute to the expansion of the ICT industry. In conclusion, the survey's outcomes will help higher education institutions better equip learners with the understanding they need concerning coronavirus outbreaks and performance.

1.6 Scope of Study

The focus of this investigation is the impact of the coronavirus outbreak on the effectiveness of information and communication technology with particular reference to Kenyan. 122 Strathmore University respondents, including ICT lecturers, ICT students, and ICT departmental employees, will be included in the assessment population. The study was carried out from June 2022 to September 2022.

1.7 Chapter Summary

The survey's context and the problem in question are the main topics of this chapter. This part also includes a summary of the study goals and the questions that will be addressed. The chapter's relevance and investigation scope are presented at the end of this chapter.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The theoretical literature that is thought to be crucial to comprehending the investigation is included in this section. A conceptual framework and an overview of the critical assessments of earlier works are also included.

2.1 Theoretical Literature Review

The Investigation will be based on the TAM theory and Diffusion of Innovation theory.

2.1.1 Technology Acceptance Model (TAM) Theory

Fred Davis proposed the TAM in 1986. In this research, TAM is used to discuss the factors that affect how technologies are accepted and used. According to Bertrand & Bouchard (2008), TAM offers a straightforward hypothetical justification. "TAM contains Perceived Simplicity of Usage and Recognized Usefulness, which are essential elements of technical acceptability and consumer engagement," claim Opoku & Enukwesi (2020). TAM is largely employed to predict how people will react to new technology and to pinpoint any challenges that must be addressed. According to this strategy, for ICT to be embraced, conditions such as recognized utility and convenience of usage, as well as the cost of purchasing ICT equipment, and ease of adoption of ICT innovations such as e-learning should exist. This is because a person's willingness to utilize technology is influenced by several factors such as acknowledged effectiveness and apparent simplicity of usage.

2.1.2 Diffusion of Innovation (DOI) theory

E.M. Rogers invented the hypothesis in 1962. To describe how a concept or item eventually obtains traction and spreads among a particular demographic or social structure, the concept was originally developed in communications. Individuals eventually embrace a newer concept, habit, or item as a component of a societal structure as a consequence of this dissemination.

Adopting describes when someone does anything different from what they formerly did. The notion is based on the assumption that new concepts (breakthroughs) or technological advancements are always being made, and that communications play a crucial role in distributing these innovative ideas throughout population or societies. This is mainly because a person's mindset towards an invention will determine whether or not it is accepted. The DOI framework is a well-liked paradigm for analyzing DOI in several economic areas, notably the ICT industry. According to Chairuel et al. (2015), the approach is skewed towards examining innovative technologies and dissemination. The idea will aid the research's knowledge of how the innovations of the ICT sector were adopted, disseminated, and accepted during the coronavirus crisis.

2.2 Empirical Literature Review

An empirical evaluation clarifies loopholes that need to be covered by ongoing or future studies and also prior survey's subject or topic, approach, outcomes, and suggestions.

2.2.1 Adoption of E-learning and performance of the ICT sector

According to an investigation by Almaiah, et al. (2020), e-learning technologies are essential in combating coronavirus outbreaks. Educational facilitators can control, prepare, execute, and monitor the educational and training processes with the help of e-learning technologies. Additionally, at times when educational institutions are closed, aids teachers, schools, and universities in facilitating the learner learning process. The purpose of the investigation was to look into factors that could influence how people used e-learning amid the outbreak. To gather reliable data for the investigation, a combination of secondary research and semi-structured interviewing was employed. Thirty-one people made up the sample size, and more than half of them were IT professionals. The results of the investigation showed that adopting e-learning has a considerable impact on students' performance. The investigation even further advised that government and technical assistance should provide the essential technical reserves deemed requisite to carry out ongoing technical upkeep for e-learning structures, as raising the adoption of e-learning structures effectively will be positively linked correlated with growing accessibility to e-learning resources without any technical issue or postponement.

An investigation was conducted by Franklin & Nahari (2018) to determine how E-Learning impacted performance in Nigeria. For a population of 4,918 academic

employees, a blend of primary and secondary data was used in the investigation. Using the convenience sampling approach, a sampling of 197 participants was chosen from this group. The results of the investigation showed that e-learning has a big influence on how well the ICT sector performs. the study further recommended that educational organizations and other relevant players in the ICT sector should enact policies to favor the adoption of E-learning to adapt to the new technological innovations.

According to Ansong et al. (2017) investigation of the drivers of e-learning acceptance in Ghana, consumers of the e-learning structure should feel satisfied utilizing it with minimal or no effort or support. The explanatory and descriptive surveying design was used in the investigation. The investigation included a population of 35,683 respondents, of which 450 were chosen to constitute the sample group utilizing a purposive sampling approach. The investigation outcomes demonstrated that technological and environmental elements influenced e-learning acceptance, and these were statically important to e-learning acceptance and performance of the ICT sector. The investigation suggested that before implementing e-learning in institutions, aspects such as technological and organizational features be evaluated to assure the effectiveness and performance of the ICT sector in general.

2.2.2 Cost of acquiring IT equipment and Performance of the ICT sector

Şahin & Topal (2016) looked into how using IT affected organizational costs and financial success. According to the report, the impact of information technology on performance is a topic that is always being looked at by businesses, industries, and the Information Technology sector. To clarify the relationship connecting the independent and dependent variables, the investigation used a descriptive research approach. The results of the investigation showed that when discussing the success of the ICT sector, the expense of IT equipment is a component that can't be overlooked. As per the study, performance and IT devise acquisition costs were positively correlated. High costs deter individuals and investors companies from desiring to contribute to the sector, which has a direct influence on the sector's performance.

Kumar and Vimala (2016) utilized a descriptive research approach to analyze the independent and dependent components in their study of the influence of cost structures on the performance of pharmaceutical enterprises in India. The secondary sources of data included in the study were collected over five years, spanning 2009 to 2014. The investigation population and sampling size included the top five firms in the abovementioned industry in India. The investigation's findings demonstrated a positive relationship between costs and performance. According to the results, the high cost of obtaining equipment affects the profit margins of companies, raising the costs of conducting operations in that sector.

According to Khayyat (2010), as ICT continues to become less costly, extra versatile, implemented effectively and linked, and engrained in a broader range of gadgets, innovative solutions in these areas, as well as the entire new industrial sectors, including interactive media structures for companies, entertainment technologies, and information and communication reasons, are likely to emerge, with tremendous implications for sector frameworks, work opportunities, and economic expansion. The investigation sought to investigate the consequences of information technology on cost, quality, and productivity in Iraq. The investigation used a sampling population of 500 people, with 150 being the sample size chosen by random sampling. According to the survey's conclusions, the exorbitant expense of purchasing ICT equipment decreases the industry's overall performance. They also showed a strong correlation involving cost and ICT industry performance that was positive and substantial.

2.2.3 Government policies and performance of the ICT sector

Mwasiaji, (2019), conducted research into how government policies have an impact on the manufacturing sector's performance. A descriptive survey design was employed in the investigation. 484 people made up the study's population, and 73 of them were chosen to employ cluster sampling strategies. The results of the investigation showed that the growth of the manufacturing sector is significantly influenced by positive government policy initiatives. The government was urged by the research to develop more targeted legislative proposals and policies aimed at enhancing the industry's performance.

Ndege & Moronge (2016) researched the elements that affect the ICT performance of SMEs in the Kenyan economy. The investigation found that both government agencies and corporate organizations should promote and encourage small company connectivity and ICT. The investigation used an exploratory, descriptive, and quantitative survey design technique. The investigation used a sample of 100 responders and collected both "qualitative and quantitative data". According to the investigation's outcomes, government policies in the Kenyan economy have an impact on the success of Initiatives in SMEs, as indicated by a correlation coefficient of 20% and a significant value of 0.000. This reveals that a shift in government policies affects 20% of performance. The investigation suggested that relevant authorities should develop favorable policies to enhance the performance of SMEs in the Country.

According to a study by Owino et al. (2015) on the factors influencing the effectiveness of ICT projects in Kenya, "tax subsidies, subsidies for ICT sector Investments, and accessibility to up-to-date knowledge about ICT" all have an impact on the development and expansion of ICT. Other constraints highlighted included "license prices, license prerequisites, political concerns, and government regulations" that were shown to limit investments in ICT. A descriptive survey design was employed in the investigation. From the 344 ICT companies in Nairobi City county that made up the target population, 103 ICT enterprises were chosen as a sample for the study. The results of the analysis showed a high correlation between Kenyan government policies and the success of ICT projects. The investigation further suggested that ICT policymakers and the government develop and implement beneficial ICT policies that foster a setting that is favorable for all actors. The government should also think about developing policies that promote the utilization of ICT offerings to support addressing pressing national issues like security, corrupt practices, and illegal hunting to increase consumption of ICT solutions.

According to an investigation by Bekele (2012), favorable government policies help the ICT industry flourish and contribute to the country's GDP, which helps to boost economic expansion. The goal of the study was to identify the variables that affect ICT progress in Ethiopia. According to the report, the performance of the ICT industry is

positively correlated with good government policies. The research used a descriptive survey approach. All of Ethiopia's ICT organizations were included in the survey's sample size, which also included the study population. The study employed secondary data sources. The report also suggested that the government should build strong policies to foster an atmosphere favorable to the growth of ICT. The research also recommends that laws and regulations be passed by the government for those policies developed to be implemented quickly.

2.2.4 Artificial Intelligence on the performance of the ICT sector

Wijayati & Rahman (2021) claim that the performance effects of AI capabilities might be both beneficial and detrimental. Their research sought to determine how Indonesian employees responded to AI use. This investigation employed quantitative research and the non-probability sampling methodology, together with judgment sampling and purposive sampling techniques. Three hundred fifty-seven responders participated in the research survey, of which two hundred fifty-four met the criteria for sample size. The results of the investigation showed that AI and related innovations provide a wide variety of possibilities, advantages, and solutions to enhance the performance of various economic industries.

An analysis by Agarwall et al. (2021) into whether AI impacts the operating performance of firms, found that enterprises from developing economies have started adopting AI capabilities to improve their performance and uncover opportunities to expand their businesses. The investigation utilized secondary data to assess the impact of AI on the performance of ICT companies over a period of 15 years. The survey's conclusions showed a correlation connecting AI characteristics and ICT enterprises' performance. The study recommended that firms aspiring to expand and improve their performance should incorporate AI into their operations.

Wamba-Taguimdje et al. (2020) researched the impact of AI on corporate performance in France. The investigation discovered that AI abilities impact organizational and operational performance enhancement. According to the report, AI and its capabilities provide a wide variety of alternatives, advantages, and solutions to improve

organizational performance. The survey conducted a secondary investigation on five hundred case studies. The survey's findings demonstrated that AI's abilities and capabilities enable firms to optimize their performance. the study's recommendations were in line with those of Agarwall et al. (2021).

2.3 Summary and Research Gaps

Several studies have been conducted on the implications of E-learning, technology costs, government policies, use of AI, and the performance of diverse sectors. According to Franklin and Nahari (2018), e-learning has a considerable favorable influence on ICT performance. This investigation, on one hand, concentrated on educational institutions in Nigeria. The present research will be conducted in Kenya. Furthermore, Almaiah et al. (2020) evaluated the impact of E-learning on learner performance in tertiary education facilities. The investigation discovered a substantial beneficial association between e-learning and learner performance in tertiary education facilities. This analysis focused on educational institutions, but the present analysis will focus on Kenya's ICT industry. Studies conducted by Sahin & Topal (2016), Khayyat (2010), and Kumar & Vimala (2016) revealed a substantial strong connection between the expense of IT devices and, respectively, the financial performance, pharmaceutical companies' performance in India, and Iraq's performance on the expense, quality, and effectiveness. This research was conducted around the globe, but the present survey will be centered in Kenya.

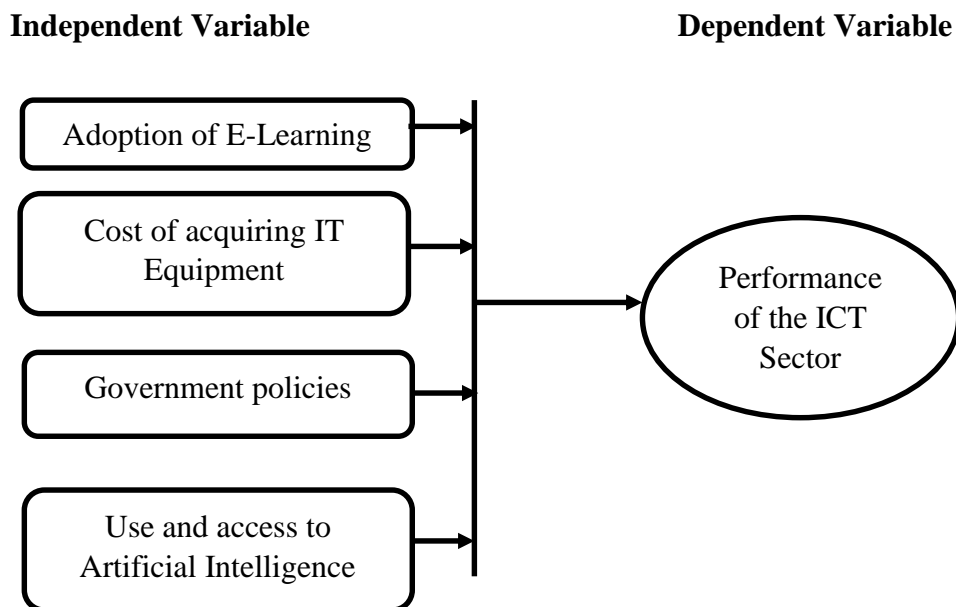
Government policies were found to be highly associated with performance, according to Mwasiagi (2019). This analysis paid particular attention to SMEs. The present analysis will concentrate on Kenya's Strathmore University. Owino, et al. (2015) also sought to explore the factors that affect the success of ICT initiatives in Kenya. While the present analysis will concentrate on commercial institutions, the previous study covered state institutions. In conclusion, Bekele (2012) found that one of the major problems impeding the performance and growth of the ICT industry in Ethiopia is negative government policies. This study focused on the ICT sector of Ethiopia while the present analysis will concentrate on the ICT sector in Kenya.

Last but not least, studies believe that AI is a crucial role in positively affecting performance. According to an investigation by Wijayati and Rahman published in 2021, AI has a favorable impact on Indonesian workers' performance. The present investigation is being undertaken in Kenya, whereas the study by Wijayati and Rahman, (2021) was carried out in Indonesia. According to Wamba-Taguimdje et al. (2020), AI and performance in France were statistically and strongly related. This research was done in France while Kenya served as the base of the current inquiry.

2.4 Conceptual Framework

The investigation structure is summarised in the conceptual framework. The independent and dependent factors in this investigation, therefore, provide a conceptual foundation. The performance of the ICT industry is the dependent factor. On the other side, the independent factors include the acceptance of e-learning, the Cost of IT equipment, government policies, and usage of AI.

Figure 1: Conceptual Framework



2.5 Operationalization of Variables

Table 1: Operationalization of Variables

Variable	Indicator	Measurement
Performance of the ICT Sector	<ul style="list-style-type: none"> • Increased Productivity • Return on investment • Improve profit margins • Quality of IT services 	(1 – 5) Likert scale
Adoption of E-Learning	<ul style="list-style-type: none"> • Cost of Adoption • Ease of adoption • Knowledge of Use • Network and access 	(1 – 5) Likert scale
Cost of acquiring IT equipment	<ul style="list-style-type: none"> • Training cost • Availability and access • Cost of installation • Cost of transportation 	(1 – 5) Likert scale
Government Policies	<ul style="list-style-type: none"> • Ease and pace of Implementation • Effectiveness and efficiency • User satisfaction • Responsiveness 	(1 – 5) Likert scale
Use of Artificial Intelligence	<ul style="list-style-type: none"> • Knowledge of ICT • Access and use of AI • Information security and privacy • Cost of Using AI 	(1 – 5) Likert scale

Chapter Summary

The ideas on which the investigation is founded, earlier research on the same topic, an overview of those earlier investigations, any gaps that were found, and the conceptual framework of the analysis are all covered in this chapter of the paper. In this section, the operationalization of research factors is also completed.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This significant part of the publication addresses the research design, target population calculations, sample size calculations, research instruments, data collection and analysis procedures, and ethical issues.

3.1 Research Design

To enable a thorough evaluation of the implications of coronavirus on the performance of the ICT industry in Kenya, a descriptive survey was employed as the research design. This design tries to depict the nature, conduct, impact, and variables that lead to the investigation. The results of a descriptive survey design provide the opinions and sentiments of the responders concerning the variables that shaped the investigation. Accurate data can be easily collected using questionnaires and observations in the descriptive survey design. Because descriptive analysis is more analytical, it was simple for the investigation to statistically evaluate the data it needed to establish the existence of a connection connecting the independent factor and the dependent factor as per Mugenda & Mugenda, (2013).

3.2 Target Population

A population, according to Mugenda & Mugenda (2013), is a complete categorization of every component under research; it contains every component under analysis. To fully address the research's questions, Strathmore University IT students, IT lecturers, and workers from the IT department of the institution were recruited as survey respondents. A total of 122 people were used for the endeavor

Table 2: Target Population

Participants	Number	Percentage
IT Students	62	50.80
IT lecturers	35	28.70
IT staff	25	20.50
Total	122	100

3.3 Sample and sampling techniques

Data was chosen using a simple random sampling procedure. A sample is a subset of the 'population' that is analyzed to draw generalizations about the entire population as per Kothari (2011). According to Saunders, et al. (2009), the sampling approach is the method through which an investigator chooses a sample based on the expertise or experiences of the population being surveyed. As per Mugenda & Mugenda (2013), a sample range of around 10 percent and 30 percent is an acceptable depiction of the overall intended population whenever the research population is smaller than ten thousand participants.

Table 3: Sample Size

Participants	Number (30%)	Percentage
IT Students	19	50
IT lecturers	11	29
IT staff	8	21
Total	38	100

3.4 Data Collection Instrument

All of the research participants got standardized questionnaires. A blend of 'open-ended and closed-ended questionnaires was used in the investigation. Before the actual data collection, all instruments were pre-tested with the responders who did not participate in the actual investigation, and modifications were adjusted as needed.

3.5 Pilot study

The viability of the investigation is validated by a pilot study that replicates all the methods of the primary investigation and evaluates the selection and exemption criterion of the respondents as per In, (2017). Four IT personnel from the Management University of Africa were used in the survey's pilot investigation.

3.6 Validity

According to Mugenda & Mugenda, (2008), validity is the extent to which outcomes from data assessment genuinely reflect the subject being studied. A professional comment may also be used to judge if an investigation is valid. Thus, to evaluate the instrument components' validity, this investigation requested the research supervisor's advice.

3.7 Reliability Test

According to Mugenda & Mugenda, (2008), reliability is the extent to which the investigation instrument produces similar outcomes or findings after multiple tests. Before the data gathering procedure, a pilot investigation was conducted to assess the reliability of the questionnaires by gathering information from people who were not participating in the sample. To cut down on mistakes that could jeopardize the accuracy of the data obtained, a coefficient of dependability was established. Reliability for the study was considered acceptable with a value of 0.7.

3.8 Data Collection Procedure

The investigator handed out the questionnaires for the responders to fill. A deadline was set for the responders to react to the questionnaires. The investigator gathered the surveys after the deadline and guarantee a high rate of completeness and retrieval of the filled questionnaires. Relevant resources that offered important knowledge that was useful to the investigation were used in the gathering of secondary data. Publication presses, journals, archives, and numerous research-related sources are examples of external sources.

3.9 Data Analysis and Presentation

The investigator confirmed that the surveys are completed before being taken to different levels during the completion check process. This was performed to make sure that any irregularities found are fixed right away before the participant's questionnaires are collected. After all relevant data had been collected, data processing began. Conceptual contents assessment was used to assess both closed-ended and open-ended questions. The creation and presentation of frequency estimates, charts, and tables that depicted and summarized the data formed part of the assessment. To draw conclusions and make contrasts about the factors, the investigation also used averages and standard deviations.

3.10 Ethical Considerations

Ethical considerations' main objective is to make certain that nobody is damaged or experiences negative effects as a result of investigative activity. Appropriate protections were implemented in this investigation based on ethical concerns and standards, considering the frequently delicate connections between the investigator and the participants. As a result, the investigator only used the data collected for the investigation in an academic setting and with strict confidence. In this investigation, no names of participants were disclosed or utilized. Under the definition of voluntary participation, no volunteers were coerced into taking part in the study.

3.11 Chapter Summary

In this section of the investigation, the target population and research design were described. The methods for collecting data and using samples were also covered in this chapter. The processes for data collection, analysis, and presentation will be looked into. The chapter summary and ethical issues are also considered.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.0 Introduction

This chapter includes presentations and discussions on how the coronavirus pandemic impacted various aspects that can be used to measure the performance of Kenya's ICT industry, specifically Strathmore University serving as the primary focal point. To gather data from the respondents, the investigation employed surveys. In this chapter, the acquired data was reviewed, analyzed and the results were presented and discussed.

4.1 Presentation of Research Outcomes

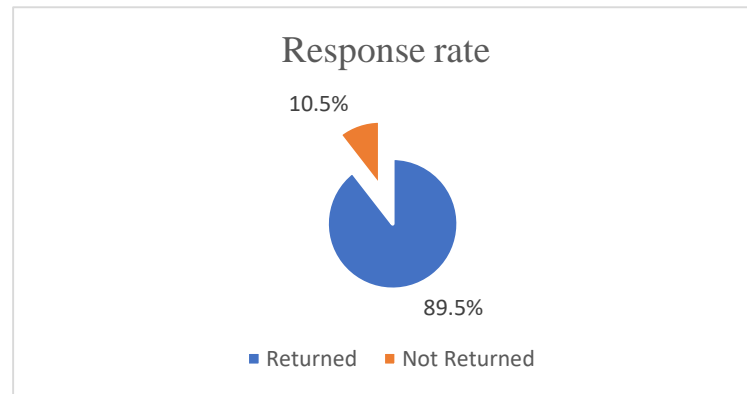
4.1.1 Response rate

38 surveys were given to investigation's respondents by the investigator. 89.5% of the respondents managed to return the questionnaires that were given out, whereas only 10.5% were unable to do so, according to the investigator 's study of the respondents' reaction rate, which is shown in table 4 and figure 2, respectively, after completing questionnaires collection procedure. As a result, the study's completion rate of 89.5% was deemed appropriate for the study's purpose.

Table 4: Response rate

Surveys	Frequency	Proportion (%)
Returned	34	89.5
Not Returned	4	10.5
Total	38	100

Figure 2: Response rate



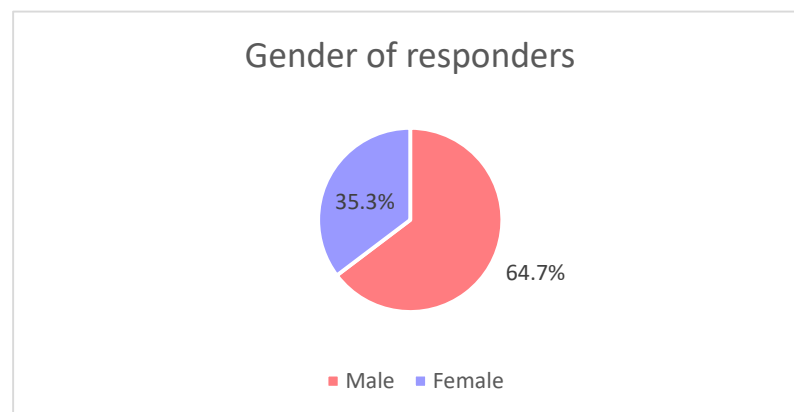
4.1.2 Gender of participants

The inquiry managed to establish a two-thirds gender rule, with men making up 64.7% of the surveys returned and women 35.3%, based on the examination of respondents' gender.

Table 5: Gender of responders

Gender	Frequency	Proportion (%)
Male	22	64.7
Female	12	35.3
Total	34	100

Figure 3: Gender of responders



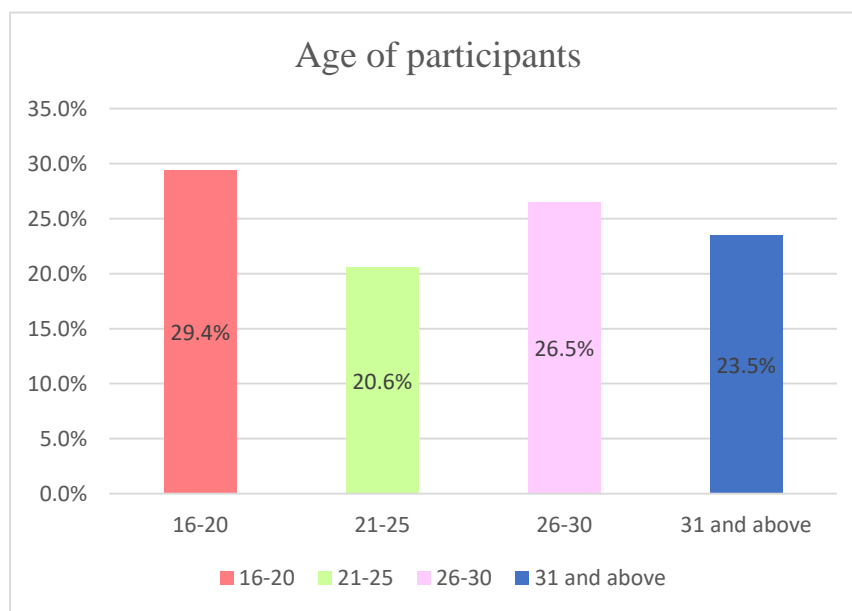
4.1.3 Age of respondents

According to a review of the responders' ages, the majority of responders'—29.4%—were between the ages of 16 and 20; 26.5%; between the ages of 26 and 30; 23.5%; and 20.6%—were above the age of 31.

Table 6: Age of respondents

Age	Frequency	Proportion (%)
16-20	10	29.4
21-25	7	20.6
26-30	9	26.5
31 and above	8	23.5
Total	34	100

Figure 4: Age of respondents



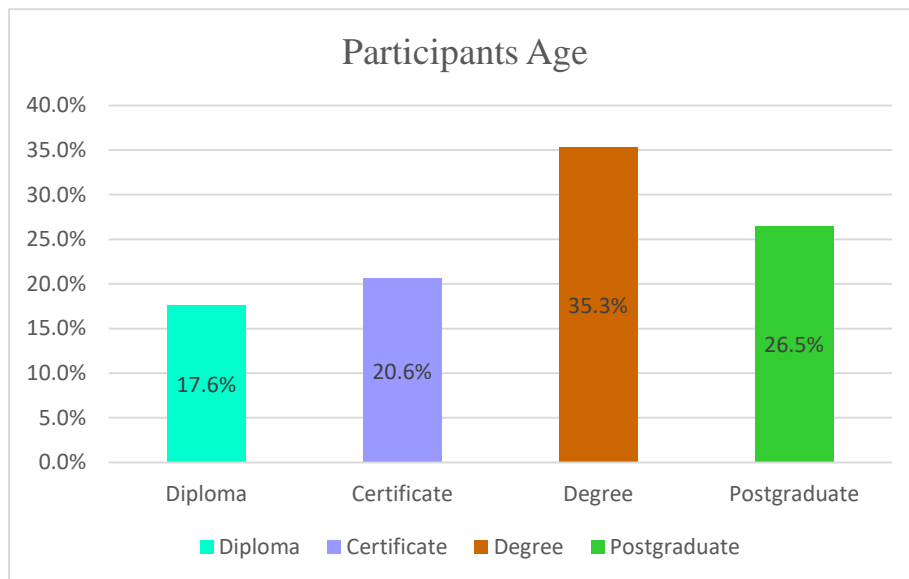
4.1.4 Participants Education

The bulk of research participants—35.3%—had obtained undergraduate degrees certificates. Postgraduates' degree holders came in second with 26.5%, accompanied by Certificate holders with 20.6% and those with diplomas with 17.6%.

Table 7: Participants' Education

Education	Frequency	Proportion (%)
Diploma	6	17.6
Certificate	7	20.6
Degree	12	35.3
Postgraduate	9	26.5
Total	34	100

Figure 5: Participants' Education



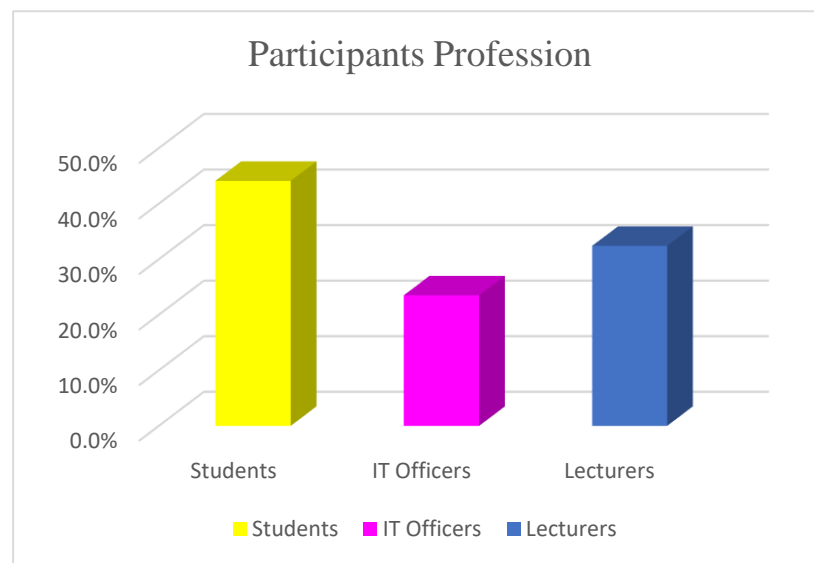
4.1.5 Participant's profession

IT Students made up 44.1% of the respondents, lecturers made up 32.4%, and IT officers working at the Strathmore IT department made up 23.5%.

Table 8: Participants' profession

Profession	Frequency	Proportion (%)
Student	15	44.1
IT officer	8	23.5
Lecturer	11	32.4
Total	34	100

Figure 6: Participants' Profession



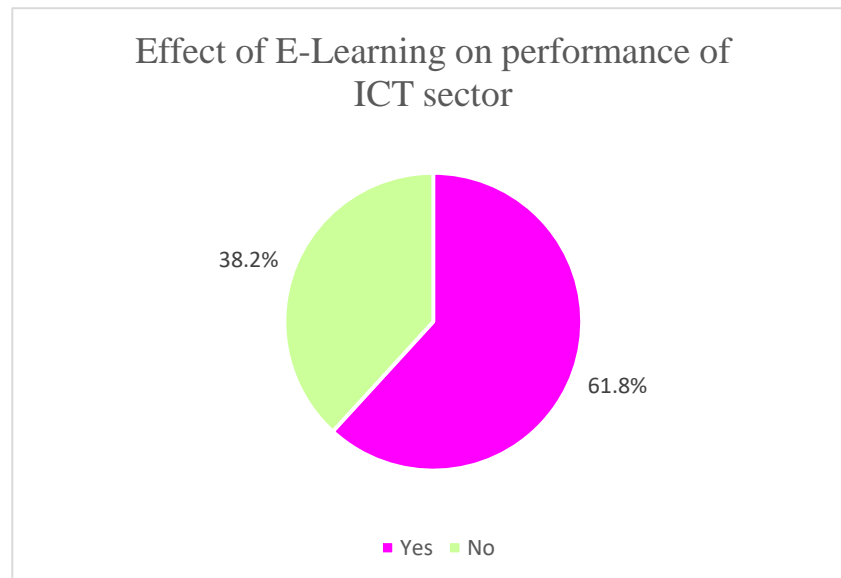
4.1.6 E-learning and performance of ICT

Although 38.2% of respondents disagreed, a large proportion of respondents (61.8%) indicated that adoption of e-learning has a direct impact on the functioning of the ICT industry.

Table 9: Effect of E-learning on the performance of the ICT sector

Response	Frequency	Proportion (%)
Yes	21	61.8
No	13	38.2
Total	34	100

Figure 7: Effect of E-Learning on the performance of the ICT sector



The success of the ICT industry in Kenya can be said to be affected by the adoption of e-learning, according to a series of statements to which responders were also requested to answer. Table 10 indicates that participants appeared to concur with the statements that were made to a significant degree. A mean average of 2.19 and a

standard deviation of 1.96 backed up this conclusion. The investigation's standard deviation demonstrated how varied the answers were from the average mean. The results indicate that the success of Kenya's ICT industry is impacted by the use and adoption of e-learning solutions.

Table 10: Adoption of E-Learning and performance of the ICT sector

Statements	N	Mean	Std. Deviation
The cost that is involved in the adoption of E-learning by educating institutions impacts the performance of the ICT sector in Kenya.	34	2.06	1.83
Education institutions with financial capability can easily adopt e-learning which in turn contributes to the overall performance of the ICT sector in Kenya.	34	2.12	1.86
Institutions with the required knowledge and expertise are in a better position to adopt e-learning, as this helps in reducing the cost involved in training individuals.	34	2.24	2.06
Only individuals with access to networks and the internet can use e-learning services and this hurts the ICT sector.	34	2.35	2.09
Average Mean		2.19	1.96

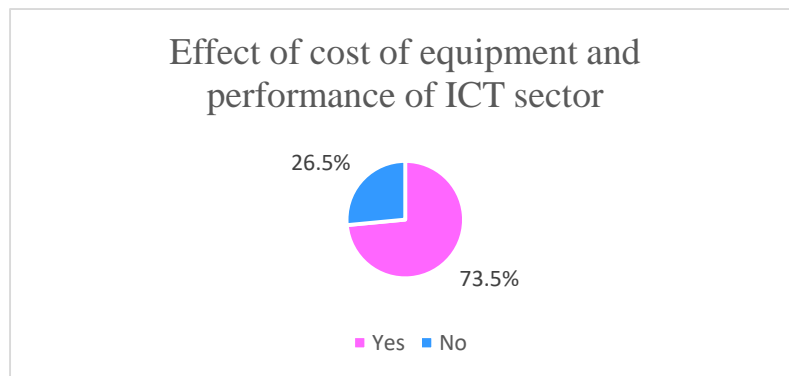
4.1.7 Cost of acquiring IT Equipment and performance of the ICT sector

A large proportion of overall respondents (73.5%) claimed that the price of buying IT equipment had a direct impact on how well the ICT industry performs, while just 26.5% of respondents disagreed.

Table 11: Effect of cost of equipment on performance of the ICT sector

Response	Frequency	Proportion (%)
Yes	25	73.5
No	9	26.5
Total	34	100

Figure 8: Effect of cost of equipment on performance of the ICT sector



Additionally, respondents were requested to comment on a variety of statements regarding how the price of purchasing IT equipment impacts the success of Kenya's ICT industry. Table 12 shows that participants appeared to concur with the comments made to a large extent. A mean average of 2.22 and a standard deviation of 1.98 backed up this conclusion. The investigation's standard deviation illustrated how varied the replies were from the average mean. The results support the claim that the success of Kenya's ICT industry is influenced by the price of purchasing IT equipment.

Table 12: Cost of acquiring IT equipment and performance of the ICT sector

Statements	N	Mean	Std. Deviation
The cost involved in training IT individuals inhibits the adoption of IT solutions and thus has a direct impact on the performance of the ICT sector in Kenya.	34	2.06	1.97
Availability and accessibility of IT equipment inhibit the adoption of ICT solutions thus the performance of the ICT sector in Kenya	34	2.24	1.99
The cost involved in the installation of ICT equipment hinders its adoption	34	2.21	1.94
The cost of acquiring IT equipment has a direct to the performance of the ICT sector	34	2.38	2.04
Average Mean		2.22	1.98

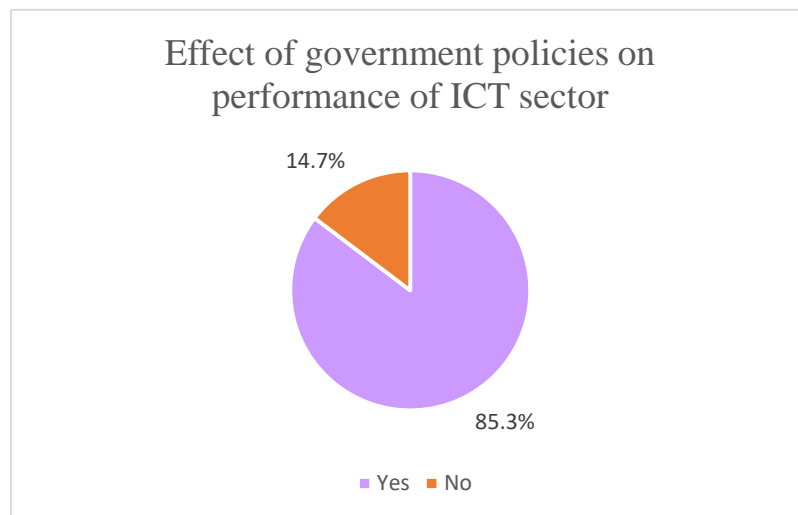
4.1.8 Government policies and performance of the ICT sector

In contrast to 14.7% of the respondents, a large proportion of the respondents (85.3%) claimed that government policies directly affect the success of the ICT industry.

Table 13: Effect of government policies on the performance of the ICT sector

Response	Frequency	Proportion (%)
Yes	29	85.3
No	5	14.7
Total	34	100

Figure 9: Effect of government policies and performance of the ICT sector



Furthermore, participants were requested to comment on several assertions regarding how Kenya's ICT industry is affected by government policy. Table 14 shows that responders appeared to concur with the comments made to a large extent. An average mean of 2.16 and a standard deviation of 1.94 lend credibility to this conclusion. The investigation's standard deviation demonstrated how varied the replies were from the

average mean computed. The results indicate that government initiatives have an impact on the development of overall ICT industry in Kenya.

Table 14: Government policies and performance of the ICT sector

Statements	N	Mean	Std. Deviation
The ease and pace at which the government implement policies affect the performance of the ICT sector to a great extent.	34	2.32	2.03
Effective and efficient ICT policies promote the overall performance of the sector	34	2.00	1.83
Government policies should be aimed at improving the performance of the ICT sector.	34	2.15	1.99
Government policies have a direct link to the performance of the ICT sector	34	2.18	1.94
Average Mean		2.16	1.95

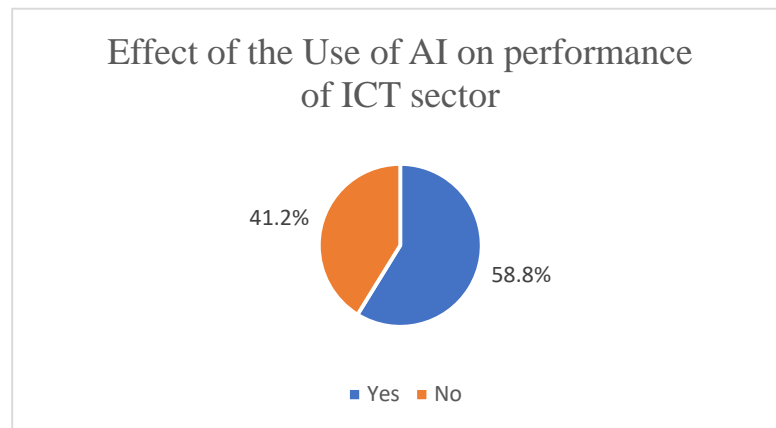
4.1.9 Use of AI and performance of the ICT sector

The usage of AI has a direct impact on the success of overall ICT industry, according to a large proportion of respondents (85.3%), whereas only 14.7% of respondents held the opposite view.

Table 15: Effect of the Use of AI on the performance of the ICT sector

Response	Frequency	Proportion (%)
Yes	20	58.8
No	14	41.2
Total	34	100

Figure 10: Effect of the use of AI on the performance of the ICT sector



Similarly, responders were requested to comment on several claims regarding how the growth of Kenya's ICT industry is impacted by the utilization of AI. Table 12 shows that responders appeared to concur with the comments made to a large extent. An average mean of 2.16 and a standard deviation of 1.94 lend credibility to this conclusion. The investigation's standard deviation demonstrated how varied the replies were from the average mean computed. The results indicate that the success of Kenya's ICT industry is impacted by the usage of AI.

Table 16: Use of AI and performance of the ICT sector

Statements	N	Mean	Std. Deviation
Increased productivity by ICT firms can be used to measure the performance of the ICT sector.	34	2.12	1.91
The high ROI of ICT firms can be said to have a positive link to ICT sector performance	34	2.18	1.91
High-profit margins of ICT firms positively impact ICT sector performance	34	2.06	1.88
High-quality services offered by ICT firms improve their profitability which also contributes to the overall performance of the sector	34	2.00	1.68
Average Mean		2.09	1.84

4.2 Limitation of the study

Constraints constitute obstacles that harm overall results of the investigation. This analysis primarily focused on Strathmore University and the impact of the coronavirus outbreak on a few factors that influence the success of the ICT industry. This suggests that the investigation's conclusions could not be substantially applicable to Kenya's ICT industry's performance.

4.3 Chapter Summary

Results from the research are analyzed and presented in this chapter. The investigation's limitations are discussed in the section's concluding part.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.0 Introduction

The investigation's main objective was to determine how the coronavirus affected Kenya's ICT industry's success. This chapter of the investigation contains recommendations as well as a summary of the investigation outcomes and a conclusion.

5.1 Summary of the findings

The investigator gave out 38 surveys to the participants, of which 34 surveys were completed and returned. As a result, the investigation received 89.5% of responders' responses. The reply rate of 89.5% was deemed acceptable and sufficient for the data processing procedure to begin.

5.1.1 Adoption of E-learning and performance of the ICT sector

First, the investigation set out to determine how the adoption of E-learning would affect the success of the ICT industry. The data gathered from overall participants and analyzed revealed that a large proportion of responders (61.8%) thought that the adoption of E-learning has an impact on the ICT industry's success. The participants' responses to the varied assertions made indicated a Mean = 2.19, and a Standard deviation = 1.96, which supports this conclusion.

5.1.2 Cost of acquiring IT equipment and performance of the ICT sector

The investigation additionally intended to determine the relationship between the success of Kenya's ICT industry and the price of purchasing IT equipment. The information gathered from the participants and evaluated revealed that a large percentage (73.5%) thought equipment costs had an impact on the functioning of the ICT industry. This conclusion is also supported by the participants' responses to the study's numerous claims, which indicated an average Mean = 2.22, and Standard deviation = 1.98.

5.1.3 Government policies and performance of the ICT sector

The analysis further tried to determine how government policies affected the functioning of Kenya's ICT industry. The information gathered from the participants and examined revealed that the ICT industry's success was believed to be impacted by government policies by an overwhelming proportion (85.3%) of responders. This conclusion is further supported by the responders' responses to the numerous comments made, which revealed an average mean of 2.16, and standard deviation 1.95, respectively.

5.1.4 Use of AI and performance of the ICT sector

In conclusion, one of the goals of the investigation was also to determine how the utilization of AI affected Kenya's ICT industry's success. The results of the data collection and analysis on the participants' responses revealed that a large proportion (58.8%) of responders believed that the success of the ICT industry was impacted by the utilization of AI. This conclusion is further supported by the participants' responses to the numerous statements presented, which revealed an average mean of 2.09, and standard deviation of 1.84, respectively.

5.2 Conclusion

The adoption of E-learning, the cost of purchasing IT equipment, government policies, and the utilization of AI are elements that can be ignored by the players in the ICT industry as these aspects have a substantial effect on their overall success, the investigator found from the investigation outcomes. The investigation also discovered that a large percentage of participants concurred that the success of the ICT industry was impacted by government regulations, the cost of purchasing IT equipment, the adoption of E-learning, and the utilization of AI. The study came to a further conclusion that failing to examine these factors could jeopardize both the short- and long-term viability of the ICT industry.

5.3 Recommendations

The investigation makes the suggestion that the government should use the findings of this research to create incentive schemes that will encourage businesses to increase their ICT use. In order to promote the design of the nation's technological backbone, the government may also offer incentives aimed at lowering the cost of purchasing ICT

equipment in collaboration with ICT companies. In order to increase the profitability of the ICT industry in the nation, the report also urges the government to slacken tax laws and enhance the business climate.

5.4 Further research

This study concentrated on how the pandemic affected the ICT industry's overall success. The focus of future studies can be on how ICT has affected the country's transportation and logistics industry.

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APPENDIX I: INTRODUCTION LETTER

Dear Respondents

RE: Assessing the effect of the covid-19 pandemic on the performance of the information communication technology sector in Kenya.

I'm a Management University of Africa diploma student. I am conducting investigation on The Effect of the COVID-19 Crisis on the Performance of the ICT Sector in Kenya as part of the prerequisite to complete my diploma programme.

This inquiry has selected you to participate in it. The short survey should only require a few minutes to complete. Your data will be held in the strictest secrecy. Upon request, I would be more than pleased to provide the study's findings.

Thank you for taking part in filling out the questionnaire.

Yours sincerely

Florence Waluse

APPENDIX II: QUESTIONNAIRE

PART 1: GENERAL INFORMATION

Tick where appropriate

1. What is your Gender?

Male

Female

2. How old are you?

16-20 years

21-25 years

26-30 years

31 and above years

3. Level of education?

Diploma

Certificate

Degree

Postgraduate

4. What is your profession

IT Lecturer

Student

IT officer

PART 2: ADOPTION OF E-LEARNING AND PERFORMANCE OF THE ICT SECTOR

Would you say that adoption of E-learning had a direct effect on the performance of the ICT sector in Kenya Amid the pandemic?

Yes

No

In the statements provided below concerning the study variable, kindly rate your opinion by ticking inside the box where:

1- Strongly disagree, 2- Disagree, 3- Neutral, 4- Agree, and 5- Strongly agree.

Statements	1	2	3	4	5
The cost that is involved in the adoption of E-learning by educating institutions impacts the performance of the ICT sector in Kenya.					
Education institutions with financial capability can easily adopt e-learning which in turn contributes to the overall performance of the ICT sector in Kenya.					
Institutions with the required knowledge and expertise are in a better position to adopt e-learning, as this helps in reducing the cost involved in training individuals.					
Only individuals with access to networks and the internet can use e-learning services and this harms the ICT sector.					

PART 3: COST OF EQUIPMENT AND PERFORMANCE OF THE ICT SECTOR

Would you say that cost of acquiring IT equipment had a direct effect on the performance of the ICT sector in Kenya Amid the pandemic?

Yes

No

In the statements provided below concerning the study variable, kindly rate your opinion by ticking inside the box where:

Strongly disagree, 2- Disagree, 3- Neutral, 4- Agree, and 5- Strongly agree.

Statements	5	4	3	2	1
The cost involved in training IT individuals inhibits the adoption of IT solutions and thus has a direct impact on the performance of the ICT sector in Kenya.					
Availability and accessibility of IT equipment inhibit the adoption of ICT solutions thus the performance of the ICT sector in Kenya					
The cost involved in the installation of ICT equipment hinders its adoption					
The cost of acquiring IT equipment has a direct to the performance of the ICT sector					

PART 4: GOVERNMENT POLICIES AND PERFORMANCE OF THE ICT SECTOR

Would you say that government policy had a direct effect on the performance of the ICT sector in Kenya Amid the pandemic?

Yes

No

In the statements provided below concerning the study variable, kindly rate your opinion by ticking inside the box where:

Strongly disagree, 2- Disagree, 3- Neutral, 4- Agree, and 5- Strongly agree.

Statements	5	4	3	2	1
The ease and pace at which the government implement policies affect the performance of the ICT sector to a great extent.					
Effective and efficient ICT policies promote the overall performance of the sector					
Government policies should be aimed at improving the performance of the ICT sector.					

Government policies have a direct link to the performance of the ICT sector					
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PART 5: USE OF AI AND PERFORMANCE OF THE ICT SECTOR

Would you say that the use of AI had a direct effect on the performance of the ICT sector in Kenya During the pandemic?

Yes

No

In the statements provided below concerning the study variable, kindly rate your opinion by ticking inside the box where:

Strongly disagree, 2- Disagree, 3- Neutral, 4- Agree, and 5- Strongly agree.

Statements	5	4	3	2	1
Knowledge of the use of ICT reduces the cost of adoption and contributes to the overall performance of the ICT sector.					
Access and use of AI solutions improve the performance of ICT firms and the overall ICT sector.					
AI usage helps improve the security and privacy of the information of ICT firms which contributes to their overall performance.					
The high cost of AI utilization affects the performance of the ICT sector.					

