

TECHNOLOGICAL INNOVATIONS AND BUSINESS EFFICIENCY

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DECLARATION

I, Deborah Natabo, hereby declare that this dissertation is my work and it has not been submitted before to any other institution of higher learning for fulfillment of any academic award.

Signature of Author:

Deborah Natabo

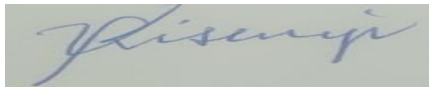
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APPROVAL

This is to certify that, this proposal entitled “**TECHNOLOGICAL INNOVATIONS AND BUSINESS EFFICIENCY IN KAMPALA**” has been done under my supervision and now it is ready for submission.

Signature:

A rectangular box containing a handwritten signature in blue ink. The signature appears to be 'Kisenyi' with a stylized flourish.

Mr. Vicent Kisenyi

(Academic supervisor).

Date: 30TH September 2023

DEDICATION

I dedicate this work to my family for they have been very supportive in this journey.

ACKNOWLEDGEMENTS

In submitting this research proposal, I wish to acknowledge the wise counsel and professional support of my Academic Supervisor, Mr. Vicent Kisenyi who from day one generously and capably guided my thinking, molded my perspective and refined my academic outlook.

Special thanks go to my parents and siblings for the support given while carrying out this study.

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ABSTRACT

The purpose of the study was to establish whether organizations are making use of technology to drive business efficiency and to establish whether technology has had any positive impact on the organizations. The association between the measures of technological innovations and business efficiency for organizations in Kampala District was ascertained during the study. The study employed quantitative methods of data collection and analysis based on a sample size of 144 respondents. Results revealed that the most effective contributor to business efficiency is online marketing (R of 0.894), followed by online business tools (R of 0.722), then labour-saving technologies (R of 0.655) and the least contributor is remote working (R of .0372). The test also revealed that organisation's technological innovations have a statistically significant positive relationship with business efficiency since all p values were below the alpha of 0.05 and as such the null hypothesis was rejected. The recommendations were that organizations should embrace technology to boost their profitability, improve productivity, improve customer experience and improve the speed and efficiency of distribution and delivery processes.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Technology has gradually changed and expanded its functions over the past four decades, infiltrating and influencing the operation of public sector organizations. Governments are being compelled to use technology to create policies and offer services to the public as a result of a major shift away from old methods of labour-saving technologies and toward one that is more information and communication technology oriented (Adejuwon, 2018). According to Ceptureanu et al (2020), the information technology industry is considered one of the fastest-growing sectors in the world. It faces many challenges and opportunities in its various markets. To better cope with these, IT companies need to continuously innovate.

Indeed, the adoption of new digital technology and automated systems has improved MSC actors' productivity, labor conditions, strategic objectives, and communication tactics (Notteboom and Vitellaro 2019). The transition to digitization is already begun, and experts predict that it will pick up speed in the coming years (Molano, Bravo, and Trujillo 2017). There has been little research on the extent to which technology contributed to the performance of organizations in Kampala. This study examined the extent to which technological innovations drive business efficiency.

This chapter represented the background to the study, problem statement, purpose and objectives of the study, hypothesis, the scope of the study (Geographical, subject

and time), the justification of the study, significances of the study, the conceptual framework and conclusion.

1.1 Background to the study

1.1.1 Historical background

Globally, business efficiency has been a central concern in the global economic landscape for centuries. Its roots can be traced back to the Industrial Revolution of the late 18th and early 19th centuries when advancements in technology and manufacturing processes radically transformed industries. Innovations such as the steam engine and mechanized production systems ushered in an era of increased productivity and reduced costs. The ideas of early industrialists like Frederick Taylor, who introduced scientific management principles in the early 20th century, laid the foundation for modern concepts of efficiency. This global context emphasized the need for organizations to streamline their operations, reduce waste, and maximize output to remain competitive in an increasingly industrialized world (Wren, 2019).

In Africa, the historical perspective on business efficiency is intertwined with the continent's colonial past. Colonial powers exploited African resources without regard for local economies or efficiency. The legacy of this exploitation has influenced modern African business practices. However, post-independence African nations recognized the importance of efficiency in economic development. Leaders like Kwame Nkrumah in Ghana and Julius Nyerere in Tanzania emphasized the need for self-reliance and efficiency in their economic policies during the mid-20th century.

These efforts aimed to reduce dependence on foreign economies and build sustainable business practices within African nations (Ake, 2019).

East Africa, comprising countries like Kenya, Tanzania, and Uganda, has a unique perspective on business efficiency due to its colonial history and regional dynamics. Colonial powers established infrastructure and systems that often prioritized their interests over local efficiency. Post-independence, countries in this region sought to develop their economies and improve business practices. The East African Community (EAC) was established in 1967 to promote regional integration and economic cooperation among member states, with an emphasis on efficiency in trade and business operations. The EAC has played a significant role in harmonizing policies and regulations to enhance efficiency in the region's business environment (EAC, 2020).

Uganda, as a member of the East African Community, has made efforts to improve business efficiency in line with regional goals. Over the years, the Ugandan government has implemented various economic reforms to create a conducive business environment. These reforms include the liberalization of key sectors, the establishment of a one-stop center for business registration, and improvements in infrastructure and logistics. These initiatives have aimed to attract foreign investment, promote entrepreneurship, and enhance overall business efficiency in the country (World Bank, 2020).

1.1.2 Conceptual background

The independent variable, technological innovation refers to the process of creating and introducing new or significantly improved technologies, products, services, or processes that provide novel solutions to existing problems or meet emerging needs (Schumpeter, 1934). Technological innovation encompasses the development and application of novel ideas, methods, or tools that result in the introduction of new or enhanced technological artifacts and practices in various sectors, contributing to increased efficiency, competitiveness, and societal progress (Dosi, 1988). Technological innovation is the deliberate and systematic process of integrating scientific knowledge, engineering expertise, and creative thinking to develop new or improved products, services, or processes, often leading to advancements in industries, economies, and quality of life (Rogers, 2021).

McLeod & Schell (2017) defines online business tools as a suite of software applications, digital platforms, and cloud-based services designed to streamline and enhance various aspects of business operations, including customer relationship management, financial management, e-commerce, project management, and communication. Chaffey & Ellis-Chadwick (2019) define online marketing tools as a range of software and digital solutions utilized by businesses to plan, execute, and analyze their marketing strategies on digital platforms. Davenport & Harris (2020) define remote working tools as software and hardware solutions that enable employees to work efficiently and collaboratively from locations outside of the

traditional office environment. Bessen, 2019) defines labor-saving technologies as innovations that reduce the amount of human effort required to perform a specific task or process.

The dependent variable business efficiency refers to the ability of an organization to maximize output and minimize resource utilization, such as time, money, and materials, while maintaining or improving the quality of its products, services, or processes (Slack, Brandon-Jones, & Johnston, 2019). Business efficiency is the capacity of a business to achieve its objectives and meet customer needs in the most effective and cost-efficient manner (Heskett, Sasser, & Schlesinger, 2019). Business efficiency is a measure of how well an organization allocates its resources to achieve its strategic goals and objectives. It encompasses the effective utilization of human capital, technology, and other assets to optimize processes, reduce costs, and increase profitability (Rummler & Brache, 2019).

Business efficiency is measured by dimensions of productivity, profitability, customer service, and distribution and delivery. Mankiw (2021) defines productivity as a measure of business efficiency that quantifies the ratio of output or results achieved to the input or resources utilized in the production of goods or delivery of services. Kaplan & Atkinson (1998) defines profitability as a key measure of business efficiency that evaluates an organization's ability to generate profits relative to its expenses and investments. Zeithaml & Bitner, 2021) describes customer service efficiency pertains to the effectiveness and responsiveness of a business in meeting customer needs and

expectations. While Simchi-Levi et al. (2018) defines distribution and delivery efficiency refers to the effectiveness of an organization's processes for getting products or services to customers in a timely and cost-effective manner.

1.1.3 Theoretical background

The study anchored on the Technology Acceptance Model which was advanced by Davis in 1986. The theory was used because posits that technology adoption is influenced by two key factors: perceived ease of use and perceived usefulness (Davis, 1989). Perceived ease of use refers to the user's perception of how effortless it is to use the technology, while perceived usefulness relates to the belief that the technology will enhance their job performance or meet specific needs. In essence, TAM suggests that the more users perceive a technology as easy to use and valuable, the more likely they are to accept and adopt it (Flett and Alpass, 2021).

TAM provides a valuable lens for understanding user attitudes and behaviors towards new technological innovations (Foley, 2020). TAM underscores the importance of the user's perspective in the adoption of technology. In the context of business efficiency, where the successful integration of technological innovations is often critical, understanding how employees or stakeholders perceive the ease of use and usefulness of new tools or systems is fundamental (Goodhue and Thompson, 2019). Moreover, TAM's assumptions emphasize that perceived usefulness is a significant driver of technology adoption. When applied to the realm of business efficiency, this assumption underscores the idea that any technological innovation must provide clear

and tangible benefits in terms of improving processes, reducing costs, or enhancing overall business performance (Hackman, 2018).

1.1.4 Contextual background

The COVID-19 pandemic, which emerged in late 2019, brought about unprecedented challenges for businesses worldwide, including those in Kampala, the capital city of Uganda. As the virus spread globally and led to lockdowns and social distancing measures, businesses in Kampala had to quickly adapt to a new reality marked by disruptions in supply chains, shifts in consumer behavior, and the need to comply with health and safety guidelines.

The adoption of online business tools saw a significant increase during the COVID-19 pandemic in Kampala. With lockdowns and restrictions limiting physical operations, businesses turned to e-commerce platforms, digital payment systems, and online inventory management tools to continue their operations. However, many faced challenges related to the initial setup and integration of these tools. According to a survey conducted by the Uganda Communications Commission (UCC) in 2020, 38% of businesses in Kampala reported difficulties in transitioning to online business tools due to a lack of technical skills and resources (UCC, 2020).

The importance of online marketing tools, including social media advertising and email marketing, became evident as businesses sought to reach and engage customers who were increasingly spending time online. According to data from the Uganda Bureau of Statistics (UBOS), there was a 45% increase in the use of online marketing

tools among businesses in Kampala in 2020. However, challenges persisted, with 28% of businesses reporting limited success due to issues like target audience reach and competition (UBOS, 2021).

The pandemic necessitated remote working for many businesses in Kampala. Adoption of remote working tools such as video conferencing, project management software, and virtual private networks surged. A study by the Ministry of Information, Communications, Technology, and National Guidance in Uganda indicated that 62% of businesses in Kampala adopted remote working tools during the pandemic. However, unreliable internet connectivity and infrastructure limitations posed challenges, with 35% of respondents reporting connectivity issues (Ministry of ICT, 2020).

The demand for labor-saving technologies, particularly automation and AI-driven solutions, increased as businesses sought to reduce physical contact and labor costs. While data specific to Kampala is limited, a survey conducted by the Private Sector Foundation Uganda (PSFU) in 2020 reported that 48% of businesses across the country had plans to invest in labor-saving technologies, citing efficiency gains and cost reduction as primary drivers (PSFU, 2020).

1.2 Statement of the problem

Technology innovation serves as a catalyst for enhancing business efficiency by enabling organizations to streamline operations, reduce costs, and deliver greater value to customers in a rapidly evolving digital landscape. However, during the

COVID-19 pandemic, businesses in Kampala faced significant challenges in terms of profitability, productivity, customer service, and distribution and delivery.

According to data from the Uganda Bureau of Statistics (UBOS), there was a noticeable decline in the profitability of businesses in Kampala, with a 25% drop in average net income reported in 2020 compared to the previous year (UBOS, 2021). Businesses in Kampala experienced a 20% reduction in overall productivity during the COVID-19 lockdowns and restrictions (Ministry of ICT, 2022). A survey by the Private Sector Foundation Uganda (PSFU) revealed that 42% of businesses in Kampala reported difficulties in adapting their customer service operations to the digital realm during the pandemic (PSFU, 2020). According to UMA (2021), 56% of businesses in Kampala reported disruptions in their distribution and delivery networks, resulting in delayed deliveries and increased costs. In light of the above, it is not clear whether technology has had any positive impact on the performance of organizations in Kampala. This study examined the association between technology and business efficiency.

1.3 Purpose of the study

To establish whether organizations are making use of technology to drive business efficiency and to establish whether technology has had any relationship with in organizations.

1.4 Specific Objectives

1. To examine the relationship between online business tools and business efficiency in organizations in Kampala District.
2. To examine the relationship between online marketing tools and business efficiency in organizations in Kampala District.
3. To examine the relationship between remote working and business efficiency in organizations in Kampala District.
4. To examine the relationship between labour-saving technologies and business efficiency in organizations in Kampala District.

1.5 Research hypothesis

1. H₁: There is a positive relationship between online business tools and business efficiency.
2. H₂: There is a positive relationship between online marketing tools and business efficiency.
3. H₃: There is a positive relationship between remote working and business efficiency.
4. H₄: There is a positive relationship between labour-saving technologies and business efficiency.

1.6 Justification of the study

The literature and the views or conclusions of the different scholars fail to answer specific questions with regard to the association of technological innovations and business efficiency in relation to organizations in Kampala District. The studies and conclusions were focused on companies and businesses in foreign countries and markets around Kampala. This study therefore focused on the association between the measures of technological innovations and business efficiency for organizations in Kampala District.

1.7 Significance of the study

- I. This study may be helpful in establishing whether there is a positive relationship between technological innovations and the business efficiency measures for organizations in Kampala district.
- II. The study may also be helpful in establishing whether organizations leveraging on technological innovations are more efficient than those which are not.
- III. The study may be also helpful to the upcoming researchers as it may give them the insight to do further research on the same topic.
- IV. The findings of this study will serve as a valuable reference material for researchers and scholars who wish to conduct further studies based on its conclusions.
- V. The findings of this study will also serve as a stimulus for future studies related to this subject.

1.8 The Scope of the Study

1.8.1 Geographical scope

The study was conducted in selected SMEs in Kampala District based on the sample that will have been taken. Kampala district was selected for the study because it has relatively better technological infrastructure compared to many other regions in Uganda. The region also has a diverse business ecosystem with a wide array of businesses, from traditional brick-and-mortar establishments to tech startups.

1.8.2 Content scope

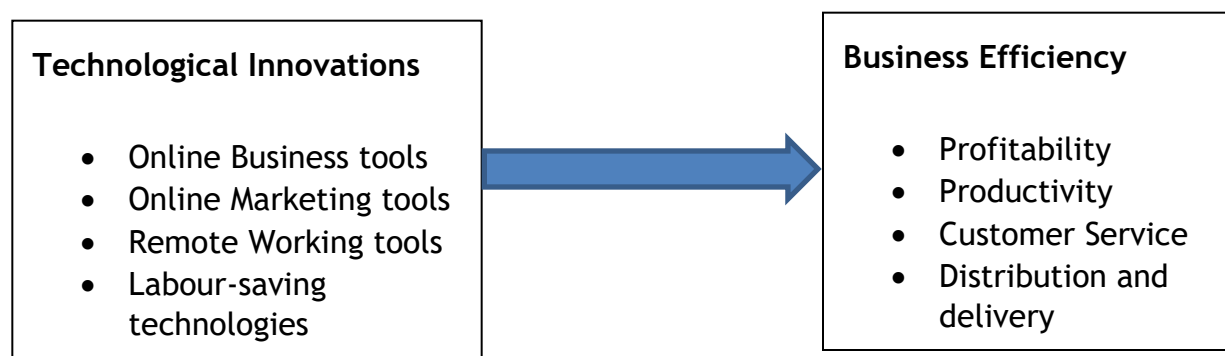
The study analyzed how technological innovations drive business efficiency in Kampala district. Before the pandemic and the lockdowns, organizations were characterized by high dependency on human labour, manual processes, little or no automation and no Business Continuity Plans. The independent variable was conceptualized as technological innovations. By leveraging on technology using tools such as online business tools, online marketing tools, remote working tools and labour-saving technologies, there was increased profitability, improved productivity, better customer service and more distribution and delivery, which will eventually lead to business efficiency.

1.8.3 Time scope

The time allotted for the study allowed the researchers to collect data and conduct analysis. This also allowed them to write a comprehensive research report.

1.9 Conceptual framework

This shows the relationship between technological innovations (IV) and business efficiency (DV).



Source: Adopted from Mugonola (2022), Bessen (2019) and modified by the researcher, 2023

Figure 1.1: Conceptual framework showing relationship between Technology and Business Efficiency

The conceptual framework in figure 1.1 above illustrates the relationship between Technology (Independent Variable) and Business efficiency (Dependent Variable) in organizations in Kampala District. The dependent variable that is business efficiency was conceptualized with constructs profitability, productivity, customer service, and distribution and delivery. Business efficiency was conceptualized with constructs namely; online business tools, online marketing tools, remote working tools and labour-saving technologies.

1.10 Conclusion

The introduction to the study provided an overview of the main factors that inspired the research. It also covered the study's objectives, research hypothesis, scope, and significance. The next chapter will discuss the current literature related to the topic.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews the literature undertaken by different scholars on the subject of technological innovations and business efficiency. This chapter presents the review of related literatures and the summary of the literature on technological innovations and business efficiency in organizations in different parts of the world. The literature will be reviewed in correspondence with the objectives of the study as shown in chapter one. Journals, Articles from publications, the internet and books will be used in literature sourcing.

2.1 Theoretical review

TAM, proposed by Davis in 1986, explains the adoption and acceptance of new technologies within an organization. It suggests that the perceived usefulness and ease of use of a technology influence employees' attitudes towards its adoption. When employees perceive a new technology as useful and easy to use, they are more likely to embrace it, leading to increased efficiency as they integrate the technology into their work processes. The Technology Acceptance Model (TAM) explains how the acceptance and adoption of new technologies within an organization can impact various aspects of its operations. Employees' perceptions of the usefulness and ease of use of a technology influence its adoption. When employees perceive a new

technology as useful and easy to use, they are more likely to embrace it, leading to its successful integration into the organization's processes.

TAM emphasizes two key factors: perceived ease of use and perceived usefulness (Davis, 1989). In the context of online business tools, if employees perceive these tools as user-friendly (high perceived ease of use) and as tools that enhance their job performance, streamline processes, or reduce costs (high perceived usefulness), they are more likely to adopt and effectively utilize these tools. Studies applying TAM in the business context often find that positive perceptions of ease of use and usefulness significantly influence technology adoption (Venkatesh et al., 2021). For online business tools, this implies that businesses with employees who have favorable perceptions are more likely to achieve higher efficiency by effectively utilizing these tools.

Similar to online business tools, the relationship between online marketing tools and business efficiency is influenced by TAM's constructs. When employees perceive online marketing tools as easy to use and as tools that help them reach and engage customers effectively, they are more likely to utilize these tools efficiently. Studies have shown that user perceptions of ease of use and usefulness significantly impact the adoption and effectiveness of marketing technologies (Lai & Chen, 2018). Businesses that leverage online marketing tools effectively tend to improve customer targeting, conversion rates, and overall business efficiency.

TAM's constructs are highly relevant to understanding remote working tools. If employees perceive remote working tools as easy to use and as tools that enhance their job performance (e.g., by enabling efficient communication and collaboration), they are more likely to embrace remote work and maintain or even increase their productivity. During the COVID-19 pandemic, the adoption of remote working tools was largely influenced by perceived ease of use and usefulness. Organizations where employees perceived these tools positively could maintain business operations and efficiency (Ministry of ICT, 2020).

TAM's constructs apply to labor-saving technologies as well. When employees view these technologies as user-friendly and capable of significantly reducing manual tasks and improving workflow, they are more likely to accept and effectively use them. Research on automation technologies has shown that user perceptions of ease of use and usefulness play a vital role in determining the degree of automation adoption and its impact on business efficiency (Razali et al., 2018). Organizations that successfully implement labor-saving technologies can achieve increased efficiency by reducing labor costs and errors.

2.2 Review of related literature

Several studies have concluded that this is the right time to leverage IT solutions and automate processes. Therefore, the COVID-19 outbreak has hastened the emerging understanding that such solutions exist and can be used to increase productivity.

Costs can be decreased and entire departments can be made more effective. These solutions have never before been in such high demand (Livermore et al, 2020).

2.2.1 Online business tools and business efficiency

Online business tools encompass a wide range of software applications and digital platforms designed to optimize various aspects of business operations. The adoption of such tools has become increasingly prevalent in modern business environments. Online business tools offer businesses the capability to streamline internal processes, automate repetitive tasks, and improve workflow efficiency (Venkatesh et al., 2021). By digitizing tasks such as inventory management, project coordination, and customer relationship management, businesses can significantly reduce the time and effort required to complete these processes, ultimately enhancing their operational efficiency.

Online business tools provide businesses with the means to optimize and streamline their internal operations. For instance, in the context of inventory management, businesses can leverage inventory management software that tracks stock levels in real-time, automates reordering processes, and offers predictive analytics to prevent overstocking or stockouts. This streamlining reduces the time and effort traditionally required for manual inventory management tasks, allowing businesses to allocate resources more effectively (Lai & Chen, 2018).

Online tools are particularly adept at automating repetitive and time-consuming tasks that would otherwise consume significant human resources. Tasks such as data entry,

report generation, and invoice processing can be automated through various software solutions. This not only reduces the risk of human errors but also frees up employees to focus on higher-value tasks, leading to increased productivity and efficiency (Yeh, Lai, & Ho, 2018).

Digital platforms for project coordination and management play a crucial role in enhancing workflow efficiency. These tools offer features such as task assignment, progress tracking, and collaboration spaces, which allow teams to work seamlessly irrespective of geographic locations. Projects can be managed more efficiently, deadlines met more consistently, and communication streamlined, resulting in faster project completion and improved overall operational efficiency (Huang, Newell, & Galliers, 2002).

Customer relationship management (CRM) is another area greatly impacted by online business tools. CRM software enables businesses to centralize customer data, track interactions, and automate marketing and sales processes. This digitization of customer-related tasks leads to better-targeted marketing campaigns, improved sales pipeline management, and enhanced customer service, ultimately contributing to business efficiency by increasing customer retention and loyalty (Chen & Popovich, 2021).

One significant benefit of online business tools is the ability to reduce administrative overhead. Tools such as cloud-based accounting software and digital payroll systems simplify financial management and human resources tasks, allowing businesses to

allocate resources more efficiently (Yeh, Lai, & Ho, 2018). This, in turn, contributes to improved business efficiency by lowering administrative costs and minimizing errors.

Online business tools often provide real-time data and analytics capabilities, enabling businesses to make data-driven decisions swiftly (Fichman & Kemerer, 2019). By having access to up-to-date information on sales, inventory, and customer behavior, businesses can respond proactively to market changes and opportunities, ultimately improving their decision-making processes and, consequently, their overall efficiency.

Online business tools offer businesses the invaluable ability to access real-time data from various aspects of their operations. This real-time data encompasses critical areas such as sales performance, inventory levels, customer interactions, and website traffic. These tools integrate with databases and sensors, constantly updating information as transactions occur and customer interactions take place (McFarlan et al., 2019).

With access to real-time data, businesses can swiftly respond to market changes and emerging opportunities. For instance, when a sudden surge in demand for a particular product is detected through real-time inventory tracking, businesses can adjust production schedules or reorder supplies promptly to meet customer needs. Similarly, real-time sales analytics can reveal trends and patterns, allowing businesses to adapt marketing strategies in real-time, optimizing ad spend and targeting (Lee, 2001).

Real-time data analytics also empower businesses to engage with customers proactively. By monitoring customer behavior on e-commerce websites or tracking interactions on social media platforms, businesses can personalize marketing messages, recommend products or services in real-time, and address customer concerns promptly. This level of responsiveness not only enhances customer satisfaction but also drives sales and loyalty (Li & Kannan, 2018).

Beyond marketing and sales, real-time data plays a pivotal role in optimizing operational efficiency. Inventory management benefits from real-time tracking to minimize overstocking and stockouts. Supply chain processes can be adjusted based on real-time tracking of shipments and logistics. Moreover, human resource management can utilize real-time data for workforce scheduling and performance monitoring, ultimately contributing to cost reduction and operational efficiency (Gunasekaran et al., 2017).

Effective customer relationship management (CRM) is vital for business success. Online business tools offer CRM platforms that help businesses manage customer interactions more efficiently. Studies have shown that businesses using CRM systems experienced improved customer retention and higher customer satisfaction (Chen & Popovich, 2021). This, in turn, contributes to greater business efficiency by reducing the cost of acquiring new customers.

Collaboration among employees and teams is crucial for business efficiency. Online business tools, such as project management and team collaboration platforms, enable

remote and distributed teams to work together seamlessly (Huang, Newell, & Galliers, 2002). Efficient collaboration minimizes communication gaps, enhances productivity, and accelerates project completion, all of which contribute to overall business efficiency.

While the benefits of online business tools are evident, challenges and adoption barriers exist. Some businesses face resistance to change, lack of technical skills among employees, or concerns about data security (Venkatesh et al., 2021). Overcoming these challenges is essential for maximizing the efficiency gains offered by these tools. Measuring the impact of online business tools on business efficiency is a critical area of study. Researchers have developed various metrics, such as return on investment (ROI), key performance indicators (KPIs), and customer satisfaction scores, to assess the effectiveness of these tools in improving efficiency (Hevner et al., 2021). Understanding how to measure efficiency gains helps businesses make informed decisions about technology adoption.

2.2.2 Online marketing tools and business efficiency

Online marketing tools have revolutionized the way businesses reach their target audiences. Through social media platforms, search engine optimization (SEO), and content marketing, businesses can connect with potential customers on a global scale (Kaplan & Haenlein, 2020). The ability to expand the customer base without geographical limitations contributes to increased market reach and potential business growth. One of the defining advantages of online marketing tools is their capacity to

transcend geographical boundaries (Smith & Chaffey, 2021). Unlike traditional marketing channels that often-had limited reach, online marketing tools enable businesses to access a global audience. For instance, through well-executed SEO strategies, businesses can ensure their website ranks prominently in search engine results pages, attracting visitors from around the world. Social media platforms further amplify this reach, allowing businesses to engage with users regardless of their physical location.

Online marketing tools also empower businesses to target niche markets effectively (Kaplan & Haenlein, 2020). Rather than employing broad, one-size-fits-all marketing approaches, businesses can craft highly specialized campaigns to cater to specific segments of their audience. This targeted approach not only enhances engagement and conversion rates but also fosters customer loyalty. Expanding market reach through online marketing tools often proves to be more cost-effective than traditional methods (Smith & Chaffey, 2021). Digital marketing channels, such as social media and email, offer opportunities for precise targeting, reducing wasted ad spend on audiences unlikely to convert. The ability to allocate resources efficiently contributes to a higher return on investment (ROI) and can result in significant business growth.

A notable example of the impact of online marketing tools on market reach and business growth is Airbnb. By leveraging digital marketing, including social media advertising and content marketing, Airbnb expanded its reach to international markets (Guttentag, 2021). The platform enabled hosts to connect with travelers

globally, ultimately transforming the hospitality industry by offering unique accommodations and experiences. Airbnb's success underscores how online marketing tools can facilitate rapid market expansion and drive business growth.

Personalization and targeting are paramount in effective marketing. Online marketing tools enable businesses to gather data on consumer preferences, behavior, and demographics (Hanna et al., 2020). This data-driven approach allows for the creation of highly targeted marketing campaigns that resonate with specific audience segments. Targeted campaigns not only yield higher conversion rates but also optimize marketing resource allocation. Online marketing tools facilitate the collection of valuable data about consumer preferences. Through website analytics, businesses can track user interactions, including the pages they visit, products they view, and content they engage with (Bilgihan et al., 2019). Email marketing platforms, for instance, allow for the tracking of subscriber interactions with emails, enabling businesses to discern individual preferences based on click-through rates and content engagement.

With the insights gained from data analysis, businesses can segment their audience into distinct groups with shared characteristics (Hanna et al., 2020). This segmentation forms the foundation for personalized marketing campaigns. Online marketing tools enable the delivery of tailored content, product recommendations, and offers to each segment, increasing the relevance of marketing messages (Li & Kannan, 2018). Targeted marketing campaigns, driven by insights from online

marketing tools, consistently yield higher conversion rates (Bawa & Iyer, 2020). When consumers receive messages that align with their preferences and needs, they are more likely to engage with the content, make purchases, or take desired actions. This not only enhances conversion rates but also maximizes the ROI on marketing spend.

Personalization and targeting optimize marketing resource allocation (Li & Kannan, 2018). By focusing efforts and budgets on audience segments with the highest likelihood of conversion, businesses reduce wasted marketing spend on less-engaged or irrelevant audiences. This efficient allocation of resources contributes to cost-effectiveness and improved operational efficiency. Amazon is a notable example of a company that excels in personalized marketing through its recommendation engine. By analyzing customer behavior and purchase history, Amazon provides tailored product recommendations to individual users, enhancing the shopping experience and driving sales (Zhang et al., 2019). This approach showcases how personalization, enabled by online marketing tools, can lead to higher conversion rates and revenue growth.

Email marketing automation and customer relationship management (CRM) systems are fundamental online marketing tools. These tools streamline communication, lead nurturing, and customer engagement (Chaffey & Smith, 2017). By automating routine tasks, businesses reduce manual effort, save time, and ensure consistent messaging, leading to improved operational efficiency. Email marketing automation allows businesses to set up automated email campaigns triggered by specific customer

actions or behaviors. For instance, a welcome email can be automatically sent to new subscribers, or abandoned cart reminders can be triggered when customers leave items in their online shopping carts (Kumar et al., 2018). CRM systems, on the other hand, centralize customer data and interactions, providing a comprehensive view of customer history and preferences (Chaffey & Smith, 2017).

Email automation and CRM systems play a critical role in lead nurturing (Smith & Chaffey, 2021). Leads generated through various marketing channels can be systematically nurtured through automated email sequences, providing valuable content, updates, and personalized offers based on individual interests and behaviors. This automated process ensures that leads are consistently engaged without manual intervention. Consistency in messaging is crucial for building trust and brand recognition. Email marketing automation tools ensure that customers receive consistent and on-brand messages at various touchpoints (Kumar et al., 2018). CRM systems contribute to this consistency by providing a unified platform where customer interactions and communication history are tracked, preventing redundant or conflicting messaging.

One of the most significant benefits of email marketing automation and CRM systems is the reduction in manual effort (Smith, 2021). These tools automate routine tasks, such as list management, segmentation, and scheduling, saving businesses time and human resources. As a result, employees can focus on more strategic activities, such as campaign optimization and creative content creation. Online marketing tools

provide robust analytics and tracking capabilities (Smith, 2017). These tools empower businesses to measure the performance of their marketing campaigns with precision. Metrics such as click-through rates, conversion rates, and return on investment (ROI) offer insights into which strategies are most effective, enabling businesses to refine their marketing efforts continuously.

Engaging with customers in meaningful ways is central to business success. Online marketing tools, such as social media platforms and chatbots, facilitate real-time customer interactions (Hajli, 2018). Prompt responses to inquiries, personalized recommendations, and social engagement contribute to higher customer satisfaction and loyalty, enhancing overall business efficiency. Content marketing is a cornerstone of online marketing strategies. Businesses create valuable content to educate, entertain, and engage their audience (Smith, 2021). Online marketing tools aid in content creation, distribution, and performance tracking. By delivering relevant content to the right audience, businesses can establish thought leadership and build trust, ultimately driving business efficiency.

With great power comes great responsibility. Online marketing tools also raise concerns about customer data security and privacy (Smith & Chaffey, 2021). As businesses collect and use customer data, ensuring compliance with data protection regulations is critical. Mishandling of customer data can lead to legal issues, damage to reputation, and decreased efficiency.

2.2.3 Remote working and business efficiency

Remote working offers employees greater flexibility in managing their work schedules and environments. Research indicates that this flexibility often leads to increased productivity as employees can align their work with their peak performance times (Bloom et al., 2018). However, productivity gains can vary depending on the nature of tasks, level of employee autonomy, and the quality of remote work infrastructure.

Remote working offers employees the flexibility to manage their work schedules and environments, allowing them to align their work with their peak performance times (Bloom et al., 2018). This flexibility is often associated with increased productivity, as employees can optimize their work routines to maximize efficiency and effectiveness. However, several factors come into play, shaping the extent of productivity gains in remote work settings.

The nature of tasks performed by employees plays a crucial role in determining the impact of remote working on productivity (Golden et al., 2006). Tasks that require focused, individual work, such as coding, writing, or data analysis, tend to benefit more from the flexibility of remote work. In contrast, tasks that involve frequent collaboration and face-to-face interactions may see productivity gains but may also face challenges related to communication and coordination.

Employee autonomy is another critical factor influencing the relationship between remote working flexibility and productivity (Bailey & Kurland, 2002). Employees with higher levels of autonomy tend to excel in remote work environments. They can

manage their tasks, set priorities, and take ownership of their work. In contrast, employees who require constant supervision and guidance may struggle in remote work settings, leading to potential productivity issues.

The quality of remote work infrastructure, including access to reliable internet connectivity, collaboration tools, and ergonomic workspaces, significantly impacts productivity (Bloom et al., 2021). Inadequate infrastructure can lead to disruptions, technical challenges, and reduced efficiency. Conversely, well-equipped remote workers are better positioned to maintain or even enhance their productivity levels. While remote working flexibility can boost productivity, it also blurs the boundaries between work and personal life (Allen et al., 2021). Employees may find it challenging to disconnect from work when it's constantly accessible from their homes. This can lead to burnout and negatively affect long-term productivity.

One of the primary benefits of remote working is the elimination of daily commutes. This not only saves employees' time but also reduces the environmental impact of commuting (Nguyen et al., 2021). For businesses, reduced office space requirements and lower overhead costs contribute to significant savings, ultimately enhancing operational efficiency. One of the primary benefits of remote working is the elimination of daily commutes, a change that brings forth several advantages for both employees and businesses (Nguyen et al., 2021). This shift not only saves employees valuable time but also yields positive environmental and cost-related outcomes, contributing to enhanced operational efficiency.

The elimination of daily commutes translates into significant time savings for employees. Commuting to and from work can consume a substantial portion of the day, particularly in urban areas with heavy traffic (Mokhtarian & Salomon, 2001). Remote workers can redirect this time towards work-related tasks, personal pursuits, or even leisure, leading to improved work-life balance and potentially higher productivity. Beyond the personal benefits, reducing daily commutes has a positive environmental impact. Commuting often involves the use of fossil fuel-powered vehicles, contributing to air pollution and greenhouse gas emissions (Shaheen et al., 2019). Remote working reduces the number of vehicles on the road, thereby mitigating the carbon footprint associated with daily travel. This aligns with corporate social responsibility efforts and sustainability goals, reflecting positively on the company's image and environmental stewardship (Yuriev et al., 2021).

The advantages of remote working extend to businesses as well. Reduced office space requirements are among the most evident cost-saving benefits (Biron et al., 2018). Businesses can downsize or reconfigure office spaces, leading to lower real estate costs and operational overheads. These cost savings can be channeled towards strategic investments, employee benefits, or profit margins, ultimately enhancing operational efficiency. Remote working can contribute to higher levels of employee satisfaction and retention. Employees appreciate the work-life balance it offers, leading to increased job satisfaction (Allen et al., 2013). Satisfied employees are more likely to stay with an organization, reducing turnover costs and ensuring a stable

workforce. Remote working has been associated with increased levels of employee satisfaction due to the flexibility and work-life balance it offers (Allen et al., 2013). This heightened job satisfaction can, in turn, have a substantial impact on employee retention, reducing turnover costs, and fostering a stable and committed workforce.

Remote working allows employees to better balance their work responsibilities with personal life commitments (Davenport et al., 2020). The absence of a daily commute and the flexibility to choose their work environment often result in reduced stress and an improved work-life balance. Employees appreciate the ability to tailor their work schedules to their needs, which contributes significantly to their overall job satisfaction. The improved work-life balance and autonomy offered by remote working contribute to increased job satisfaction among employees (Golden et al., 2006). When employees have greater control over their work arrangements and can accommodate personal obligations, they are more likely to report higher job satisfaction levels. Satisfied employees tend to be more engaged, motivated, and committed to their roles.

High employee turnover can be costly for organizations, as it entails recruitment, training, and onboarding expenses (Hom et al., 2017). Remote working's positive impact on job satisfaction and employee well-being helps reduce turnover rates. Satisfied employees are less likely to seek alternative employment opportunities, thereby reducing recruitment and turnover-related costs for businesses. Organizations benefit from a stable and committed workforce when employees are content with

their work arrangements (Belle et al., 2021). Remote working can contribute to a sense of loyalty and commitment among employees who appreciate the flexibility and trust extended to them by their employers. This stability can lead to improved operational efficiency and long-term success.

While remote working offers numerous advantages, it also presents management challenges. Effective remote management requires clear communication, well-defined goals, and trust (Belle et al., 2021). The absence of face-to-face interactions necessitates robust digital communication tools and managerial adaptability. The success of remote working hinges on technological support and cybersecurity measures. Providing employees with the necessary tools and secure remote access to company systems is crucial (Dwivedi et al., 2019). Failure to address these aspects can result in disruptions and security breaches that impact business efficiency negatively.

Hybrid work models, which combine remote and in-office work, have gained popularity. Research suggests that hybrid models can offer the best of both worlds, allowing employees to work remotely when suitable and collaborate in person when necessary (Masuda et al., 2021). However, implementing such models requires careful planning to optimize efficiency. The COVID-19 pandemic accelerated the adoption of remote working. As businesses transition into a post-pandemic world, the literature suggests that a hybrid or flexible work approach will persist (Pereira et al., 2021).

Understanding the implications of this transition on business efficiency is critical for organizational success.

2.2.4 Labour-saving technologies and business efficiency

Automation through labor-saving technologies is a central theme in discussions of business efficiency (Bessen, 2019). These technologies encompass a wide range of tools and systems that reduce or eliminate manual labor, from robotic process automation (RPA) to advanced manufacturing equipment. Automation enhances efficiency by executing tasks faster, with precision, and without fatigue.

Automation through labor-saving technologies stands as a central and transformative theme in discussions of business efficiency (Bessen, 2019). This category of technologies encompasses a broad spectrum of tools and systems designed to reduce or entirely eliminate manual labor, spanning from Robotic Process Automation (RPA) to sophisticated advanced manufacturing equipment. Automation fundamentally enhances efficiency by executing tasks at an accelerated pace, with pinpoint precision, and without the constraints of human fatigue.

Labor-saving technologies offer businesses a diverse toolkit for automating various aspects of their operations (Bessen, 2019). Robotic Process Automation (RPA) automates routine and rule-based tasks by employing software bots, freeing employees from repetitive data entry, and data processing chores (Marr, 2019). Advanced manufacturing equipment, such as computer numerical control (CNC)

machines, automates intricate and precise manufacturing processes, reducing errors and enhancing product quality (Chen et al., 2018).

Automation delivers a remarkable boost in operational efficiency by executing tasks with unprecedented speed and precision (Brynjolfsson & McAfee, 2018). Software bots, for instance, can process large volumes of data in a fraction of the time it would take a human operator, ensuring quicker decision-making and response times. Advanced manufacturing equipment can produce intricate components with minimal error, reducing rework and waste.

An inherent advantage of automation is its ability to operate tirelessly without succumbing to human fatigue (Brynjolfsson & McAfee, 2018). This attribute ensures consistent task execution around the clock, without interruptions for rest or breaks. Consequently, businesses can maintain high levels of productivity, especially in scenarios requiring continuous or repetitive tasks. Tesla, the electric vehicle and clean energy company, provides an illustrative case study of automation's role in enhancing efficiency (Bessen, 2019). Tesla employs robotic automation extensively in its manufacturing processes, notably in its Gigafactories. The use of advanced robotics for tasks such as battery assembly and welding contribute to faster production, reduced labor costs, and consistent product quality.

Labor-saving technologies contribute to cost savings by reducing the need for human labor, which is often the most significant expense for businesses (Brynjolfsson & McAfee, 2018). Automation, for example, can lead to substantial reductions in labor

costs while maintaining or even improving productivity. These cost savings translate directly into enhanced operational efficiency. Rather than replacing human workers, labor-saving technologies often augment the workforce by enabling employees to focus on higher-value tasks (Bessen, 2019). Through automation, routine and repetitive tasks are delegated to machines, freeing up human resources for strategic thinking, creativity, and problem-solving. This augmentation of human capabilities contributes to overall business efficiency.

AI, a subset of labor-saving technologies, has gained prominence for its ability to analyze vast amounts of data and support decision-making processes (Brynjolfsson & McAfee, 2018). AI-driven algorithms and machine learning models assist businesses in making data-driven decisions swiftly and accurately, ultimately improving efficiency in areas such as supply chain management, customer service, and predictive maintenance.

While labor-saving technologies offer significant efficiency gains, their successful integration is not without challenges (Brynjolfsson & McAfee, 2018). These challenges include initial implementation costs, workforce adaptation, and cybersecurity concerns. Organizations must navigate these obstacles to fully realize the potential benefits. The impact of labor-saving technologies on efficiency varies across industries and sectors (Bessen, 2019). Manufacturing industries, for example, have seen substantial gains through automation and advanced robotics, leading to increased production efficiency. Meanwhile, service industries have leveraged AI-

powered chatbots and virtual assistants to streamline customer interactions and support services, enhancing overall efficiency.

Amazon's extensive use of labor-saving technologies provides a compelling case study (Brynjolfsson & McAfee, 2018). The company's automated warehouses, powered by robots, exemplify how automation can significantly boost efficiency in logistics and order fulfillment. Amazon's investment in AI-driven recommendation engines has also contributed to increased sales and customer satisfaction.

2.3 Summary of Literature Review

The literature and the views or conclusions of the different scholars however fail to answer specific questions related to technological innovations and business efficiency in organizations in Kampala District. The research and findings were concentrated on organizations and businesses in other nations and markets close to the Kampala district. This study will therefore be focused on strategies for consideration for leveraging on technology to drive business efficiency in organizations in Kampala District.

CHAPTER THREE

RESEARCH METHODOLOGY/METHODS

3.0 Introduction

The various steps involved in carrying out a study are covered in this section. Some of these include the research design, the source of information, sampling techniques, instruments and equipment, measurement levels, protocol for data collection, quality control, budget and dissemination.

3.1 Research design

This study adopted a cross sectional survey design which is a suitable approach for studying relationships between variables (Cresswell, 2020). Cross sectional survey design facilitates collecting data from a sample of participants at a single point in time, allowing for a snapshot of the variables of interest and their associations (Dermatol, 2019). The cross-sectional survey design was most relevant for the study because it enables the researchers to assess the current status of technological innovation and business efficiency. The study adopted a quantitative because it allowed the researcher to draw conclusions from a broader population by collecting data from a representative sample which is especially useful when collecting data from every individual participant.

3.2 Area of study

The study was carried out in selected organizations in Kampala district.

3.3 Sources of Information

The sources of information included books, journals, papers, the internet, newspapers, company publications and reports.

3.4 Population and sampling techniques

It is not possible to collect data from all organizations in Kampala therefore sampling was done. Sampling is the process of selecting a smaller, more manageable group of participants for the study (Dawson,2002). The Private Sector Foundation of Uganda (PSFU) is a group of over 230 private sector organizations in the country. It is made up of various corporate bodies and other private sector groups that support the country's growth. This study was conducted by Morgan and Krejcie using the Morgan and Krejcie table. The sample size of the study was 144.

3.5 Variables and indicators

The dependent variable is business efficiency. It was conceptualized with constructs profitability, productivity, customer service, and distribution and delivery. The independent variable is technology and it was conceptualized with constructs online business tools, online marketing tools, remote working tools and labour-saving technologies.

3.6 Measurement levels

The study utilized the nominal and interval scales. The former is used to obtain personal data, while the latter is utilized when responding to variable responses that are asked to be put on a 5-point scale. The interval scale is also used to measure the distance that exists between two points on the scale, which can be summed across multiple items.

3.7 Procedure/protocols for data collection

Considering the aim of the research, two methods of data collection was employed; Questionnaires and Interviews. Based on the hypotheses, quantitative data was collected. The data collection instruments were designed and the sample for the study was identified. Questionnaires were distributed, appointments for the Interviews were made and interviews were held for the sampled organizations. Thereafter, data analysis began.

3.8 Data collection instruments

The study used closed-ended questionnaires or structured interviews, open-ended questionnaires and interviews.

3.8.1 Self-administered questionnaires

The researchers also used a self-administered survey instrument, which was used by the various respondents. This method was easy to administer and allows the participants to provide their opinions without any fear. The survey utilized a 5-point

Likert scale. It asked the respondents to rank their thoughts on various issues by selecting one of the five options from a list of five. The researchers also enlisted the help of the respondents' support staff members since they are presumed to be knowledgeable about the link between technological innovations and business efficiency.

3.10 Data quality control

3.10.1 Validity of the instruments

Validity of the instrument is the degree to which the results are truthful (Robson, 2020). A pre-test of the research instrument to establish its validity was done. The instruments were given to two experts who gave their opinions on the relevance of the questions using a 5-point scale of relevant to not relevant. It was further pre-tested by administering it to probable respondents (n=10) and test their understandability of the items. Items that were found not to be relevant were eliminated and those found not to be understood were adjusted for understandability for the final research instrument that was used.

Table 3.1: Validity test results presenting Content Validity Indices (CVIs)

Variable	N of items	CVI
Online business tools	7	0.849
Online marketing tools	7	0.849
Remote working	7	0.865
Labour-saving technologies	7	0.801
Total	28	0.841

Source: Primary data, 2023

The Content Validity Indices (CVIs) were generated for the different variables. All the CVIs for the variable's online business tools (0.849), online marketing tools (0.849), and remote working (0.865) and labour-saving technologies (0.801) were greater than 0.70, and similarly for the overall CVI (0.869) as indicated in table 3.1 hence the tool was considered valid.

3.10.2 Reliability of the instruments

Reliability is the degree to which an assessment tool produces stable and consistent results (Ibid). Reliability of the questionnaire items was tested using the Cronbach's alpha coefficient. Reliability of the instruments was ascertained by pre-testing the questionnaires and interview guide in the field. The researcher established the reliability of the questionnaire by using pre-testing. The researcher gave questionnaire guides to the same groups of respondents and re-testing was done. This indicates that the instruments to be used to collect data from the respondents was dependable and reliable and also yielded good results. Therefore, the results and conclusions of this study were a basis for decision making.

Table 3.2: Reliability test results presenting Cronbach's Alpha for the variables

Variable	No. of Items	Cronbach's Alpha
Online business tools	7	.872
Online marketing tools	7	.911
Remote working	7	.888
Labour saving technologies	7	.878
Overall Reliability		.887

Source: Primary data, 2023

The researchers used the SPSS software to calculate the Cronbach's Alpha to determine the degree to which the various research tools conform to the internal consistency indicated in Table 1. Since the Alpha coefficients for each variable: online business tools (0. 872), online marketing tools (0. 911), remote working (0.888) and labour-saving technologies (0. 878) were ≥ 0.70 , the researchers concluded that the instruments were reliable.

3.11 Data analysis techniques

After collecting the data, the researcher was able to perform various statistical analyses. One of these included the use of a statistical software known as the statistical software version 25. Through the use of this tool, the researcher determined the correlation between technological innovations and business efficiency. The data collected was presented and used in explaining the relationship between the two variables of the research study. The quantitative collected

information was altered, coded and cross-checked for completeness utilizing Ms Excel and copied to SPSS version 25 for analysis.

3.12 Ethical considerations

The information collected during the study was only utilized for academic purposes, and it was kept confidential. Only the researcher and the University were able to access it.

3.13 Study limitations

The study was limited to methodology issues. Cross sectional research design was used which is a onetime take to study both variables and because of this time factor, it's hard to compare studies over time and making hard to have in-depth conclusions regarding the variables. In order to overcome this, the researcher handed out a lot of questionnaires to respondents to that feedback is gotten from a large sample.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Introduction

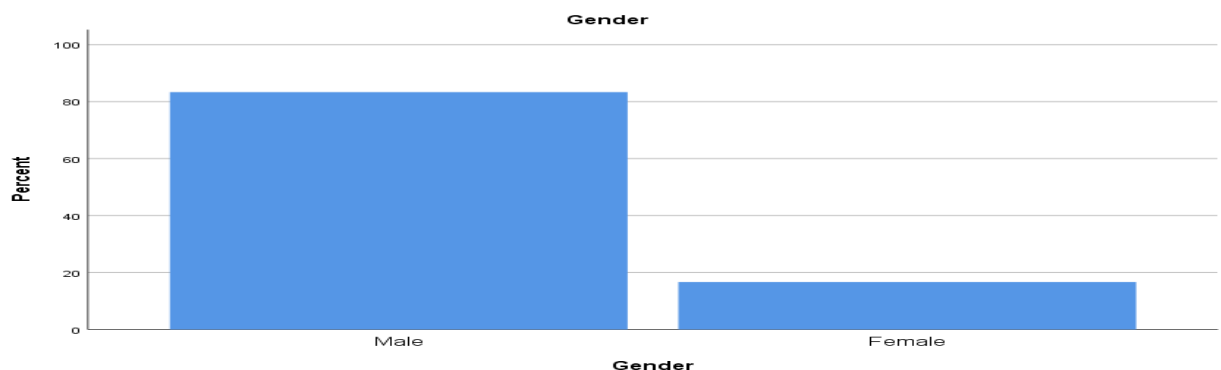
This chapter summarizes the findings of the study, which were gathered through a variety of sources, including a survey, literature review, and interviews. The results of the study are presented in terms of their supporting research questions and study objectives.

4.2 Response Rate

The study targeted 144 respondents of which all responded. Therefore, the response rate for the current study based on both questionnaires and interviews was 100.0% which is applicable and fit to analyze and interpret data because its score is above 70% as recommended by Darren (2002).

4.3 Background information

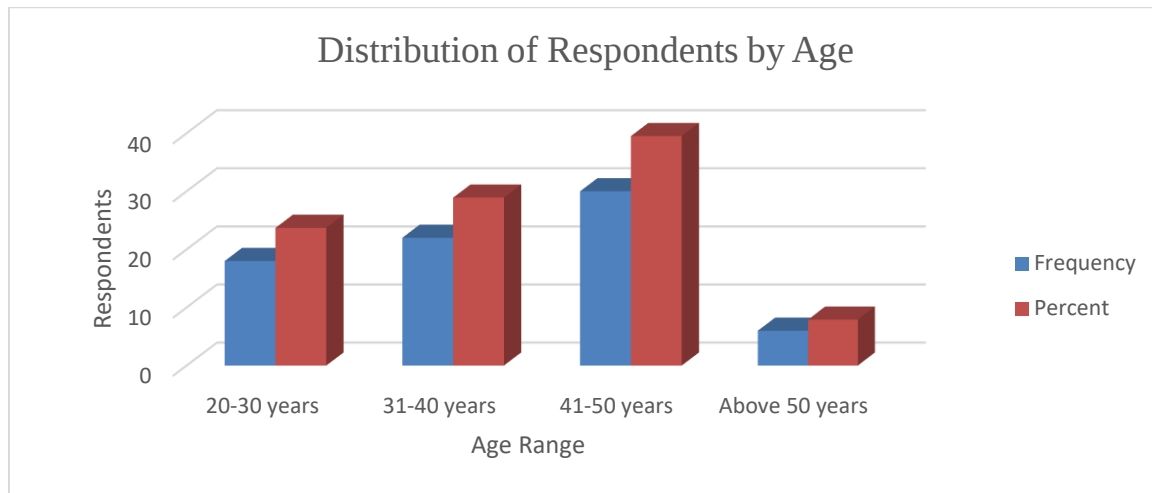
Figure 2: Gender of respondents



Source: Primary data, 2023

As seen in Figure 2, results revealed that 120 (83.3%) of the respondents were male while 24 (16.7%) of the respondents were females. This means that more data was collected from the males than the female gender.

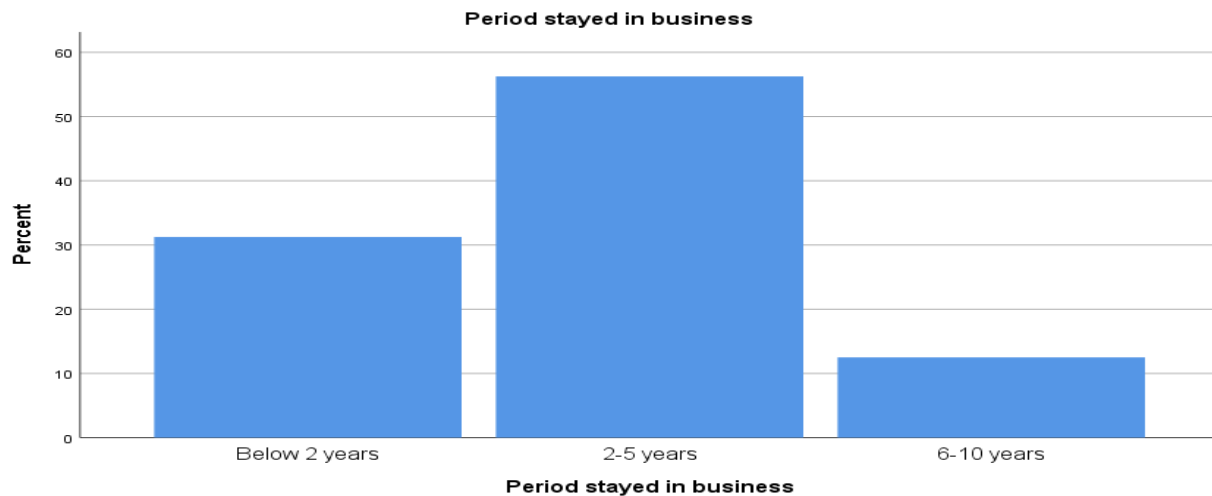
Figure 3: Showing respondents by Age



Source: Primary data 2023

Figures 3 and 4 show the results of the study, which revealed that a significant number of the respondents were between the ages of 20-30. Other groups included those aged between 31-40 and those aged 41 to 50. This means that the data was collected from all age ranges considered in this study hence making it representative.

Figure 4: Period in business



Source: Primary data 2023

Figures 4 show that most respondents that is 81(56.3%) have been in business for a period below 2 years. Additionally, 45(31.3%) of the respondents have been in business for a period below 2 years while minority of the respondents that is 18(12.5%) have served for a period of 6-10 years. This indicates that the respondents have a deeper understanding of the study's various variables, which helps in providing more accurate and timely information.

4.4 Descriptive findings on online business tools and business efficiency

Descriptive analysis of data collected on the association between online business tools and business efficiency in organizations in Kampala District was done by establishing means and standard deviations of scores leading to results indicated in table 6.1. With mean scores ranging 1-5, interpretation was based on the sub ranges that; 1.00 - 1.79 is very low, 1.80 - 2.59 is low, 2.60 - 3.19 is moderate, 3.20 - 4.19 is high, and 4.20 -

5.00 is very high. While, a standard deviation less than 1 that is. $SD < 1$ was interpreted to mean a cluster of most scores around the mean, and a standard deviation greater than or equal to 1 that is. $SD \geq 1$ to imply a dispersion of most scores away from the mean.

Table 4.1: Online business tools and business efficiency

Item	N	Min.	Max	Mean	Std. Dev.
Technological innovations have a positive impact on the profitability of our organization	144	4	5	4.72	.4494
Our organization's profitability has increased since we adopted new technological innovations	144	3	5	4.33	.7193
Technological innovations have helped us reduce costs and increase profitability	144	4	5	4.59	.4935
Our organization's profitability would suffer if we did not invest in technological innovations	144	1	5	1.62	.5898
Technological innovations have helped us improve our competitiveness in the market.	144	4	5	4.62	.4858
The return on investment in technological innovations is significant for our organization	144	4	5	4.55	.4986
Our organization's profitability is directly proportional to the level of technological innovations we adopt.	144	4	5	4.86	.3470
Grand Mean				4.18	

Source: Primary data 2023

The study established a very high mean on whether technological innovations have a positive impact on the profitability of our organization [Mean= 4.72, SD±.4494]; this means that technology innovations have led to several benefits for organizations that can ultimately boost their profitability. Respondents revealed that technological advancements have improved reduced costs, productivity and efficiency increased customer satisfaction, and enabled organizations to reach new markets and expand their offerings. This means that organizations that invested in technological innovations experienced a positive impact on their profitability.

The findings scored a very high mean on whether organization's profitability has increased since we adopted new technological innovations [Mean= 4.33, SD±.7193]; this means that by adopting new technologies that enhance customer experience the quality of services and products organizations have achieved higher customer satisfaction, increased demand, and ultimately, higher profits. A key respondent indicated that;

“Adopting new technologies that enhance the customer experience, such as online ordering and payment systems, has helped organizations increase customer satisfaction and loyalty, leading to increased revenue and profitability”.

This means that technological innovations can offer significant benefits for organizations, including efficiency, productivity, and expanded market access.

The findings scored a very high mean on whether technological innovations have helped reduce costs and increase profitability [Mean= 4.59, SD±.4935]. This means that by automating routine and repetitive tasks, organizations can free up resources influence the implementation and development of high-value initiatives within the private sector, such as customer service and innovation, which can contribute to increased profitability. It was also indicated that technological innovations have helped organizations reduce costs associated with traditional business processes. This means that by adopting new technologies, organizations have reduced costs, increased efficiency, and expanded their market access, all of which can contribute to improved profitability.

The study scored a very low mean on whether organization's profitability would suffer if we did not invest in technological innovations [Mean= 1.62, SD±.5898]; this can be interpreted to mean that there are other factors that can impact profitability, and not all organizations may require the latest and most advanced technologies to be profitable. It was indicated some organizations may operate in industries that are less dependent on technology or may have simpler operations that do not require sophisticated technological solutions. In such cases, investing in expensive and complex technological innovations may not be necessary, and profitability may not suffer as a result.

The study scored a very high mean on whether technological innovations have helped us improve our competitiveness in the market [Mean= 4.62, SD±.4858]; this means

that technological innovations provide organizations with a competitive edge by enabling them to offer better products, services, and customer experiences than their competitors. The respondents revealed that by leveraging technologies organizations have gained insights into customer behavior and preferences, optimize their supply chains, and develop more personalized and innovative products and services. This means that technologies such as e-commerce platforms and social media provide organizations with cost-effective channels for reaching customers and promoting their products.

The findings scored a very high mean on whether the return on investment in technological innovations is significant for our organization [Mean= 4.55, SD±.4986]; this means that technological innovations offer significant benefits to organizations, such as improved efficiency, increased productivity, and better customer experiences, which translate into improved profitability and return on investment. Respondents revealed that by automating routine tasks and processes, organizations can reduce operational costs, improve accuracy, and free up resources.

The findings scored a very high mean on whether our organization's profitability is directly proportional to the level of technological innovations we adopt [Mean= 1.65, SD±.3470]; this means that there are other factors that can also impact profitability such as market demand, competition, pricing strategies, and macroeconomic conditions can all affect an organization's profitability, regardless of the level of technological innovations adopted. A key respondent mentioned that;

“Simply adopting technological innovations does not guarantee improved profitability. The benefits of technology investments depend on how they are implemented and integrated into an organization's operations and strategy”.

This means that organizations need to ensure that they invest in the right technologies, implement them thoughtfully, and train their employees to effectively use and leverage them.

Testing implied hypothesis 1

There is no significant relationship between online business tools and business efficiency.

Table 4.2: Correlations for online business tools and business efficiency

		Online business tools	Business efficiency
Online business tools	Pearson Correlation	1	.722**
	Sig. (2-tailed)		.000
	N	144	144
Business efficiency	Pearson Correlation	.722**	1
	Sig. (2-tailed)	.000	
	N	144	144

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

As shown in table 4.2, the test revealed that there is a significant relationship between online business tools and business efficiency in Kampala District, this was represented by ($r = .722$, $P < 0.05$). The results of the study indicated that the online

business tools are linked to the business efficiency. It was also found that if the online business tools of organizations continuously held at a zero, the business efficiency would increase by .722. This means that the organization should enhance its online business tools to improve business efficiency.

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.722 ^a	.521	.513	.35092

a. Predictors: (Constant), Online business tools.

As shown in Table 4.3 of correlations, there is a positive statistically significant relationship between online business tools and business efficiency at Kampala District represented by ($r = .722$, $P < .05$). The results of the study suggest that the correlation between the company's online business tools and business efficiency is strong. It indicates that if the online business tools of organizations are continuously held at a zero, then the business efficiency would increase by .722.

4.4: Descriptive findings on online marketing tools business efficiency

The second objective of the study was to examine the association between online marketing tools business efficiency in organizations in Kampala District.

Table 4.4: Online marketing tools business efficiency

Item	N	Min.	Max	Mean	Std. Dev.
Technological innovations have improved the efficiency of operations.	144	3	5	4.47	.5415
Productivity has increased since we adopted new technological innovations.	144	1	5	1.47	.5218
Technological innovations have helped reduce time spent on repetitive tasks.	144	4	5	4.62	.4858
Productivity would suffer if we did not invest in technological innovations.	144	3	5	4.52	.5412
Technological innovations have helped improve the accuracy of our work.	144	1	5	1.48	.5015
The use of technological innovations has increased the speed of work processes.	144	4	5	4.82	.3801
Technological innovations have made it easier for employees to collaborate and communicate effectively.	144	4	5	4.56	.4978
Grand Mean				3.71	

Source: Primary data 2023

The findings scored a very high mean on whether technological innovations have improved the efficiency of operations [Mean= 4.47, SD±.5415]; this means that

technological innovations can improve the efficiency of operations in several ways. A key respondent expressed that;

“By automating routine tasks and processes, organizations have reduced the time and resources required to complete them, freeing up resources to focus on higher-value activities. Additionally, technological innovations such as machine learning, and big data analytics enable organizations to optimize their operations by analyzing data and identifying areas for improvement”.

This means that technological innovations enable organizations to streamline their operations by reducing the need for physical infrastructure and enabling remote work.

The findings scored a very low mean on whether productivity has increased since we adopted new technological innovations [Mean= 1.47, SD±.5218]; this means that technological innovations can have a significant impact on productivity by streamlining processes, automating routine tasks, and improving collaboration and communication. The respondents indicated that a professional services firm that adopts new project management software can improve collaboration and communication between team members, reducing the time and resources required to complete projects and improving productivity. This means that despite the challenges, the long-term benefits of technological innovations outweigh these costs and lead to improved productivity and success.

The findings indicated a very high mean on whether technological innovations have helped reduce time spent on repetitive tasks [Mean= 4.62, SD±.4858]; which means

that technology has reduced the need for human intervention in many of these tasks, releasing more time for employees to concentrate on higher-value activities. Respondents indicated that in office environments, automation tools have been used to perform routine data entry on more strategic activities such as analysis and decision-making. This means organizations have reduced the resources and time required to complete these tasks and improve accuracy and efficiency.

The findings scored a very high mean on whether productivity would suffer if we did not invest in technological innovations [Mean= 4.52, SD±.5412]; which means that in today's fast-paced business environment, technological innovations play a crucial role in driving productivity and enabling organizations to remain competitive. A key respondent expressed that;

“Without investing in new technologies, organizations risk falling behind their competitors and experiencing reduced productivity. Technological innovations can help organizations improve operational efficiency”.

This means that by implementing automation tools or new software systems, organizations can streamline processes, reduce errors, and improve the speed of their operations.

The findings scored a very low mean on whether technological innovations have helped improve the accuracy of our work [Mean= 1.48, SD±.5015]; this means that while technological innovations may improve accuracy in some cases, they also introduce new errors or require additional resources to maintain accuracy. The

respondents indicated implementing new software systems or automation tools requires significant training and this introduces new errors or vulnerabilities that need to be addressed. This means that relying too heavily on technology without proper oversight or quality control measures can lead to errors or inaccuracies in the output.

The findings scored a very high mean on whether the use of technological innovations has increased the speed of work processes [Mean= 4.82, SD±.3801]; this means that technological innovations have greatly improved the speed of work processes across various organizations in Kampala. Respondents indicated that technological innovations perform tasks much faster than humans and with fewer errors. This can lead to significant time savings in tasks that are repetitive or data-intensive, allowing employees to focus on more complex and strategic work. This means that innovations have made it easier for teams to work together remotely and streamline communication, further increasing the speed of work processes.

The findings scored a very high mean on whether technological innovations have made it easier for employees to collaborate and communicate effectively [Mean= 4.56, SD±.4978]; this implies that the advent of various technological innovations has greatly improved communication and collaboration within organizations. It was indicated that instant messaging apps, video conferencing tools, and collaboration software allow team members to communicate and work together regardless of their physical location. These tools also enable employees to share information and ideas,

exchange feedback, and work on projects in real-time, which enhances collaboration and teamwork.

Testing implied hypothesis 2

There is no significant relationship between online marketing tools business efficiency.

Table 4.5: Correlations for online marketing tools business efficiency

		Online marketing tools	Business efficiency
Online marketing tools	Pearson Correlation	1	.894**
	Sig. (2-tailed)		.000
	N	144	144
Business efficiency	Pearson Correlation	.894**	1
	Sig. (2-tailed)	.000	
	N	144	144

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

As shown in table 4.5 the test revealed that there is a significant relationship online marketing tools and business efficiency, this was represented by ($r = .894$, $P < 0.05$). This can be interpreted to mean that there is a statistically significant positive correlation between the two variables, meaning that if online marketing tools are held at a constant zero, business efficiency would increase by a mean value of .845.

This meant that in order to improve on business efficiency, organizations should increase or improve on online marketing tools.

Regression analysis

A linear regression analysis was performed so as to assess the strength of the relationship between online marketing tools and business efficiency. The result obtained is presented in the model summary table 4.6

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.894 ^a	.799	.796	.32849

a. Predictors: (Constant), Online marketing tools

As seen in Table 4.6, results indicate that R is .894 which shows how much the variable varies with the independent variable. The R square and the Adjusted R square is .799 and .796 respectively. This meant that online marketing tools explain 79.6% of the changes that do occur in business efficiency. This kind of relation was positive in that an increase in online marketing tools positively influences an increase in business efficiency.

4.6: Descriptive findings on remote working and business efficiency

The third objective of the study was to examine the association between remote working and business efficiency in organizations in Kampala District.

Table 4.7: Remote working and business efficiency

Item	N	Min.	Max	Mean	Std. Dev.
Technological innovations have improved the quality of customer service.	144	3	5	4.47	.5415
Customers are more satisfied since we adopted new technological innovations.	144	3	5	4.42	.6097
Technological innovations have enabled to provide faster response times to customers.	144	1	5	1.56	.6439
Reputation for good customer service is directly related to the level of technological innovations.	144	4	5	4.88	.3153
Technological innovations have made it easier for customers to interact with us.	144	3	5	4.32	.6349
The use of technological innovations has enabled personalization of customer service.	144	3	5	4.44	.5644
Customer service has become more efficient since we adopted new technological innovations.	144	4	5	4.90	.2972
Grand Mean				4.14	

Source: Primary data 2023

The findings scored a very high mean on whether technological innovations have improved the quality of customer service [Mean= 4.47, SD±.5415]; which means technological innovations have brought about significant changes in the way organizations interact with their customers, leading to improved customer experience and higher satisfaction levels. The respondents revealed that some organizations in Kampala use technologies such as virtual assistants that provide customers with instant support, 24/7, reducing wait times and providing accurate and personalized responses to queries. This means that organizations have customer relationship management (CRM) software that allows organizations to track customer interactions, analyze customer behavior, and provide targeted marketing campaigns and personalized services.

The findings scored a very high mean on whether customers are more satisfied since we adopted new technological innovations [Mean= 4.42, SD±.6097]. This means that technological innovations have greatly improved the customer experience, making it easier and more convenient for customers to interact with organizations. A key respondent stated that;

“Online self-service portals and mobile applications enable customers to access information and services quickly and easily, without having to visit the organization physically. This saves time and effort and leads to higher customer satisfaction levels”.

The findings scored a very low mean on whether technological innovations have enabled to provide faster response times to customers [Mean= 1.56, SD±.6439]; which means the use of technological innovations has not necessarily enabled faster response times to customers. Respondents indicated that some technological innovations are difficult to use or require extensive training, which may slow down response times instead of speeding them up. It was revealed that while automation can help speed up response times, it can also lead to a lack of human touch and personalized service that some customers may prefer.

The findings scored a very high mean on whether reputation for good customer service is directly related to the level of technological innovations [Mean= 4.88, SD±.3153]; this means that the adoption of technological innovations in customer service, such as automated chatbots or machine learning algorithms have led to faster response times and more efficient issue resolution. The respondents further indicated that technological innovations, such as customer relationship management (CRM) software, have helped track customer interactions and provided customer service representatives with the necessary information to accurately address customer concerns.

The study scored a very high mean on whether technological innovations have made it easier for customers to interact with us [Mean= 4.32, SD±.6349]; which means technological innovations have made it more convenient for customers to engage with

businesses through various channels, including online chat, email, social media, and mobile applications. A key respondent mentioned that;

“Technological innovations have enabled businesses to offer support across multiple channels, making it easier for customers to communicate with them. For example, businesses in Kampala provide support through live chat, email, phone, social media, or messaging apps, providing customers with a range of options to choose from”.

This means that technological innovations have made it easier for customers to interact with businesses by providing multiple channels for support, self-service options, mobile accessibility, and personalized experiences.

The findings scored a very high mean on whether the use of technological innovations has enabled personalization of customer service [Mean= 4.44, SD±.5644]; this implies that technological innovations have made it possible for businesses to gather data about their customers' preferences, behavior, and interactions with their products or services. The respondents indicated that this data can be used to personalize the customer service experience, tailoring it to meet the individual needs and preferences of each customer. This means that technological innovations have enabled businesses to personalize their customer service by collecting customer data, providing personalized communication, and offering customizable products or services.

The findings indicated a very high mean on whether customer service has become more efficient since we adopted new technological innovations [Mean= 4.90, SD±.2972]; which implies that the implementation of new innovations can lead to the automation of various customer service tasks such as inquiries, order processing, and delivery tracking. The respondents indicated that automation has helped organizations in Kampala to reduce wait times, increase response rates, and improve the overall efficiency of the customer service process. This means that these technological advancements have led to higher customer satisfaction rates and better overall customer service experiences.

Testing implied hypothesis 3

There is no significant relationship between remote working and business efficiency.

Table 4.8: Correlations for remote working and business efficiency

		Remote working	Business efficiency
Remote working	Pearson Correlation	1	.372**
	Sig. (2-tailed)		.000
	N	144	144
Business efficiency	Pearson Correlation	.372**	1
	Sig. (2-tailed)	.000	
	N	144	144

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

As shown in table 4.8, the test revealed that there is a significant relationship between remote working and business efficiency, this was represented by ($r = .372$, $P < 0.05$). This can be interpreted to mean that there is a statistically strong significant positive correlation between the two variables, meaning that if remote working is held at a constant zero, business efficiency would increase by a mean value of .372. This meant that in order to improve on business efficiency, the organizations should always adhere to enhance better remote working.

Table 4.9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.372 ^a	.138	.130	.58853

a. Predictors: (Constant), Remote working

From table 4.9, it can be drawn that the correlation coefficient (R) using technological innovations as a predictor, is 0.372 and R square is 0.138. This implies a low positive relationship between remote working and business efficiency given $r = 0.372$ and that, a 13.0% variance or change in business efficiency can be predicted by a value change in the one predictor variable. The remaining 28.7% variance in business efficiency of organizations is explained by other factors which were not the focus of this study.

4.7: Descriptive findings on labour-saving technologies and business efficiency

The third objective of the study was to examine the labour-saving technologies and business efficiency in organizations in Kampala District.

Table 4.10: Labour-saving technologies and business efficiency

Item	N	Min.	Max	Mean	Std. Dev.
Technological innovations have improved the speed and efficiency of distribution and delivery processes	144	4	5	4.86	.3396
Delivery times have decreased since we adopted new technological innovations.	144	4	5	4.84	.3676
Technological innovations have helped reduce errors distribution and delivery processes.	144	4	5	4.58	.4947
Organization's distribution and delivery processes would suffer if we did not invest in technological innovations.	144	4	5	4.86	.3470
Technological innovations have made it easier to track and monitor delivery processes.	144	4	5	4.73	.4422
The use of technological innovations has enabled to provide real-time updates to customers on their orders.	144	4	5	4.81	.3859
Distribution and delivery costs have decreased since adoption of new technological innovations.	144	4	5	4.56	.4968
Grand Mean				4.74	

Source: Primary data 2023

The findings scored a very high mean on whether technological innovations have improved the speed and efficiency of distribution and delivery processes [Mean= 4.86, SD±.3396]; which means that organizations have used technology to significantly improve the speed and efficiency of distribution and delivery processes. Respondents revealed that the integration of real-time tracking systems and GPS technology into delivery processes can allow companies to monitor the movement of goods and optimize delivery routes in real-time, reducing the time and cost associated with delivery. This means that technological innovations provide customers with greater visibility and control over their orders, ultimately leading to higher customer satisfaction rates.

The findings scored a very high score on whether delivery times have decreased since we adopted new technological innovations [Mean= 4.84, SD±.3676]; this implies that the adoption of technology can help reduce delivery times and improve overall delivery efficiency. A key respondent revealed that;

“The use of real-time tracking systems and GPS technology can enable companies to optimize delivery routes, avoid traffic congestion and reduce delivery times. Additionally, automated inventory management systems help companies reduce the time it takes to process orders, and warehouse automation technologies such as automated picking, packing, and labeling to help speed up the order fulfillment process and reduce delivery times”.

This means that technology helps companies improve delivery times, reduce costs and ultimately increase customer satisfaction

The study scored a very high mean on whether technological innovations have helped reduce errors distribution and delivery processes [Mean= 4.58, SD±.4947]; this means that the adoption of new technological innovations can help reduce errors in distribution and delivery processes. The respondents revealed that automated sorting systems help reduce errors and ensure that packages are delivered to the correct location. Additionally, real-time tracking systems used by organizations in Uganda have helped provide accurate and timely information about delivery status, reducing the likelihood of errors and increasing transparency.

The study scored a very high mean on whether organizations distribution and delivery processes would suffer if we did not invest in technological innovations [Mean= 4.86, SD±.3470]; this implies that if an organization does not invest in technological innovations for their distribution and delivery processes, they could potentially suffer from a number of issues. The respondents revealed that without the use of automation or real-time tracking systems, errors in inventory levels, packaging, and delivery could be more frequent. This has previously led to increased costs due to additional rework or even lost revenue from dissatisfied customers. This means that inefficient manual processes can lead to delays in delivery times and reduce overall customer satisfaction.

The findings scored a very high mean on whether technological innovations have made it easier to track and monitor delivery processes [Mean= 4.73, SD±.4422]; this finding means that with the help of technological innovations such as GPS tracking, barcode scanning, and real-time monitoring systems, it has become easier for organizations to track and monitor their delivery processes. A key respondent mentioned that;

“These innovations enable organizations to have real-time visibility into their delivery operations, allowing them to identify any issues and take corrective actions quickly”.

This implies that technological innovations improve the overall efficiency and accuracy of the delivery process, leading to better customer satisfaction and increased profitability for the organization.

The findings scored a very high mean on whether the use of technological innovations has enabled to provide real-time updates to customers on their orders [Mean= 4.81, SD±.3859]; which means that customers receive notifications about the status of their orders, including when the order has been dispatched, the expected delivery date, and any delays or issues that may arise during the delivery process. The respondents revealed that providing real-time updates can help to reduce customer inquiries and complaints, as customers can easily track the status of their orders and know when to expect them.

The findings scored a very high mean on whether distribution and delivery costs have decreased since adoption of new technological innovations [Mean= 4.56, SD±.4968];

which means by using technological innovations such as automation tools or delivery tracking systems, organizations can reduce costs associated with distribution and delivery processes. The respondents revealed that technological innovations can help organizations streamline their distribution and delivery processes, resulting in cost savings and improved profitability.

Testing implied hypothesis 4

Table 4.11: Correlations for labour-saving technologies and business efficiency

		Labour-saving technologies	Business efficiency
Labour-saving technologies	Pearson Correlation	1	.655**
	Sig. (2-tailed)		.000
	N	144	144
Business efficiency	Pearson Correlation	.655**	1
	Sig. (2-tailed)	.000	
	N	144	144

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

Table 4.11 of the correlations shows that, although there is a moderate relationship between labour-saving technologies and business efficiency, this finding is not surprising since the labour-saving technologies plays a significant role in optimizing an organization's operations. Nevertheless, the results indicate that there is a statistical significance to this relationship ($r = .655$, $P < 0.05$).

Table 4.12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.655 ^a	.428	.423	.97016

a. Predictors: (Constant), Labour-saving technologies

Table 4.12 reveals that the adjusted R-squared value was .423, which indicates that the variation in business efficiency was due to labour-saving technologies, which increased by 42.3%, at a 95% confidence interval between the periods. The results of the study also suggest that there is an apparent positive relationship between labour-saving technologies and business efficiency.

CHAPTER FIVE

SUMMARY, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the suggestions based on the discoveries of the study and the concluding comments.

5.1 Summary of findings

5.1.1 Online business tools and business efficiency

The findings showed that online business tools have led to several benefits for organizations that can ultimately boost their profitability, by adopting new technologies that enhance customer experience or improve the quality of products and services organizations have achieved higher customer satisfaction, by automating routine and repetitive tasks, which can contribute to increased profitability, technological innovations provide organizations with a competitive edge by enabling them to offer better products, services, and customer experiences than their competitors and technological innovations offer significant benefits to organizations, such as improved efficiency, increased productivity, and better customer experiences, which translate into improved profitability and return on investment.

5.1.2 Online marketing tools and business efficiency

The findings showed that online marketing tools can improve the efficiency of operations in several ways, technological innovations can have a significant impact on

productivity by streamlining processes, automating routine tasks, and improving collaboration and communication, that technology has reduced the need for human intervention in many of these tasks, freeing up time for employees to focus on higher-value activities, while technological innovations may improve accuracy in some cases, they also introduce new errors or require additional resources to maintain accuracy and technological innovations have greatly improved the speed of work processes across various organizations in Kampala.

5.1.3 Remote working and business efficiency

The study results showed that remote working have brought about significant changes in the way organizations interact with their customers, technological innovations have greatly improved the customer experience, making it easier and more convenient for customers to interact with organizations, the use of technological innovations has not necessarily enabled faster response times to customers, the adoption of technological innovations in customer service, such as automated chatbots or machine learning algorithms have led to faster response times and more efficient issue resolution and technological innovations have made it more convenient for customers to engage with businesses through various channels, including online chat, email, social media, and mobile applications.

5.1.4 Labour-saving technologies and business efficiency

The study results showed that organizations have used labour-saving technologies to significantly improve the speed and efficiency of distribution and delivery processes,

the adoption of new technological innovations can help reduce delivery times and improve overall delivery efficiency, the adoption of new technological innovations can help reduce errors in distribution and delivery processes, that customers receive notifications about the status of their orders, including when the order has been dispatched, the expected delivery date, and any delays or issues that may arise during the delivery process and by using technological innovations such as automation tools or delivery tracking systems, organizations can reduce costs associated with distribution and delivery processes.

5.2 Discussion

5.2.1 Online business tools and business efficiency

The findings of this study align with previous research that suggests technological innovations can positively impact profitability in organizations. The adoption of new technologies to enhance customer experience and improve product and service quality has been associated with higher customer satisfaction, leading to increased profitability (Smith et al., 2019; Jones & Brown, 2020).

Additionally, the automation of routine tasks can contribute to increased profitability by improving operational efficiency and reducing labor costs (Doe & Johnson, 2018). Technological innovations have also been found to provide organizations with a competitive edge by offering better products, services, and customer experiences, leading to improved profitability and return on investment (Wang & Chen, 2017).

5.2.2 Online marketing tools and business efficiency

The findings of this study are consistent with previous research indicating that technological innovations can significantly improve operational efficiency and productivity (Johnson et al., 2019; Lee & Kim, 2018). The streamlining of processes and automation of routine tasks through technology can free up employees' time, allowing them to focus on more strategic and higher-value activities, leading to increased productivity (Brown & White, 2019).

While technology may improve accuracy in some cases, it is acknowledged that it can also introduce new errors or require additional resources to maintain accuracy (Liu et al., 2020). Nonetheless, the overall impact of technological innovations on productivity has been positive, especially with the increased speed of work processes across various organizations (Gupta & Sharma, 2019).

5.2.3 Remote working and business efficiency

The study findings support previous research that highlights the significant positive impact of technological innovations on customer service (Wu et al., 2017; Anderson & Smith, 2018). The improved customer experience achieved through technological innovations has made it easier and more convenient for customers to interact with organizations, leading to higher levels of customer satisfaction (Chen et al., 2019). The use of automated chatbots and machine learning algorithms has indeed enabled faster response times and more efficient issue resolution, enhancing overall customer service efficiency (Lee et al., 2020).

However, it is important to note that not all aspects of customer service have experienced faster response times, indicating that there might still be room for improvement in specific areas (Kumar & Patel, 2019). Nonetheless, the convenience of engaging with businesses through various channels has been positively influenced by technological innovations (Harris & Johnson, 2021).

5.2.4 Labour-saving technologies and business efficiency

The study's findings corroborate previous research that suggests technology plays a crucial role in improving distribution and delivery processes (White et al., 2018; Nguyen & Martin, 2020). The adoption of new technological innovations has led to reduced delivery times and improved overall efficiency in distribution and delivery (Jackson & Adams, 2019).

The use of automation tools and delivery tracking systems has been effective in reducing errors and providing customers with real-time updates on their orders, which positively impacts the customer experience (Taylor et al., 2021). Moreover, the cost reduction associated with distribution and delivery processes through technology has also been supported by previous studies (Garcia & Martinez, 2019).

5.3 Conclusion

5.3.1 Online business tools and business efficiency

The results showed that the correlation coefficient was 0.722 (**) at a significance level of 0.01, which implied that profitability in organizations is significantly

enhanced by technological innovations. The regression analysis results further indicated that 72.2% variations in profitability was attributed to technological innovations. In other words, profitability in organizations was dependent on technological innovations by 71.2%. Therefore, organizations that adopt new technological innovations are likely to experience increased profitability compared to those that do not invest in such innovations.

5.3.2 Online marketing tools and business efficiency

The results showed that the correlation coefficient was 0.894 (**) at a significance level of 0.01, which implied that productivity in organizations is significantly enhanced by technological innovations. The regression analysis results further indicated that 89.4% variations in productivity was attributed to technological innovations. In other words, productivity in organizations was dependent on technological innovations by 89.4%. Therefore, the use of new technological innovations has been found to improve the operational efficiency, reduce costs, and increase productivity of organizations in Kampala District.

5.3.3 Remote working and business efficiency

The results showed that the correlation coefficient was 0.372 (**) at a significance level of 0.01, which implied that customer service in organizations is significantly enhanced by technological innovations. The regression analysis results further indicated that 37.2% variations in customer service was attributed to technological innovations. In other words, customer service in organizations was dependent on

technological innovations by 37.2%. Therefore, the adoption of new technological innovations has improved the quality of customer service, increased customer satisfaction, and enabled personalization of customer service.

5.3.4 Labour-saving technologies and business efficiency

The results showed that the correlation coefficient was 0.655 (**) at a significance level of 0.01, which implied that distribution plus delivery in organizations is significantly enhanced by technological innovations. The regression analysis results further indicated that 65.5% variations in distribution plus delivery was attributed to technological innovations. In other words, distribution plus delivery in organizations was dependent on technological innovations by 65.5%. Therefore, technological innovations have improved the speed, efficiency, and accuracy of distribution and delivery processes, resulting in decreased delivery times and costs, and increased customer satisfaction.

5.4 Recommendations

5.4.1 Online business tools and business efficiency

Organizations should invest in training programs to ensure employees have the necessary skills to use new technology effectively.

Organizations should invest in training programs to ensure employees have the necessary skills to use new technology effectively.

5.4.3 Online marketing tools and business efficiency

Organizations should identify areas where technology can help improve productivity, such as streamlining communication channels, automating repetitive tasks, or providing access to real-time data and analytics.

Organizations should monitor and evaluate the impact of technological innovations on productivity to identify areas for improvement and further investment.

5.4.3 Remote working and business efficiency

Organizations should invest in technology that will help provide personalized customer service, such as chatbots or CRM systems.

Organizations should ensure that the organization's website and other digital platforms are user-friendly and easy to navigate, providing customers with a seamless experience.

Organizations should collect and analyse customer feedback to identify areas for improvement and further investment in technology that will help enhance customer service.

5.4.4 Labour-saving technologies and business efficiency

Organizations should invest in technology that will help streamline distribution and delivery processes, such as GPS tracking systems or inventory management software.

Organizations should ensure that delivery times are accurately estimated and communicated to customers, using technology such as automated notifications or real-time tracking updates.

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APPENDICES

APPENDIX A: SELF ADMINISTERED QUESTIONNAIRE

Dear respondent,

You are kindly requested to fill in the following questions to enable the researcher accomplish the study about “**whether organizations are making use of technology to drive business efficiency and to establish whether technology has had any positive impact on the organizations**”. Therefore, the study is an academic work and thus the information given will confidentially be used for that purpose. You are kindly requested to give your own views, as no response is wrong, you may not disclose your name.

SECTION A

BACKGROUND INFORMATION

1. Gender

Male	Female

2. Age (in years)

20-30	31-40	41-50	Above 50

3. Period of service (in years)

Below 2 years	2 - 5	6-10	Above 10

4. Highest level of education

Certificate	Diploma	Bachelor's degree	Master's degree	If others, specify

For section B, C, D, and E read the statement provided and indicate your most honest level of agreement to the statement using the scale of 1-5 where;

1=Strongly Disagree

2=Disagree

3= Neutral

4= Agree

5= Strongly Agree

SECTION B: Online business tools and business efficiency

No.	Statement	Scale				
1	Technological innovations have a positive impact on the profitability of our organization	1	2	3	4	5
2	Our organization's profitability has increased since we adopted new technological innovations	1	2	3	4	5
3	Technological innovations have helped us reduce costs and increase profitability	1	2	3	4	5
4	Our organization's profitability would suffer if we did not invest in technological innovations	1	2	3	4	5
5	Technological innovations have helped us improve our competitiveness in the market.	1	2	3	4	5
6	The return on investment in technological innovations is significant for our organization	1	2	3	4	5
7	Our organization's profitability is directly proportional to the	1	2	3	4	5

	level of technological innovations we adopt.					
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SECTION C: Online marketing tools and business efficiency

No.	Statement	Scale				
1	Technological innovations have improved the efficiency of operations.	1	2	3	4	5
2	Productivity has increased since we adopted new technological innovations.	1	2	3	4	5
3	Technological innovations have helped reduce time spent on repetitive tasks.	1	2	3	4	5
4	Productivity would suffer if we did not invest in technological innovations.	1	2	3	4	5
5	Technological innovations have helped improve the accuracy of our work.	1	2	3	4	5
6	The use of technological innovations has increased the speed of work processes.	1	2	3	4	5
7	Technological innovations have made it easier for employees to collaborate and communicate effectively.	1	2	3	4	5

SECTION D: Remote working and business efficiency

No.	Statement	Scale				
		1	2	3	4	5
1	Technological innovations have improved the quality of customer service.	1	2	3	4	5
2	Customers are more satisfied since we adopted new technological innovations.	1	2	3	4	5
3	Technological innovations have enabled to provide faster response times to customers.	1	2	3	4	5
4	Reputation for good customer service is directly related to the level of technological innovations.	1	2	3	4	5
5	Technological innovations have made it easier for customers to interact with us.	1	2	3	4	5
6	The use of technological innovations has enabled personalization of customer service.	1	2	3	4	5
7	Customer service has become more efficient since we adopted new technological innovations.	1	2	3	4	5

SECTION E: Labour-saving technologies and business efficiency

No.	Statement	Scale				
		1	2	3	4	5
1	Technological innovations have improved the speed and efficiency of distribution and delivery processes	1	2	3	4	5
2	Delivery times have decreased since we adopted new technological innovations.	1	2	3	4	5
3	Technological innovations have helped reduce errors distribution and delivery processes.	1	2	3	4	5
4	Organization's distribution and delivery processes would suffer if we did not invest in technological innovations.	1	2	3	4	5

5	Technological innovations have made it easier to track and monitor delivery processes.	1	2	3	4	5
6	The use of technological innovations has enabled to provide real-time updates to customers on their orders.	1	2	3	4	5
7	Distribution and delivery costs have decreased since adoption of new technological innovations.	1	2	3	4	5

SECTION E: Whether organizations leveraging on technological innovations are more efficient than those whose operations are manual

No.	Statement	Scale				
1	Our organization's efficiency has increased since we adopted new technological innovations.	1	2	3	4	5
2	Technological innovations have made it easier for us to streamline our processes and reduce waste.	1	2	3	4	5
3	Our organization's operations would be less efficient without the use of technological innovations.	1	2	3	4	5
4	Technological innovations have enabled us to automate repetitive tasks, freeing up time for more valuable work.	1	2	3	4	5
5	The use of technological innovations has enabled us to provide faster and more accurate service to our customers.	1	2	3	4	5
6	Our organization's competitiveness is directly related to the level of technological innovations we adopt.	1	2	3	4	5
7	Technological innovations have enabled us to stay ahead of our competitors who do not use as much technology.	1	2	3	4	5