2023

The Effect of digital technology adoption on the operational performance of travel agencies in Kenya.

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THE EFFECT OF DIGITAL TECHNOLOGY ADOPTION ON THE OPERATIONAL PERFORMANCE OF TRAVEL AGENCIES IN KENYA

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ADM NO: 111328

A RESEARCH PROJECT SUBMITTED IN FULFILMENT OF THE REQUIREMENTS OF THE AWARD OF MASTERS OF BUSINESS ADMINISTRATION OF STRATHMORE UNIVERSITY BUSINESS SCHOOL

JUNE 2023

DECLARATION

This project is my original work and has not been submitted for examination in any other institution.

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Approval

This research project has been submitted for examination with my approval as the university supervisor.

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ABSTRACT

The use of digital technologies has proved to be a significant contributor to efficiency, effectiveness and quality service provision within firms. Especially with the emergence of the COVID-19 pandemic which has disrupted physical work arrangements, firms that adopted digital technologies found it easier to continue with their service provision. The travel agency was one of the biggest hit industry's' by the pandemic which resulted in disruption in service provision which ultimately led to poor operational performance of the firms. Locally, the industry faced monumental losses in jobs, declining in revenue, customer satisfaction and service quality. Hence, this study sought to identify if the digital technology adoption influenced the operational performance of travel agency firms. The study analysed on the effect of interactive websites, digital analytics, social media and e-commerce tools on operational performance. The research was grounded on the innovation diffusion theory. A positivist philosophy was used in the course of the study with a quantitative descriptive research design being applied. The population for this study was the 142 firms registered under the Kenya Association of Travel Agencies. The sample size for the study as computed by the Yamane formula was 104 firms. A structured research questionnaire was employed in the collection of quantitative research data. Both drop and pick as well as electronic data collection procedures were used. The study conducted a pilot test to check on the reliability and validity of the research tool. The collected study data was analysed using both descriptive and inferential tests. The research findings were presented using figures and tables. The research obtained 94 responses which translated into 72% with only 28% of the sample participants not being involved in the final survey. The correlation results showed a weak positive relationship between adoption of interactive website, adoption of social media tools and operational performance of travel agency firms in Kenya, a moderate positive relationship between adoption of e-commerce tools and operational performance of travel agency firms in Kenya and a strong positive linear relationship between adoption of digital analytics and operational performance of travel agency firms in Kenya. The regression analysis showed that digital technology adoption could be used to explain about 71.7% of the variance in the operational performance of travel agency firms in Kenya. The study concluded that digital analytics, adoption of social media tools and adoption of e-commerce tools had a positive and significant effect on the operational performance of the travel agency firms while interactive websites reflected a statistically significant negative effect on the operational performance of travel agency firms in Kenya. The study recommends that the travel agencies continuously gather and analyse customer feedback to identify areas of improvement on their websites. The study also recommends more utilization of social media platforms to promote travel deals and packages to target audiences. Further, the study recommends that the firms implement a data analytics system to track customer behaviour, preferences, and buying patterns as well as identifying customer segments and tailor marketing efforts to specific groups. Finally, the study therefore recommends that the travel firms offer a variety of payment options, including online payments, to make the booking process as seamless as possible.

Keywords: Digital technology, interactive websites, social media tools, data analytics, ecommerce tools, travel agencies

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LIST OF ABBREVIATIONS

ASTA	American Society of Travel Agents
IDT	Innovation Diffusion Theory
TAM	Technology Acceptance Model
TPB	Theory Of Planned Behaviour
US	United States
WEF	World Economic Forum
WTO	World Tourism Organization
WTTC	World Travel and Tourism Council

DEFINITION OF TERMS

Digital technology	Meessen (2018) notes that digital technology refers to the utilization of information communication technologies (ICT) and tools that generate, process, transmit, and store data.
Digital technologies tool	Digital technologies encompass the segment of engineering or scientific skills that entails the conception and practical application of digital or computerized devices, methods, systems such as computers, mobile devices such as smartphones, the internet, and mobile software applications (Ndung'u, 2019).
Digital Data Analytics	Digital analytics is the process of collecting and processing data from multiple digital sources to illustrate user behaviour and inform product creation and marketing strategy and decisions (Höpken, et al., 2019).
e-commerce	e-commerce refers to the selling and purchase of products and services through online channels (Sunayana & Parveen, 2019).
interactive websites	Interactice websites are internet pages that use a variety of tools and software to enable users to have an interactive experience (Odiko, Ogutu, Yabs, & Omar, 2018).
Operational Performance	Operational performance refers to the degree of synergy between various units in an organization in generating desired output (Kiprotich, Njuguna, & Kilika, 2018).
social media tools	Social media refer to those interactive tcehnologies that enable users to create and share different forms of digital content through web-based tools and interactive platforms (Karani, 2020)

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Over the last two decades, a vigorous digital transformation has resulted in new technologies across various industries (Reinhold, Zach, & Laesser, 2020). Like any other primary industry, the travel sector has undergone significant changes in operations resulting from the adoption of emerging technologies and strategy execution (Linton & Öberg, 2020). Mitas, van der Ent, Peeters, and Weston (2015) contend that information technologies within the travel industry have revolutionized service delivery and transformed how the travel ecosystem operates. According to Troshin, et al., (2020), travel agencies adopt digital technologies to facilitate fast communication with partners and ensure customers plan their trips as smoothly as possible, guaranteeing satisfaction and building an online real estate. However, according to Arasli, Abdullahi and Gunay (2021), not all firms are successful ion their attempts to adopt and implement digital technologies into their processes.

In their annual report, Eurostat (2020) showed that around 9% of the global labour market worked in the tourism and travel industry. Further, the World Travel and Tourism Council (WTTC) reported that the sector contributes to 10.4% of the global gross domestic product and over 313 million jobs (WTTC, 2019). Indeed, the World Economic Forum (2020) affirmed that the transport and in extension, the tours and travel sector is currently undergoing digital transformation buoyed by changes in consumption behaviour, consumer preferences and perforation and ubiquity of digital tools. The report shows that through the assimilation of digital technologies, the global output value of the tour and travel amounted to US$ 305 billion between 2016-2025. World Economic Forum (2017) concurs and reveals that in the travel industry, digital technologies are associated with customer-centrism, services personalization, increased online distribution of products and services, and improved service offering.

The American Society of Travel Agents (2016) opine that digital technologies perforation has increased competitive practices in the sector with at least 22% of traditional travel agents firms having closed down due to changes in consumer consumption behaviour with regards to identifying, booking and accessing hotel services. More firms are adopting digital technologies to improve how they market themselves, provide critical services and ensure customer satisfaction (Fardowsa, 2018). Škare, Soriano and Porada-Rochoń (2021) added that despite the Covid-19 pandemic subsiding, much of the norms of the lockdown era such as online

shopping have remained engrained among consumers who are increasingly looking to access a wide variety of products through online channels. Bartsch, Weber, Büttgen, and Huber (2020) contend that during and after the Covid-19 pandemic, the industry's chance of survival was reliant on their ability to integrate new technologies in to their operations.

Taiminen and Karjaluoto (2015) showed the use of digital technology tools such as email, websites, blogs, and digital applications to offer competitive services and prices to travellers. Furthermore, Baek, Oh, Yang, and Ahn (2017) confirm that more and more firms are using search engine optimization tools, social media, website enhancement, google analytics, and email marketing to make corporate decisions, enhance customer understanding and revenue generation. Regionally, Nigeria's Ollor and Nwankwo (2022) investigated the influence of digital billboards, SMS and social media marketing on travel agencies' performance and concluded that social media has the most significant impact on tour agencies' marketing outcomes. Ethiopia's Bayelegne, Sellassie and Demese (2022), on the other hand ascertained that tourists to Ethiopian tour sites made use of search engines and social media, with mobile messaging having insignificant effects on firm attraction. Locally, Gakii, Maina and Murigi (2022) was of the opinion that video marketing has significant associations with market performance of registered travel agencies in Nairobi. This study did not address how use of audio and written digital channels affects the performance of the firms in question.

Kenya is the regional ICT hub of East Africa, leading in broadband connectivity, general ICT infrastructure, value added services, mobile money, and mobile banking and FinTech services (Osiakwan, 2017). In accordance with the Big Four Agenda and the Vision 2030, the Kenyan government has created various strategic and policy interventions to promote adoption of a digital economy, and most firms have taken the initiative of integrating new technologies in their operations (Getuno, 2022). Currently, more than 100,000 local domains were established in 2020, a 38 percent increase from 2016, 46% of businesses have deployed mobile money and other cashless payment services, 37% of have functional websites, while 43% of firms have adopted organizational email to facilitate communication with customers (KNBS, 2020). These businesses consider digital technologies to be crucial to marketing outcomes and Kariru (2022) shows how digital marketing adoption, in addition to increased revenue generation, also improves customer satisfaction, competitive advantage and cost performance.

Despite the above numbers indicating a positive uptake of digital technologies, data from a KNBS 2016 report shows that only 58 percent, 57 percent, 43 percent and 35 percent of Kenyan businesses use social media, websites, e-government platforms and cloud computing services.

Further, there is a significant gap in adoption, with firms in urban areas having higher adoption rates than rural firms (Jarso, Wario, Mwalili, & Otieno, 2018). This shows that there exist data gaps on access and usage of ICTs in enterprises in Kenya. Malik, Suresh, and Sharma's (2019) research showed that adoption of digital technologies can be investigated through various theoretical models such as the Technology Acceptance Model (TAM), the Theory of Planned Behaviour (TPB), or Innovation Diffusion Theory (IDT). This study analysed on the user's adoption and usage of technology from the firm perspective using the diffusion of innovation perspective (Davis, Bagozzi, & Warshaw, 1989).

1.1.1 Digital Technology Adoption

Digital technologies are electronic tools, systems, devices and resources that generate, store or process data such as computers, mobile devices, the internet, and mobile software applications (Ndung'u, 2019). Meessen (2018) refers to digital technology adoption as the utilization of ICT resources to generate, process, transmit, store and utilize data. It is the process through which users leverage new technologies to derive maximum value from a digital process (Kahrović & Avdović, 2021). Assaf and Tsionas (2018) note that the digitalization of travel and tourism services has disrupted how the marketing channels work, the pricing mechanisms, optimized costs, and service efficiency. Al-Razgan, et al. (2021) opine that firms adopt digital technologies due to the ubiquity of the internet, associated devices and increased demand for digital content while Korir and Muchemi (2020) add that digital technologies offer a wide variety of services including voice, audio and visual media sharing, text and interactive platforms, as well as analytic tools.

Law, Buhalis and Cobanoglu (2014) commented on the quick evolution of digital technologies with innovations such as websites evolving from static to interactive websites in less than two decades. Abou-Shouk, Lim, and Megicks (2013) aver that due to the rapid nature of technology evolution, many are becoming obsolete as newer more refined tools emerge. This makes successful technology adoption for business process improvement a challenge. Fereidouni and Kawa (2019) showed that in the data age, businesses such as travel agencies face challenges emanating from user privacy and data use concern, digital discrimination, and regulatory challenges. However, Lam and Law (2019) opine that digitalization brings new opportunities for firms to improve the quality of service delivery, counter locational limits and increase their market presence. Happ and Ivancso-Horvath (2018) add that digital technologies have been central to the shift in marketing strategies and service development as tools such as interactive websites, mobile applications, social media, and e-commerce tools permeate.

Digital technologies accomplish multiple goals including relationship management, cash management, marketing, decision making, and information sharing, among others (Pacho, 2023; Gakii, Maina, & Murigi, 2022; Kipruto & Eric, 2021). This makes research into their relationship with business performance to be scattered. Hong (2022) investigated digital technologies using digital based media interaction and social media analytics, observing social media analytics enables firms to develop better customer insight which improves performance and productivity across different functions. Pacho (2023) avers that since the Covid-19 pandemic, entrepreneurs are adopting online sites, social media and business analytics into their marketing strategies and Bayelegne, et al. (2022) used search engine optimization, social media, interactive websites and mobile marketing in analysis of the digital marketing tools used to promote tourism in Ethiopia and concluded that these technologies are among the most adopted by the tour firms in marketing and will be examined in the context of the Kenyan market.

Interactice websites are internet pages that use a variety of tools and software to enable users to have an interactive experience (Odiko, Ogutu, Yabs, & Omar, 2018). Interactive websites are modern versions of traditional websites which were static and offered limited exchange between users (Makau, 2021). Common interactive websites include blogs, internet forums and social media sites and these have interactive features that enable users to submit stories, videos and ideas, personalize their internet experience and carry out online transactions. Analysis into digital marketing channels by Mohamed et al., (2022) revealed that websites and social media are the two utmost important tools for tourists going into Egypt. Jiménez-Barreto and Campo-Martínez (2018) add that the quality of the website has significant impacts on tourists' intention to participate in online co-creation experiences with a destination. Websites can engage consumers in an interaction that will move them closer to a direct purchase or other marketing outcomes (Maina, 2017).

Social media refer to those interactive tcehnologies that enable users to create and share different forms of digital content (Karani, 2020). Social media is usually accessed through web-based tools and interactive platforms where users co-create, share and engage in self-curated content online. Social media has emerged as useful channels for businesses to adverstise their products, collect customer opinions and make use of online data in decision making (Jin, Mugaddam, & Ruy, 2019). When used by corporations, social media enables them to improve consumer experience through feedback, facilitate customer engagement and create online brand awareness (Karani, 2020). Yildirim (2022) avers that Turkish tour agencies are

leveraging social media to market themselves and tour destinations in the country and are realizing an increase in customer uptake and in China, Jin, Mugaddam and Ruy (2019) revealed that social media usage promotes product and service image for organizations. Mwakiremba (2020) asserts that hospitality sector firms have to aggressively adopt social media channels such as Facebook, Instagram, Twitter, LinkedIn as well as mobile applications and websites to remain competitive.

Digital analytics is the process of collecting and processing data from multiple digital sources to illustrate user behaviour and inform product creation and marketing strategy and decisions (Höpken, et al., 2019). Digital data analytics enables businesses to harness customer data from channels such as websites, social media and mobile applications to create metrics such as SEO metrics, page views and email marketing metrics that companies use to better analyze the customer, improve market analysis and create predictive business models (Mwatha, 2020). Camilleri (2019) assert that tech-savy firms are already using big data to improve decision making, agility and customer-centric approaches and show how analytics improve identification of exogenous variables that affect organisational performance, enhance customer offerings and improve customer engagement. Navío-Marco, Ruiz-Gómez, and Sevilla (2018) showed how digital data analytics enabling businesses to offer personalized services, improve customer interactions, and experience. Hsu, King, Wang, and Buhalis's (2017) study found out that digitalized business models have improved the degree of competitiveness in travel agency firms.

e-commerce is short for electronic commerce and refers to the selling and purchase of products and services through online channels (Sunayana & Parveen, 2019). The researchers affirm that e-commerce makes use of digital technologies to connect buyers and sellers and categorizes them into business-to-business, business-to-consumer, and consumer-to-consumer models. e-commerce presents several value propositions to businesses such as cost reduction, increased visibility and customer data which can be used in digital analytics (Mohamed, 2017). Gaafar and Allah (2020) avered that Egyptian hotels are using artificial intelligence applications in e-commerce and this has significantly improved their market performance in the region and Adeola and Evans (2019) contend that digitalization can boost African tourism by facilitating remote work, delivering effective marketing campaigns and facilitating real-time customer relationship management. e-commerce components such as e-payment systems, e-marketing, and e-customer support services improve service delivery and customer satisfaction among Indian travel agencies (Sunayana & Parveen, 2019).

Rapid development of technologies has transformed the digital landscape and today, digital technologies are interconnected and businesses are using online products to provide interactive functions and personalize and customize their contents based on the characteristics of their target markets (Ana, 2019). Essentially, travel agencies are realizing that digital technologies are extensions of their official offices, and the degree of interactivity represented the quality of their products and services, as well as their reputation. This study investigated the effect of the various digital technologies conceptualized above on the operational performance of travel agents in Kenya.

1.1.2 Operational Performance of Travel Agents

Operational performance refers to the degree of synergy between various units in an organization in generating desired output (Kiprotich, Njuguna, & Kilika, 2018). Accordingly, Kipruto and Eric (2021) define operational performance as the level to which organizational systems provide conditions for different departments to collaborate and accomplish specific business goals and deliver products or services to customers in the most economically conservative way. Operational performance measures the outcomes of an organization's processes, including aspects of its reliability, production cycle time, and inventory turnover period (Hajir, 2021). Although studies use multiple measures of operational performance, the most predominant approaches use cost, quality, delivery, speed, reliability and flexibility as the basic dimensions of operational performance (Munir, Jajja, Chatha, & Farooq, 2020).

According to Munir, Jajja, Chatha and Farooq (2020), operational performance is dependent on individual firm factors, such as the competency of human resources, marketing strategy, customer service, image or reputation, relationship management and communication. Travel agencies collaborate with multiple players in the tours industry to provide conveyance, accommodation, and facilitate a streamlined tour experience, linking producers to the customers, as such, they have to meet the expectations of multiple parties (Xurramov, 2021). del Alonso-Almeida, Bagur-Femenias, and Llach (2017) showed that travel sector firms measure performance using customer acquisition and number of bookings to tour destinations. Hajir (2021) affirms that operational performance encompasses cost efficiency, quality, delivery, speed, reliability and flexibility dimensions. These metrics show an agencies' quality of service delivery, degree of customer satisfaction, competitiveness and firm reputation and were used in the current analysis.

1.1.3 Travel Agencies in Kenya

Travel agencies are firms that negotiate with hotels, transportation companies, and other suppliers to provide tourists with complete tour packages (Page & Connell, 2020). Tour packages combine various components of a vacation, including accommodation, transportation and entertainment as a single product offer them to tourists as a single package (Xurramov, 2021). Travel agencies are usually run by travel agents whose role is to guide clients in making travel plans by booking reservations, choosing appropriate tour destination, transportation, and lodging, making travellers aware of passport and visa requirements, currency exchange rates, and import duties (Hsu, King, Wang, & Buhalis, 2017). They improve market efficiency by streamlining the travel experience and reducing the costs associated with acquiring knowledge and dealing directly with sellers. In Kenya, travel agents operate under the Kenya Association of Travel Agents (KATA), whose membership has more than 140 tour and travel agencies (Kariuki & Omar, 2018). KATA came into fruition in 1979 after the dissolution of the East African Society of Travel Agents.

Tour agencies are key to success in the tourism industry since they strongly influence the choices of consumers, the practices of suppliers and new product development (Hossain, Suchana, & Avi, 2020). The tourism sector contributes to about seven percent of Kenya's Gross Domestic Product (Pedak, 2018), and despite the COVID-19 pandemic resulting in significant losses, the latest report from the Kenya National Bureau of Statistics (KNBS) shows that the country made more than 1.3 billion U.S. dollars, in 2021 from tourism. Developments in the digital space has revolutionized how travel agencies operate, particularly in regards to automation and networking of distribution channels (Ana, 2019). For instance, internet platforms enable users to interact directly with destinations, bypassing tour agents (Ochieng, 2021). This has resulted in tour firms themselves expanding the scope of their operations as they seek to remain relevant (Matešić, Pavić, & Mihajlović, 2022). Sawe (2019) reports that Galileo Kenya expanded significantly after developing an online booking engine known as 'Going Safari' which leverages horizontal and vertical integration to expand their market share and market coverage and to expand value chains.

A host of digital technologies have been deployed by tour agencies in response to the digital revolution, despite limited understanding of their effects on the firms' performance (Kikemu, 2017). Fardowsa (2018) affirms that despite increased adoption of digital technologies, research into how they influence the operational performance of tours and travel firms is

limited, and the gap is widening as the application of the technologies was accelerated during the pandemic. This study sought to address this gap.

1.2 Statement of the Problem

Firms are constantly looking to improve their performance metrics and with technologies being the footstones to service and process improvement, they are increasing their investment into digital technologies. Indeed, Sharma, Sharma and Chaudhary (2020) contend that digital technologies are transforming how businesses operate globally and aver that digital technologies offer cost reduction, increased effectiveness and improved responsiveness. In the tourism and hospitality sector, companies see digital technologies as a means of attracting new customers, improving customer service, enhancing operational efficiency, and increasing income generation (Adeola & Evans, 2019; Bayelegne, Sellassie, & Demese, 2022). They enable these businesses to follow consumption behaviours, market trends, engage consumers and present their products and services in more streamlined and coordinated methods informed by consumer data (Li, Xu, Tang, Wang, & Li, 2018). Abolhassan (2017) adds that they improve businesses' understanding of customers' requirements which is key to improving marketing goals.

Despite their percieved importance in influencing customer purchase decisions and business product/service offering, there is a deficiency in literature examining the impact of digital technologies on operational performance of firms in the deficiency in the context of the Kenyan tourism and hospitality sectors (Mohamed, 2017). Several studies investigate the individual technologies such as Mongwaketse (2021) who researched on e-marketing strategies implemented in Botswana's tourism sector and determined that e-word of mouth and social media usage significantly impact destination knowledge and attractiveness. Serbia's Kahrović and Avdović (2021), on the other hand argue that mobile technologies, social networks and cloud computing are critical to optimizing operational performance, improving resiliency and growth within the travel agency industry while according to Nimatulaev, et al. (2021), in Russia, digital technologies offer new channels for the provision of travel services and support marketing by providing information necessary to improve marketing decisions.

In Tanzania, Mwalukasa and Assenga (2021) study suggested that tour operators use electronic databases to influence visitors' decisions, virtual reality to sell the experience, update websites and social media, and promote customer knowledge while according to Karani (2020), tour agencies use social media to inspire their online clients to book with them and to promote their

businesses by uploading and sharing photos, videos, and audio. Social media was used to improve the attractiveness of Kenya's cultural heritage and tourism attraction sites. These studies are inadequate in explaining how adoption of different technologies influences firms operating performance in the hospitality scetor. Furthermore, most of these studies explored outdated technologies and did not cover issues relating to the most used digital technology, reasons and frequency of utilizing these technologies and how they impact different aspects of travel agency performance. This study sought to fill this gap by focusing on four most recent innovations in the ICT segment which include social media, interactive websites, digital data analytics and e-commerce.

1.3 General Objective

The main objective of the study is to analyse the effect of digital technology adoption on the operational performance of travel agencies in Kenya.

With the pandemic disrupting the operations of the travel industry; this study was timely in establishing how the travel agents can adopt digital technology tools to improve their operational performance.

1.3.1 Specific Objectives

i. To examine the influence of interactive websites on the operational performance of travel agencies in Kenya.
ii. To determine the effect of social media tools adoption on the operational performance of travel agencies in Kenya.
iii. To establish the effect of digital data analytics on the operational performance of travel agencies in Kenya.
iv. To examine the effect of e-commerce tools on the operational performance of travel agencies in Kenya.

1.4 Research Questions

i. To what extent do interactive websites influence the operational performance of travel agencies in Kenya?
ii. What is the effect of social media tools adoption on the operational performance of travel agencies in Kenya?
iii. What is the effect of digital data analytics on the operational performance of travel agencies in Kenya?

iv. To what extent does e-commerce tools influence the operational performance of travel agencies in Kenya?

1.5 Scope of the Study

The geographical scope of the study analysed on the various travel agencies that are registered and in operation in Kenya. Contextually the Study focused how various digital technology tools, interactive websites, digital data analytics, social media, and e-commerce tools influence the operational performance of travel agencies in Kenya. Theoretically, the study was informed by the Innovation diffusion theory. The time scope of the research was between August and November, 2022.

1.6 Significance of the Study

The study findings add value to the leadership of the tourism sector in Kenya. The Tourism Regulatory Authority can be presented with the opportunity to lobby for laws that facilitate safe, faster, and affordable technological adoption within the tourism and travel sector. The results can also assist the Tourism Regulatory Authority in the formulation of effective policies that guarantee sound and effective performance of the travel industry, which can spur the realization of Sustainable Development Goals and promote better economic development.

To the management of the travel agencies, the results of the study will help identify how various digital technology tools can be applied within the industry to drive better performance. Further, the findings can help the agencies identify the critical areas in their performance that can be revamped using digital technologies in this post-Covid 19 era.

The Study is also expected to be of importance to academicians and other researchers as it would provide the base for further research in the area of technology in the travel industry in Kenya. Further, there is a limited examination of digital technology applications in the travel industry; hence these findings will bridge the knowledge gaps in the area.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The second chapter of the study comprised the theoretical sections and the empirical review sections. The study was grounded on Rogers (1962) Innovation Diffusion Theory while the empirical section presented findings from a literature review on the study variables. These was arranged according to the study objectives.

2.2 Theoretical Framework

2.2.1 The Resource-Based Theory

The resource-based view (RBV/RBT) theory was proposed by Barney (1991) and it seeks to explain the sources of growth and competitive advantage among firms. The concept rose out of Penrose's (1959) study which recognized managerial resources as the primary driver of growth and in extension, Barney (1991) considers firms to be a set of resources whose combinations has direct implications on organizational performance outcomes. According to Barney (1991), a firm's sustained competitive advantage is based on its valuable, rare, inimitable, and non-substitutable resources. Barney (1991) emphasizes that competitive advantage is a manifestation of the degree of effectiveness through which internal resources and capabilities generated or acquired by the firm are used to achieve business goals. The theory is based on the costly-to-copy concept whereby costly resources that require an extended learning process or a change in the corporate culture are the sources of competitive advantage due to their uniqueness and cost to replicate (Nandi, Nandi, Moya, & Kaynak, 2020).

Proponents of the resource-based view (RBV) affirm that businesses can outperform their competitors through unique combinations of technical, human, and other resources (Alalie, Harada, & Noor, 2018). Barney (1991) argues that competitive advantage can only be achieved is a resource is valuable, rare, non-imitable and difficult to replicate. These properties give resources heterogeneity (different resources across firms) and immobility which is central to sustained uniqueness and competitiveness (Vrontis, Chaudhuri, & Chatterjee, 2022). Barney (1991) contends that resources are all assets, capabilities, organizational processes, technologies, knowledge and other assets that firms configure to improve their efficiency and effectiveness. The theory has stood the test of time since it helps managements to better understand the importance of competences and how they can be utilized to improve business performance. The theory stresses the importance of developing unique internal resources and

affirms that for firms operating in information-rich sectors, digital technologies that enable the assimilation and utilization of information in a superior manner have the potential for creating a sustainable competitive advantage (Kahrović & Avdović, 2021).

The RBV theory has been applied in extensive research investigating the impact of different resources on organizational performance. Vrontis, Chaudhuri and Chatterjee (2022) used the theory in examining the impact of adoption of digital technologies on SME sustainability and value creation, with social media, big data analytics, block chain and the internet of things being identified as important tcehnologies. Gupta, Tan, Ee and Phang (2018) contends that big data, cloud computing, crowdsourcing platforms, and the Internet of Things have been important sources of competitive advantage. This theory is useful in this study as it informs the research on the relationship between digital technologies and operational performance and explains how information technology creates sustainable competitive advantage to improve organizations. It shows how firms can use digital technologies in different ways to improve service and product offering, hence its usefulness to the study.

2.2.2 Innovation Diffusion Theory

The Innovation Diffusion Theory was developed in 1962 by E. M. Rogers and it is one of the oldest social sciences theories (Rogers, Singhal, & Quinlan, 2014). This theory was formulated to explain how new practices, tools and ideas spread through a population over time. According to the IDT, people are part of a social system and that depending on the context of the system, certain ideas or practices will slip into the system and spread until they become the normal accepted behaviour, practice of tool (Dearing & Cox, 2018). According to the theory, a new idea was adopted if the users perceive it to be new or innovative (Attour & Chaupain-Guillot, 2020). Rogers (1962) argues that adoption of new ideas is not simultaneous but a product of processes where some will lead others in adoption. The theory identifies different categories of adopters which marketers have to understand when marketing new products or ideas.

According to Rogers (1962), adopters fall into five main categories; innovators, early adapters, early majority, late majority and laggards. Innovators are usually first to try out a new innovation and are characterized as risk takers, venturesome and interested in new ideas. Early adapters are the opinion leaders who enjoy leadership roles and embrace opportunities for change. Most of these do not need much convincing to adapt new technologies. Early majority comprise individuals who see or experience a new idea and adopt it earlier than average individuals. Late majorities are sceptical of change and will adopt new ideas after they have

been tested and prevent to work. Laggards comprise conservative consumers who prefer traditionally established practices (Rogers, Singhal, & Quinlan, 2014). Factors that influence innovation adoption include the innovations' relative advantage, compatibility, complexity, trialability and observability (Dearing & Cox, 2018). These factors influence categories of adopters in varying ways.

Although various researchers hail the IDT as an important means to explain innovation, it has been criticized for failing to explain why individuals will cease to utilize existing technologies and for failing to explain how an individual's resource capability influence adoption decisions (MacVaugh & Schiavone, 2010)-. However, this study sought to explain how adoption of digital technologies impacts firm performance and this theory is key as it anchors the factors that influence adoption decisions. The theory has been used extensively in fields such as public health (Lien & Jiang, 2017), social work (Dearing & Cox, 2018), criminal justice (Kohlbeck, Levas, Hernandez-Meier, & Hargarten, 2022), and business (Schiavone & Simoni, 2019). The theory was also used by Al-Razgan, et al. (2021) to explain attitudes towards driving adoption by Saudi-Arabian women. It predicts that understanding the market improves technologies' adoption decisions and that helps in identifying technology factors that make businesses adoption them, hence it was key in explaining the properties of digital technologies that influence their adoption.

2.3 Empirical Review

This section presented a critical review of studies relating to the study variables presented in line with the study objectives.

2.3.1 Interactive Websites on Operational Performance

Interactice websites are internet pages that use a variety of tools and software to enable users to have an interactive experience (Odiko, Ogutu, Yabs, & Omar, 2018). Interactive websites are modern versions of traditional websites which were static and offered limited exchange between users (Makau, 2021). Common interactive websites include blogs, internet forums and social media sites and these have interactive features that enable users to submit stories, videos and ideas, personalize their internet experience and carry out online transactions. In the hospitality sector, interactive websites present the opportunity to respond to consumer inquiries, interactions and e-service provision.

Ye, Barreda, Okumus and Nusair (2019) sought to understand the relationship between website interactivity and brand value on purchase intention among online travel agencies. The study

employed convenience sampling and sourced data from online and offline sources. From the analysis, it was determined that travel agencies' social interactivity has a positive relationship on brand experience and brand choice. The ability of interactive websites to facilitate two-way communication improves consumers' perceptions regarding needs; accommodation which increases utilitarian satisfaction through memorable experiences. The study concluded travel agencies should aim to improve online responsiveness to increase usage and induce buying intentions. This study presented gaps relating to being based in China, online travel agencies and failure to investigate how responsiveness in other digital channels impact firm performance.

Mohd-Any, Winklhofer and Ennew (2015) carried out a study seeking to measure multidimensional user's value experience when using travel websites. The study specifically sought after how users create value through using website experience. The study which was based in the United Kingdom undertook an extensive literature review to identify the dimensions of customer value and randomly sampled 3000 customers who had used online travel websites. Partial least squares (PLS) analysis showed a positive influence of website use, e-value satisfaction and behavioral intentions. The analysis revealed that cognitive effort had the most significant effect on website users' e-value experience. It was closely followed by utilitarian/control value, emotional value, and value for money, while social value had minimal effects on the user satisfaction. The study concluded that actual usage significantly influences customer experience which determines e-value generation. This study involved users' perceived value gain. It does not assess how user e-value contributes to firm performance.

Noting the importance of service interactions, Stringam and Gerdes (2019) sought after customer satisfaction by examining the effect of website quality on hotel performance. The study focused on large international hotels with six or more affiliated hotels from six continents. A total of 259 websites were analysed using the GT Metrix which is a useful tool that runs website performance measurements to investigate the effect of website load times. The study revealed there exists a significant gap between the expected service and the actual perceived service; and that slow web load times contributed to this gap in service delivery expectations. The researcher affirmed that slow load times contribute to low hotel bookings especially among younger guests who use mobile devices rather than computers when making purchases. Slow load times were associated with brand devaluation. This study only reviewed one dimension of website interactivity and did not consider independent hotels in its analysis.

This research advanced this knowledge by addressing how other website quality metrics influence hotel's operational outcomes.

In another study on online travel agencies in Indonesia, Talwar, Dhir, Kaur and Mäntymäki (2020) sought after the customer's perspective when investigating the reason for their usage of online travel agencies. The study adopted a mixed methods approach and analyzed cross-sectional data from 809 OTA users. The study also sought after the moderating effect of the consumer's hygiene consciousness, privacy, age and OTA visibility on OTA usage intentions. The study was informed by the Theory of consumption values (TCV). Structural equation modeling (SEM) analysis confirmed that monetary and quality benefits, social status, informative value, and preference values all have an influence on OTA purchase intention. Consumers with high levels of hygiene consciousness and social status were willing to spend more on more expensive, but luxarious agencies, while OTA online visibility improves preference value. These findings were similar for individuals with high security and privacy concerns. This study did not investigate how such factors influence firms that are not majorly online.

In Kenya, Kikemu (2017) investigated the marketing opportunities that exist for tour firms to market the country as a tourist destination to American consumers. Descriptive analysis was applied on the data collected from 40 respondents from indound tour operators. The analysis revealed a significant positive impact of website information and online word of mouth on the attraction of travel agencies. The study asserts that Travel agencies can improve performance by making use of Kenyan diaspora as influencers to market travel agencies through digital channels. The study also reported a significant relationship between the quality of website information on agency services purchase. This study specified on information sources rather than the specific aspects of website quality that influence purchase decisions. The current study focused on this contextual gap.

Maswera, Dawson and Edwards (2015) assessed the travel and tourism industry from Kenya, South Africa, Zimbabwe and Uganda to examine the promotional techniques employed by the firms in the industry. Availability sampling was employed when choosing a sample of 802 websites from ten other European nations. The study revealed that although African firms had websites, they were often lagging behind in providing value proposition to their consumers. They failed to address privacy and security concerns and did not fully utilize the interactive capacity of interactive websites while their European counterparts utilized this feature to build and sustain new abd old relationships, thus preserving loyalty. The study also revealed a

significant impact of privacy assurance and loyalty systems on accounts' systems and customer retention. This study investigated website qualities and their impact on firm performance. The current study analyzed on the Kenyan market.

2.3.2 Social Media Tools Adoption on Operational Performance

Social media refer to those interactive tcehnologies that enable users to create and share different forms of digital content (Karani, 2020). Social media is usually accessed through web-based tools and interactive platforms where users co-create, share and engage in self-curated content online. Social media has emerged as useful channels for businesses to adverstise their products, collect customer opinions and make use of online data in decision making (Jin, Mugaddam, & Ruy, 2019). Businesses use social media for communication, to facilitate customer engagement and create online brand awareness and individuals use social media to share ideas, generate and sell content online and express themselves with regards to consumed products and services (Karani, 2020).

Prantl (2018) study aimed to determine the relationship between social media use and tourism attraction in the Czech tourism market. Considering the firms offer services that are rarely differentiated, the study proposed that social media is a source of competitive advantage. The quantitative study sampled the top 10 ranked agencies. The study determined that social media access represented only six percent of total online traffic. The study determined that search engine optimization in websites has a significant effect on tourist traffic. The analysis therefore determined that social media has an insignificant effect on profit generation, noting that the most socially active agency still reported reduced earnings during the year under review. However, the study concluded that social media use generates social experiences, improves brand strength and enhances customer relationship management which improves loyalty levels. Analysis showed that financial measures of performance were not appropriate measures for measuring social media impact on firm performance. This study was based on the Czech tourism arena, presenting a contextual gap.

Ana (2019) investigated millenials' travel behaviour to determine the influence of social media and User-Generated Content on destination intentions. The study involved young tourists who were contacted through digial channels. Statistical analysis revealed a significant relationship between social media marketing on theattraction of specific tourist destinations. The study determined that social media user generated content is informative and generates significant

visibility effects, especially if the ptomotional content is valid and relevant to the season. The study also established a positive effcet of social media responsiveness on percieved trust and preference. Further, for websites, ability to share experiences significantly improved usage intention and increased utilitarian satisfaction. The ability of brands to enhance consumers' engagement and increase organic reach enhanced the firms' competitiveness. This study focused on millenials who are the main social media consumers. Their tastes vary greatly from other populations and this study analyzed on all age groups of consumers.

Orabi (2021) investigated the Egyptian tourism sector to examine the mediating role of value co-creation of tourism experience on sales promotion of travel agencies through social media channels. The study targeted travel agencies that utilize social media to allow consumers to interact, share experiences and develop and design trips. The analysis involved structural equation modelling and results ascertained that use of social media ion marketing has a weak but positive effect on sales promotion when it comes to domestic tourism attraction. However, social media presented a unique opportunity for consumers to co-create value which improves satisfaction and validates people's opinions which in-turn stimulates purchase decisions. The study called on travel agencies to ensure they utilize the available social media platforms to facilitate social media-enabled tourism experiences which is a source of competitive advantage. This study utilized mediating variables presenting a contextual gap and the current study assessed the mediating effect of social media on the tourists perceived value creation.

Arasli, Abdullahi and Gunay (2021) investigated the use of digital marketing technologies such as social media, website and electronic word-of-mouth to promote a particular annual heritage festival in Nigeria, and its impact on tourists satisfaction and on the events' sustainability. The study's main goal was to determine whether digital technologies can be utilized to successfully induce festival revisiting intention. The study collected data from 479 foreign visitors and analyzed the data using partial least square structural equation modelling (PLS-SEM). The analysis showed a strong positive effcet of digital channels' use on the level of satisfaction among tourists. Social media channels enabled tourists to revisit events from the perspective of other tourists through online channels which increased their knowledge and generates the fear of mission out which results in revisit intentions. The study presented a contextual gap since it investigated tourist attraction to one festival event, while the current did not focus on attraction to a singular event.

Mwalukasa and Assenga (2021) aimed at investigating the effect of digital marketing on the performance of Tanzanian tour firms. The study employed a convergent parallel mixed-method

design and sampled 543 firms, collecvting both qualitative and quantitative data. Descriptive statistics and structural equation modelling were used in data analysis and hypothesis testing. Conclusions showed improved performance among tour firms that integrate digital marketing tools in their operations. Tour firms have used digital technologies such as virtual reality to sell visitors expected experience, electronic database to influence visitor decisions, websites and social media to communicate and form relationshpis with consumers, and online security technologies to protect firm database against malicious attacks. Website and social media marketing tools were instrumental in getting more tourists and collecting feedback. This study was carried out in Tanzania while the current study sought to address the same relationship with regards to the Kenyan market which is more competitive.

Karani (2020) focused on tourism travel agencies in Kenya to investigate the effect of social media marketing strategies on the performance of the country's tourism industry. A descriptive design was adopted and the sample selected using stratified random sampling. Data analysis involved descriptive and inferential statistics. Regressions showed high rate of adoption of social media marketing tools which improved firm performance through enhancing audience reach, facilitation of client-seller interactions and driving traffic to official firm websites. Social media sharing sites improved booking frequency by increasing knowledge regarding destination options. Further, video sharing platforms were reported to spike interest in tourist destinations which increased tourist traffic. The study asserted that increasing destination attractiveness improves tour firms' performance. This study did not investigate how use of other digital technologies impacts tour firms' operational performance. This study sought to address this gap.

2.3.3 Digital Data Analytics on Operational Performance

Digital analytics is the process of collecting and processing data from multiple digital sources to illustrate user behaviour and inform product creation and marketing strategy and decisions (Höpken, et al., 2019). Digital data analytics enables businesses to harness customer data from channels such as websites, social media and mobile applications to create metrics such as SEO metrics, page views and email marketing metrics that companies use to better analyze the customer, improve market analysis and create predictive business models (Mwatha, 2020). Data analytics tools make use of consumer information to improve marketing, personalize customer experience, keep up with customer trends and improve decision making (Höpken, Eberle, Fuchs, & Lexhagen, 2019).

Magno, Cassia and Bruni (2017) study investigated the adoption and impact of digital market assessment systems on the performance of travel agency performances. The study drew on the Knowledge-Based View theory and sought after whether a firm's acquired market knowledge mediates travel agencies' performance. The study sampled 171 Italian firms and applied covariance-based structural equation modelling to assess the variables' relationships. Analysis revealed that firms that had implemented sophisticated performance assessment systems reported positive results, and that the depth of market knowledge absorbed by the firms mediates this relationship. However, the analysis revealed that monitoring a significant number of marketing metrics does not improve performance outcomes. Adopting proactive marketing strategies improves the quality of market information collected. This study did not investigate how other digital technologies influence performance outcomes.

Miah, Vu, Gammack and McGrath (2017) sought after the effcet of big data analytics on the ability of tourist firms to analyze and predict tourist behaviour. The study applied a a design science research approach and assessed data from social media sites utilized by Australian tour firms. Four techniques were used to understand tourist behaviours; geographical data clustering, textual metadata processing, representative photo identification and time series modelling. The study determined that data analytic tools are essential in enabling companies understand their customers and predict purchase behaviour. This increased their targeting capacities and enabled personalization of promotional material which enhances consumer loyalty and improves overall performance. The study focused on firms that are based within city limits, the current addressed multiple firms regardless of their proximity to urban centres.

In a literature review, Li, Xu, Tang, Wang and Li (2018) investigated the application advantages of big data in the tourism industry. The review sourced data from multiple studies and categorized digital data sources into user generated content such as textual and photographic data; device data such as GPS data, mobile roaming data and Bluetooth data, and transaction data which comprises web search data, webpage visiting data, and online booking data. Analysis showed aa significant influence of data analytic tools on the firm's strategic decision making. The data sources were determined present different data types that the firms can utilise in addressing different marketing issues and improve factors such as demand projection and relationship management. The study did not source data from the firms while the current study focused on representatives from the firms to develop a more comprehensive conclusion from the firms' perspective.

Höpken, Eberle, Fuchs and Lexhagen (2019) looked into the Swedish tourism market in their investigation into the effect of Google Trends data on the ability of tourist firms to predict online search behaviour. The study sourced data from Swedish mountain destination are which is a major destination for tourists from all over the world. The study used linear regressions to explain the relationships between the study variables. The analysis revealed that tourist firms can use tourism-related search queries to present a clearer understanding of consumer behaviour which increases the accuracy of predicting tourist arrivals. This study only investigated search query analysis through Google Trends when examining data analysis. This is only one data analytics tool. The current study addressed this gap by investigating how text analytics, geo-tagging and other technologies can improve tour firms' performance from multiple perspectives other than demand forecasting.

Mwatha (2020) sought to understand the influence of big data on value creation and competitiveness of tour firms in emerging markets. The study sourced data from 24 firms in Kenya and employed qualitative methods of analysis. The study used theoretical non-random sampling. The analysis revealed a strong positive effect of big data usage on firm's dynamic capability to shape its value creation agenda. The data analytic tools were determined to strengthen a firm's sensing, seizing, and transformation capabilities which are responsible for improving the firm's competitive positioning. They enabled the firms to identify propitious events, extract meaning from consumer data and generate useful insights that improve decision making capacity. They improved the firms market intelligence, incentive alignment, cost control, quality maintenance, customer offering and inventory management, resulting in increased firm competitiveness. The study utilized cross-sectional data and sampled firms that may not fully represent the tour firms in the country.

2.3.4 E-commerce Tools on Operational Performance

e-commerce refers to the selling and purchase of products and services through online channels (Sunayana & Parveen, 2019). The researchers affirm that e-commerce makes use of digital technologies to connect buyers and sellers and categorizes them into business-to-business, business-to-consumer, and consumer-to-consumer models. e-commerce presents several value propositions to businesses such as cost reduction, increased visibility and customer data which can be used in digital analytics (Mohamed, 2017). E-commerce offers online shopping, payment and personalized marketing services which improves how consumers buy and sell products through digital channels. e-commerce adoption has several advantages including steamlining the shopping experience, collecting consumer data, faster price comparison and

24/7 operational capability supporting strategy development as well as business efficiency (Abou-Shouk, Megicks, & Lim, 2013).

Styvén and Wallström (2019) explored the Swedish tourism market to explore the perceived benefits and barriers that contribute to the uptake of digital marketing channels. The study collected data through exploratory interviews and online surveys. Factor analysis was utilized and it helped in the identification of four main barriers to digital technologies' adoption. These inckuded financial risks, poor external environment support, time constraints, and low IT experience and strategy formulation. The analysis also revealed that digital channels increase the firms' internal efficiency, marketing capability, financial outcomes and competitive positioning. Digital channels also improved customer communication. Suggestions were for tour firms to have staff dedicated to digital channel operations as this increases the perceived benefits and reduces the barriers identified. This study was exploratory in nature and utilized a different research methodology hence its findings may vary from the parameters in the current study.

Hossain, Suchana and Avi (2020) also carried out an exploratory study which sought to explore the effect of internet channels on sustainability of the Bangladesh tourism sector. The data was collected and analyzed systematically by using simple statistics. The analysis determined significant positive impacts on performance outcomes among firms using digital marketing channels. Data analytic tools improved marketers' ability to make sense of user data, reactions and feedback. Further, digital channels were associated with reduced marketiong costs and allowed the companies to measure the effectiveness of different marketing strategies through tracking and sensing technologies. The analysis also showed improved customer relationships due to the interactive nature of online commerce tools. However, although performance metrics improved, the study did not establish a direct effect of digital channels on profitability since factors such as security and safety standards were key to spending decisions and visit intentions. Further, lack of digital skills meant that some of the firms designed websites that were unable to satisfy conswumer needs.

AL-Zu'bi (2022) researched on the effect of E-marketing on tour firms' competitiveness. The study specified on investigating the level of e-marketing (E-pricing, E-promotion, E-distribution, website design) and its effect on the firm's profitability, market share and customer service execution. A descriptive-analytical method was used. The analysis showed medium application of digital channels in Jordan, and that firms that had implemented e-marketing channels were more competitive than those relying on traditional marketing

channels. They were key to information dissemination and significantly impacted destination choice. Using electronic channels of promotion had the most significant effect followed by e-distribution and e-pricing. The design of the firm's websites was determined to have the least impact on consumer spending decisions.

Misganaw and Singh (2019) reviewed Ethiopian tourism businesses to investigate the impact of e-marketing adoption on the performance of the firms involved in the sector, including travel agencies and tour operators. A descriptive design directed the research and descriptive statistics applied in data analyss. The regression analysis results showed that most firms in the sector had adopted e-marketing strategies and developed company websites where they could advertise their products at low costs and with increased efficiency than using travel agents. E-mails and social media accounts have also been utilized by the firms to send personalized communication and to involve social media influencers in marketing campaigns to promote tourist destinations. However, the firms were also determined to be reliant on conventional marketing tools, highlighting the importance of incorporating new and old technologies. This study stressed on investigating E-marketing adoption rather than its influence on the firms' performance.

Sawe (2019) investigated member firms of the Kenya Association of Tour Operators (KATO) to assess the impact of e-commerce adoption on the firms' sustainability. A descriptive research design was employed and regression analysis employed in data analysis. Data was collected from the companies' management. Analysis revealed a positive relationship between e-commerce application and sustainability of tour agencies. E-channels' usage was associated with increased customer loyalty, improved product/service diversification which improved the sustainability of the travel agencies. Further, the analysis determined that online travel agencies had more competitive edge and were threatening the survival of traditional agencies. The study used variables of performance that the current study did not incorporate.

2.4 Research Gap

The studies above provide evidence that digital technologies do impact firm performance in a variety of ways including profit generation, value creation, relationship management, competitive advantage and strategic decision making among others. However, it is clear that some gaps still need to be explored, especially in relation to the Kenyan sector. Ye, Barreda, Okumus and Nusair (2019) based their findings off the Chinese market and focussed on online tour agencies. Mohd-Any, Winklhofer and Ennew (2015) investigated ICT technologies usage

benefits from the customer's perspective while this study addressed the same from the businesses' perspective. The study Talwar, Dhir, Kaur and Mäntymäki (2020) used similar study metrics, making their findings niconclusive in the current study. The study by Stringam and Gerdes (2019) based its findings to firms in the hotel sector which is related to tour firms, albeight indirectly.

The study by Maswera, Dawson and Edwards (2015) compared technology effects by investigating a multi-country dimension analysis, comparing developed and developing businesses technologies' adoption. The study by Ana (2019) sought after social media adoption effects on the millennial population. The current study examined how other digital technologies adoption influences consumption behavior among populations of all ages. The studies by Mwalukasa and Assenga (2021) and Li, Xu, Tang, Wang and Li (2018) presented methodological gaps which this study focused on. These gaps are detailed in the table 2.1 below.

Table 2.1 Summary of Research Gaps

Author	**Title**	**Methodology**	**Findings**	**Gaps and how they were addressed**
Mohd-Any, Winklhofer and Ennew (2015)	Measuring users' value experience on a travel website (e-value) what value is cocreated by the user?	Partial least squares (PLS) analysis	Actual usage significantly influences customer experience, emotional and social value	This study investigated only one component of digital technology while the current expanded its scope to include multiple constructs.
Maswera, Dawson and Edwards (2015)	Internet Promotional Techniques of the Travel and Tourism Industry in South Africa, Kenya, Zimbabwe and Uganda	Thematic analysis	Use of Website marketing presented significant value proposition to consumers which improves business performance.	The study compared technologies implementation in developed and developing economies, presenting a contextual gap that this study sought to address
Prantl (2018)	The usefulness of social media for travel agencies in the Czech Republic.	Pearson's correlation methodology	Social media adoption has minimal effects on profit generation, but significant effects on value	This study was based on the Czech tourism arena, presenting a geographical gap.

			creation through improved customer relationship management	
Orabi (2021)	The Mediating Role of Co-Creation Tourism Experience on Promoting Sales via Social Media Platforms: Egyptian Travel Agencies Perspective	Structural equation modelling	The use of social media in marketing has a weak but positive effect on sales promotion and attraction of domestic tourists.	The study investigated technologies' usage and value co-creation by consumers. The current study addressed this by investigating the value generated by the firms rather than the consumers.
Arasli, Abdullahi and Gunay (2021)	Social Media as a Destination Marketing Tool for a Sustainable Heritage Festival in Nigeria: A Moderated Mediation Study	Partial least square structural equation modelling (PLS-SEM)	Use of digital technologies improves customer attraction and revisit intention.	This study was a case study that assessed how firms can attract consumers to one festival. The current addressed tourist attraction regardless of the event in question.

2.5 Conceptual Framework

The conceptual framework below sought to diagrammatically present the interaction between the various selected digital technology tools and the operational performance of travel agents in Kenya.

Independent Variables **Dependent Variable**

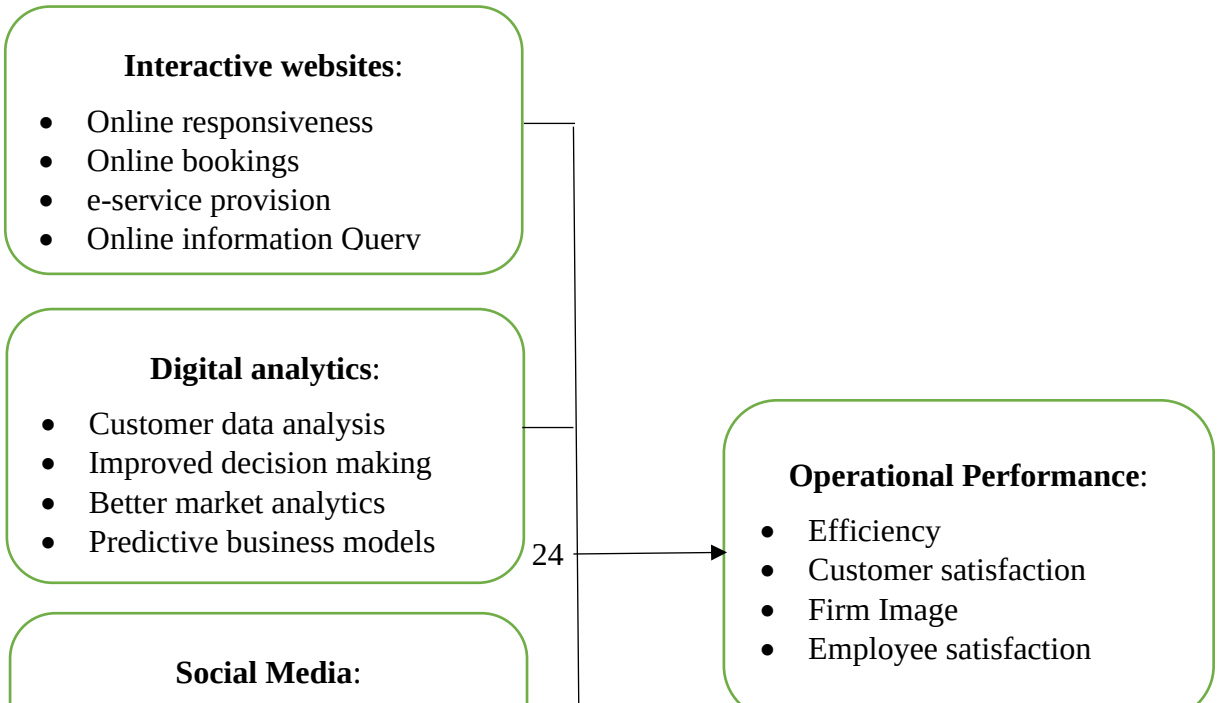

Figure 2.1 Conceptual Framework

The above conceptual framework has identified the main constructs of the digital technology tools; interactive websites, social media tools, digital data analytics and e-commerce tools and how they relate to the operational performance of travel agents in Kenya. The variables were operationalized as shown in Table 2.2 below;

Table 2.2 Operationalization of Study Variables

Variable	Indicators	Measurement	Data analysis	Supporting literature
Interactive website	Online responsiveness Online bookings e-service provision Online information	Ordinal 5-pt Likert Scale	Descriptive analysis Correlation analysis Regression analysis	Ye, Barreda, Okumu and Nusair (2019), Stringham and Gerdes (2019)
Digital analytics	Customer data analysis Improved decision making Better market analytics Predictive business models	Ordinal 5-pt Likert Scale	Descriptive analysis Correlation analysis Regression analysis	Li, Xu, Tang, Wang and Li (2018), Höpken, Eberle, Fuchs and Lexhagen (2019)
Social media	Improved social experience Online customer feedback Customer engagement Online brand awareness	Ordinal 5-pt Likert Scale	Descriptive analysis Correlation analysis Regression analysis	Ana (2019), Mwalukasa and Assenga (2021)
E-commerce tools	Digital payments Digital marketing Digitalized customer relationship management	Ordinal 5-pt Likert Scale	Descriptive analysis Correlation analysis Regression analysis	AL-Zu'bi (2022), Hossain, Suchana and Avi (2020)
Operational performance	Quality of services Improved competitiveness Increased customer base Image of the firm Complaints resolution	Ordinal 5-pt Likert Scale	Descriptive analysis Correlation analysis Regression analysis	Misoc (2018), (Munir, Jajja, Chatha, & Farooq, 2020)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter focussed on presenting the methodological plan that was used in the course of carrying out this research. The chapter outlined the philosophy, designs, population and sampling techniques. The chapter presented the data collection instruments, procedures, research quality and the data analysis and presentation approach.

3.2 Research Philosophy

The research paradigm (also referred to as worldview, epistemologies and ontologies or broadly conceived research methodologies) offers a framework within which research is carried out (Creswell & Cresswell, 2017). Adopted philosophy in a study is mainly influenced by the particular view of researchers on the relationship between knowledge and the process through which it is developed (Tobi & Kampen, 2018). The study adopted a positivism philosophy which is biased towards the use of quantitative perspective. The role of the researcher in positivism studies is limited to data collection and interpretation. It is assumed that the researcher is independent of the research subject and does not affect or influenced by subject of the study. Hence, this approach seems appropriate for the current research.

3.3 Research Design

Tobi and Kampen (2018) posit that a study design entails the procedures taken to address the research problem including aspects related to the collection, measurement, and analysis of data. The research problem determines the type of research design to be used. The research design helps, the researcher to obtain information that is relevant to the research problem. This can be done to test a theory, evaluate a program, or to describe the process involved in a phenomenon (Van Wyk, 2012). This study utilized a descriptive research design since it assisted in describing the study phenomena at a particular point in time. The design also informs the adoption of quantitative approaches in solving the research problem and highlighting the relationship between the study variables.

3.4 Target Population

Burns and Groove (2014) refers to a population as a comprehensive set of examples from which a researcher derives a study sample and generalizes findings. A population is the total set of entities from which one wishes to learn more of, or more properly and from which one wishes

to draw conclusions (Creswell & Creswell, 2017). The population of interest for the study was firms registered under the Kenya Association of Travel Agencies (KATA). KATA is the country's only travel agency membership organization that is recognized by the government and the Universal Federation of Travel Agents' Association (UFTAA). The firms registered within this umbrella body was considered for this research (KATA , 2021). Further, the study involved a representative from the Tourism Regulatory Authority (TRA) and the leadership of the Kenya Association of Travel Agencies. The population for the study was the 144 travel agencies in Kenya with the managing directors from each of the firm targeted as well as representatives of TRA and KATA to provide information on how use of various digital technologies has affected the operational performance of the firms.

3.5 Sampling Design

A sample design is the framework, or road map, that guides the selection of a survey sample (Van Wyk, 2012). For this study the sample frame was selected from the 142 travel agencies that are fully registered and operational within the country. Sampling is a methodical approach for selecting a subset from a sampling frame or the complete population (Tobi & Kampen, 2018). In this study probability sampling was used. In probability sampling, every member of the population has an equal chance of being chosen, but in non-probability sampling, elements are chosen depending on the researcher's convenience or judgment (Burns & Groove, 2014). The sample size was computed as shown below;

be used to determine the sample size.

$$n = \frac{N}{1 + \mathrm{N}(e)^2}$$

Where n= corrected sample size, N = population size, and e = Margin of error (MoE), e = 0.05 based on the research condition (Yamane, 1967).

$$106 = \frac{144}{1 + 144\ (.05)^2}$$

The sample size for this study was all the 106 travel agencies operating locally. This ensured every travel agency firm has an equal chance of being selected to participate in this research.

3.6 Data Collection Instruments

Data collection is the systematic process of acquiring and measuring information on variables of interest in order to answer research questions, test hypotheses, and evaluate outcomes (Burns & Groove, 2014). In this research a quantitative self-administered questionnaire was used in the data collection process. A questionnaire is a type of research instrument that consists of a series of questions or other types of prompts aimed at gathering information from a respondent (Creswell & Creswell, 2017). The study questionnaire was developed based on the study literature and in line with the operationalization of the variables. The questionnaire adopted a 5-point Likert scale approach with statements condensed into five main sections focusing on the research variables.

3.7 Data Collection Procedures

The data collection procedures involve the systematic approach that is used in the process of conducting a research survey (Burns & Groove, 2014). The study relied on Google forms to collect the research data due to the geographical location within which the travel agency firms operate within. Where not possible to use electronic collection procedures, the research utilized drop and pick method in the data collection involving delivering physical questionnaires to the participants and picking them at a predetermined period.

3.8 Research Quality

Pretesting is the process of testing a questionnaire on a small group of people in order to discover and eradicate probable problems or faults (Burns & Groove, 2014). A pilot study, also known as pre-testing, was conducted on 11 respondents (10% of the sample size – 106- was adequate for pretest) to determine the questionnaire's quality and the input collected was used to improve the questionnaire's quality.

3.8.1 Validity Tests

According to Heale and Twycross (2015) validity describes how well the acquired data covers the actual inquiry area. Construct validity is a measure of how well a researcher converted or changed a construct (a notion, idea, or behaviour) into a functioning and operating reality. To verify the validity of the data acquired, the researcher made sure that respondents understood the goal of the study. The study conducted content validity which involved checking the research instrument to ensure that all the study variables and constructs are captured in the research tool. The goal is to ensure the research instrument completeness is assured in the course of the research.

3.8.2 Reliability Tests

Reliability refers to degree to which a measurement of a phenomenon produces reliable and consistent results (Rovai, Baker, & Ponton, 2013). The dependability was determined using Cronbach's alpha. The Cronbach test value was evaluated using the standard value higher than 0.7 was judged as appropriate. Based on the criterion provided by Cronbach the coefficients are interpreted as follows; ">.9 Excellent, >.8 Good,>.7 Acceptable,>.6 Questionable,>.5 Unacceptable" (Brown, 2002). Hence for this study the selected threshold for utilizing this tool with dependable instruments was set at ≥0.7 as indicated by Brown (n.d) based on the above standard Cronbach score value for internal consistency in the study instrument.

Table 3.1 Reliability Results

Variable	N	Items	Cronbach Alpha Score	Decision
Operational performance	11	7	.755	Accepted for use in main research
Interactive websites	11	6	.840	Accepted for use in main research
Social media tools	11	6	.785	Accepted for use in main research
Digital data analytics	11	6	.730	Accepted for use in main research
E-commerce tools	11	7	.820	Accepted for use in main research

3.9 Data Analysis and Presentation

The collected research data was edited and coded into SPSS 25 for subsequent analysis. Having used quantitative approach in the data collection, the study employed quantitative analysis techniques such as descriptive, correlation and regression analysis. Descriptive tests included means, frequencies, percentages and standard deviation in summarizing the various responses obtained from the participants. The study utilized Spearman correlation tests to analyse the direction and significance of the relationship between the independent and dependent variables. The research employed multiple linear regression analysis to estimate the effect of digital technology adoption on the operational performance of the travel agency firms. The analysed research data was presented using figures and tables. The multiple linear regression to be used in the study is;

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

Where, Y represented the operational performance of travel agency firms

α is the constant of the regression model

$\beta_1 - \beta_4$ are the coefficients of/ the independent variables

X_1 is interactive websites

X_2 is social media tools

X_3 is digital data analytics

X_4 is e-commerce tools

ε represented the error term of the model

3.10 Ethical Considerations

The research also ensured that ethical conduct was reflected in the behaviour of the entire research team and process. The purpose of ethics in this study was to ensure that no one was harmed or had negative consequences as a result of the research (Burns & Groove, 2014). The study ensured that all respondents are made aware of their rights to participate in the research work. Secondly, the respondents didn't require to provide any personal information which assured their anonymity is guaranteed in the course of the survey. Thirdly, the study ascertained the collected study data is only to be used for academic purposes and is not shared with any unauthorized people. Fourthly, the research collected relevant approvals from Ethics Review Committee of Strathmore University and the National Commission for Science Technology and Innovation. The study ensured that participants are debriefed if there are any technical issues in the questionnaire that they can't resolve individually.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter focused on the presentation of the findings of the study. The main areas are limited to the response rate and demographic profile of the firms, the results of the descriptive findings, the correlation tests and the overall regression model that was applied in the course of this survey.

4.2 Background Information

This section dwelt on the results of the response rate and the demographic findings of the survey.

4.2.1 Response Rate

Out of the final survey sample of 130 participants, with 10% (n= 14) utilized in the pilot the research obtained 94 response which translated into 72% with only 28% of the sample participants not being involved in the final survey. The 28% respondents were not able to provide responses within the provided 3-week period in data collection hence since the response rate was deemed sufficient the researcher proceeded with the work. Fincham (2008) indicated that responses above 60% were good for quantitative analysis. The study found this response rate acceptable to be included in the main research analysis as shown in Figure 4.1

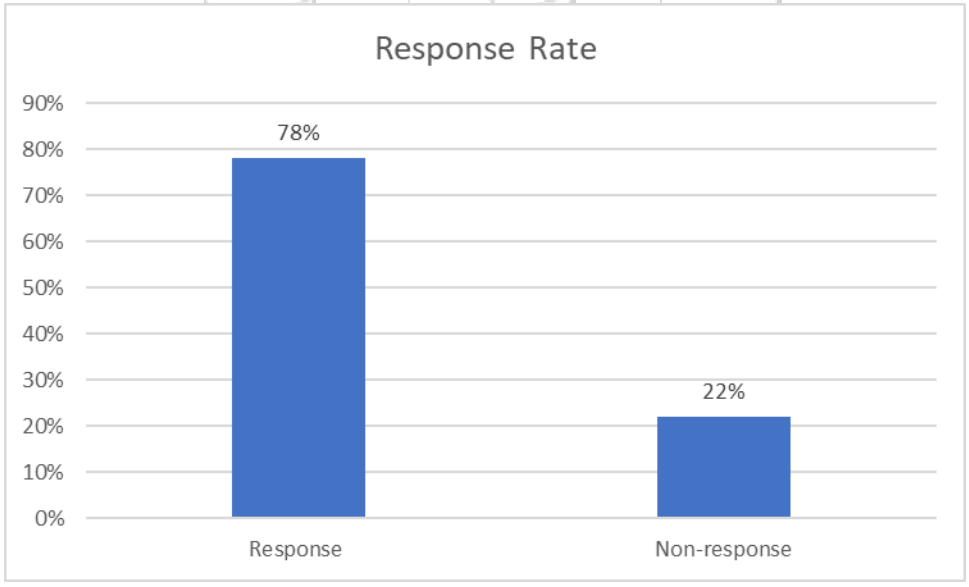

Figure 4.1 Response Rate

4.2.2 Gender of Respondents

Results showed that 55% (n = 52) of the respondents were female personnel with 45% (n = 42) were male official; the findings illustrate that the travel agencies in Kenya have a higher concentration of female employees.

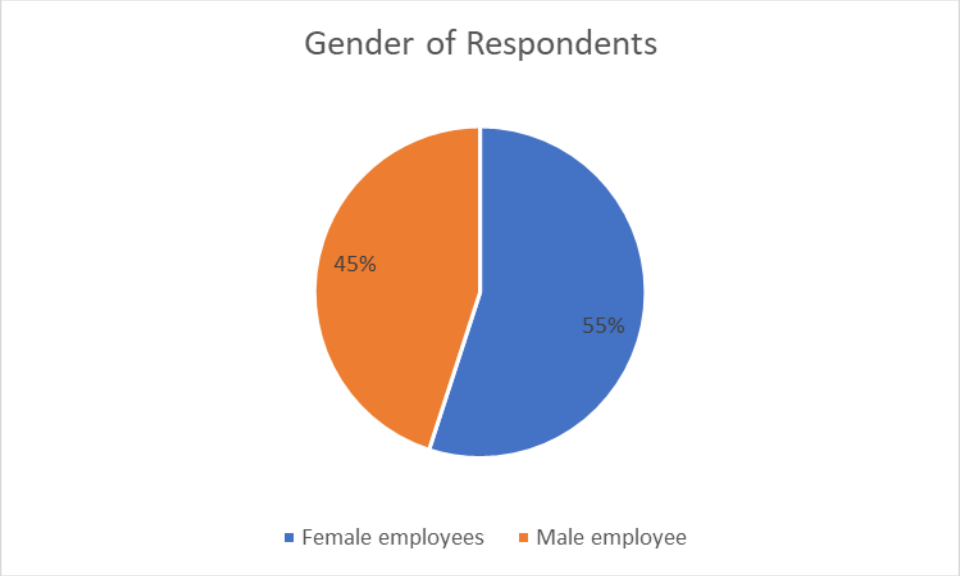

Figure 4.2 Gender of Respondents

4.2.3 Age Group of Respondents

The analysis revealed that majority of the respondents 59% (n = 55) were employees below 35 years of age with 41% (n = 39) above 35 years of age. The results demonstrate that the industry is highly populated with a youthful employee workforce at senior levels which implies there is adequate knowledge on emerging digital technologies being adopted within the travel firms in Kenya.

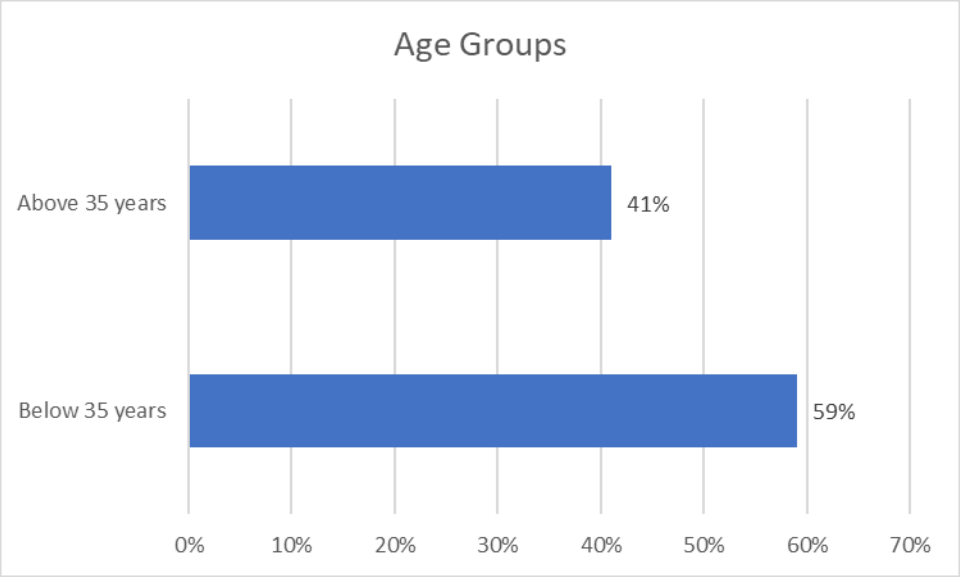

Figure 4.3 Age Group of Employees

4.2.4 Education Level of Employees

The analysis of education level of the respondents is shown in Table 4.1 below

Table 4.1 Education Level of Respondents

	Frequency	Percent
Diploma holder	36	38.3
Undergraduate degree	54	57.4
Master's Degree	4	4.3
Total	94	100.0

Findings revealed that majority of respondents 57% (n=54) had undergraduate degree, 38% had a diploma with 4% holding a master's degree showing there is formal education attainment among the various employees within the travel agency industry. The results indicated there was high education competency among employees retained within the travel firms which is key to execution of operations within the firm.

4.2.5 Profile of the Travel Agent Firms

The study reviewed various demographic characteristics of the firms involved in the survey and the analysis is shown in Table 4.2 below

Table 4.2 Profile of the Travel Agent Firms

		Frequency	Percent
Position in Firm	Managing Director	5	5.3
	Marketing/Sales Manager	25	26.6
	Operations Manager/ IT Manager	21	22.3
	Travel Manager / Finance Manager	35	37.2
	Tourism Regulator Authority	8	8.5
	Total	94	100.0
		Frequency	**Percent**
Years in operation	1-3 years	13	13.8
	4-6 years	46	48.9
	Over 7 years	35	37.2
	Total	94	100.0
		Frequency	**Percent**
Employees in firm	Less than 10	53	56.4
	11-20 employees	39	41.5
	21-30 employees	2	2.1
	Total	94	100.0
		Frequency	**Percent**
Period utilizing digital technologies	Less than a year	2	2.1
	1-3 years	6	6.4
	4-6 years	51	54.3
	Over 7 years	35	37.2
	Total	94	100.0
		Frequency	**Percent**
Countries of operation	Only locally	1	1.1
	Only within East Africa	2	2.1
	Across the continent	18	19.1
	Globally	73	77.7
	Total	94	100.0

Findings showed that most of the respondents 37% (n= 35) were Travel Manager / Finance Manager, 26% were Marketing/Sales Manager with 22% drawn from Operations Manager/ IT Manager; demonstrating that employees involved in the survey held significant positions within the firms to provide the required information to answer the research problem. The analysis revealed 49% (n=46) the firms have operated for 4-6 years and 37% (n=35) operated for over 7 years indicating they do have expansive experience within the travel agent industry. Out of the sampled firms, 54% indicated they have utilized digital technologies for at least 4-6 years, 37% for over 7 years and 6% for between 1-3 years showing there is considerable knowledge within the firms on how digital technologies have influenced their operation performance. Lastly majority of the firm's 78% (n=73) operated globally. 19% focused on the African continent with 2% limited to the East African region showing that most firms do have a vast breadth of operational focus.

4.3 Descriptive Analysis

Results on the Likert scale statements adopted are presented using descriptive measures such as means, standard deviation and the frequency of responses obtained. The results are consistent with the questionnaire adopted. The following key was utilized in interpreting the means of the Likert statements; above 4.2 = strong agreement, 3.50-4.19 = agreement, 2.50-3.49 = neither agree nor disagree, 1.50 – 2.49 = disagree, less than 1.49 = strongly disagree.

4.3.1 Descriptive Analysis of Operational Performance

The results on the operational performance of the travel agent firms are presented in the Table 4.3 below;

Table 4.3 Operational Performance of Travel Agency Firms

	N	Mean	Std. Deviation
Through a revision of our operations the travel agency has improved the quality of service provided to our customers	94	4.5319	.61700
The travel agency routinely conducts evaluation of our services and product range to improve our competitive edge	94	4.3085	.68825
The travel agency enacts customer-friendly service provision to enhance the quality of the service offering	94	4.7660	.42567
Through maintaining customer-centric product/service provision the form fosters our customer base in the market	94	4.5213	.61746
The travel agency conducts activities that foster the brand image of the firm	94	4.3936	.75089
The travel agency obtains relevant market information that is applied in enhancing the brand recognition	94	4.4681	.50166
The travel agency ensures there is seamless communication with our customers to foster complaints resolutions	94	4.5426	.50086

Results demonstrate strong agreement among employees (mean = 4.532, dev = .617) that the firms through revision of our operations the travel agency have improved the quality of service provided to our customers. A similar opinion was noted that through maintaining customer-centric product/service provision the form fosters our customer base in the market (mean = 4.521, dev = .617). Respondents strongly agree that the travel agency obtains relevant market information that is applied in enhancing the brand recognition (mean = 4.468, dev = .502). The analysis noted agreement that the travel agency ensures there is seamless communication with our customers to foster complaints resolutions (mean = 4.543, dev = .501).

4.3.2 Descriptive Analysis of Interactive Website

The analysis of the variable interactive website is summarized and presented in Table 4.4 below

Table 4.4 Interactive Website in Travel Agency Firms

	N	Mean	Std. Deviation
The travel agency relies on our website to continuously provide information to our customers	94	3.9043	1.01673
The travel agency utilizes the website to respond to customer queries on a timely manner	94	3.5851	.88487
The travel agency ensures the website is well-maintained to support online bookings for our customers	94	4.3191	.67542
The travel agency uses the website to provide feedback to customers thus enhancing the service provision to our customers	94	3.9574	.84134
The travel agency utilizes the website to provide relevant information to current and potential clients on our service/product range	94	4.1702	.89968
The travel agency provides customers with price estimation services through the interactive websites	94	4.2340	.79549

Findings demonstrate strong agreement the travel agency ensures the website is well-maintained to support online bookings for our customers (mean = 4.139, dev = .675). Responses reveal strong agreement the travel agency provides customers with price estimation services through the interactive websites (mean = 4.234, dev = 0795). The analysis show

agreement the travel agency utilizes the website to provide relevant information to current and potential clients on our service/product range (mean = 4.170, dev = .899). The results noted agreement (mean = 3.585, dev = .885) the travel agency utilizes the website to respond to customer queries on a timely manner.

4.3.3 Descriptive Analysis of Digital Data Analytics

The third variable adopted for the survey was the adoption of digital data analytics and results are shown in Table 4.5

Table 4.5 Digital Analytics of Digital Data Analytics

	N	Mean	Std. Deviation
The travel agency relies on obtained market data to develop customer-tailored products	94	4.3404	.64846
Through utilization of digital analytics, the firm is able to analyze customer demands and manage customer needs	94	4.2979	.58346
The travel agency uses the available data analytics to support aligned decision making in the market	94	3.9574	1.04640
Through application of market analytics, the travel agency is able to meet the available market demands	94	4.0426	.86652
The travel agency relies on available market data to drive market penetration strategies	94	4.1809	.70273
The utilization of available travel data is used by the firm as basis of predictive modelling for businesses	94	4.2021	.75605

Analysis of the responses noted strong agreement the travel agency relies on obtained market data to develop customer-tailored products (mean = 4.340, dev = .648). Further, employees strongly agreed that the utilization of available travel data is used by the firm as basis of predictive modelling for businesses (mean = 4.202, dev = .756). Findings showed agreement the application of market analytics, the travel agency is able to meet the available market demands (mean = 4.042, dev = .867). Respondents agreed (mean = 3.957, dev = 1.046) the travel agency uses the available data analytics to support aligned decision making in the market.

4.3.4 Descriptive Analysis of Social Media Tools Adoption

The third variable reviewed the usage of social media tools and summary results are shown below in Table 4.6

Table 4.6 Social Media Tools Adoption in Travel Agency Firms

	N	Mean	Std. Deviation
The travel agency relies on available social media tools to improve the customer attraction to our services	94	4.2979	.90197
The use of select social media sites helps the travel agency to enhance the customer experience in accessing our services	94	4.2553	.89125
The travel agency routinely relies on social media networks to provide feedback on complaints/requests provided by potential customers	94	3.8085	.96472
The travel agency utilizes social media sites as tool of fostering engagement with our customers	94	4.5213	.75816
The travel agency conducts online promotional activities through the various social media networks available	94	4.3936	.83238
The travel agency manages brand awareness practices by utilizing social media channels	94	4.2128	.82790

With a mean of 4.521, dev = .758, the employees strongly agreed the travel agency utilizes social media sites as tool of fostering engagement with our customers. Results revealed strong agreement (mean = 4.393, dev = .832) the travel agency conducts online promotional activities through the various social media networks available. Analysis showed strong agreement the travel agency manages brand awareness practices by utilizing social media channels (mean = 4.213, dev = .828). The respondents agreed the travel agency routinely relies on social media networks to provide feedback on complaints/requests provided by potential customers (mean = 3.808, dev = .965).

4.3.5 Descriptive Analysis of Adoption of E-commerce Tools

The summary of the results on adoption of e-commerce tools within the firms sampled is presented in Table 4.7

Table 4.7 Adoption of E-commerce Tools in Travel Agency Firms

	N	Mean	Std. Deviation
The travel agency utilizes e-commerce tools to facilitate payments processes	94	4.1702	.88765
The travel agency has adopted e-commerce tools to display their products/services range	94	4.0426	.85402
The travel agency utilizes available e-commerce tools to manage customer bookings	94	4.0213	.82929
The travel agency routinely uses available e-commerce tools to manage customer queries	94	3.8298	.97978
The travel agency conducts promotional marketing using available e-commerce tools	94	4.0638	.93680
The travel agency relies on active engagement among customers through e-commerce platforms to tap into new markets	94	4.1277	.77922
The travel agency uses the e-commerce tool as platform of fostering customer satisfaction through seamless communication and feedback processes	94	4.0638	.81397

The study revealed agreement that the travel agency utilizes e-commerce tools to facilitate payments processes (mean = 4.170, dev = .887). A mean of 4.1277 indicated agreement the firm relies on active engagement among customers through e-commerce platforms to tap into new markets. Analysis showed agreement (mean = 4.063, dev = .813) the firm uses the e-commerce tool as platform of fostering customer satisfaction through seamless communication and feedback processes. Respondents agreed the travel agency routinely uses available e-commerce tools to manage customer queries (mean = 3.829, dec = .979).

4.4 Factor Analysis

Factor analysis was performed to summarize the data set and regroup variables in to a limited set of factors based on shared variance (Yong & Pearce, 2013) in order to interpret the relationships and patterns. Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Barlett‘s Test of Sphericity were conducted to assess whether the variables met the threshold for factor analysis to be adopted in the study. The tests were generated by SPSS 26 and helped to assess the factorability of data or suitability of data for structure detection (Hennink & Hutter, 2011). Kaiser-Meyer-Olkin (KMO) test was used to assess sampling adequacy. The index ranges from 0 to 1. For an adequate sample, the KMO test statistic should be greater than 0.5 and the Barlett‘s Test of Sphericity should be statistically significant with less than Sig value <.05

Table 4.8 Kaiser-Meyer-Olkin (KMO) Test and Barlett's Test of Sphericity

Operational performance	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.834
	Bartlett's Test of Sphericity	Approx. Chi-Square	342.404
		df	15
		Sig.	.000
Interactive website	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.834
	Bartlett's Test of Sphericity	Approx. Chi-Square	342.404
		df	15
		Sig.	.000
Digital analytics	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.650
	Bartlett's Test of Sphericity	Approx. Chi-Square	210.384
		df	15
		Sig.	.000
Social media	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.692
	Bartlett's Test of Sphericity	Approx. Chi-Square	426.872
		df	15
		Sig.	.000
Ecommerce tools	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.763
	Bartlett's Test of Sphericity	Approx. Chi-Square	446.343
		df	21
		Sig.	.000

The findings above indicated that across all the variables the Kaiser-Meyer-Olkin Measure of Sampling Adequacy met the required threshold of above 0.5 with a Bartlett's Test of Sphericity which was significant less than 0.05 which implied that factor analysis can be conducted for the research. The extracted components were applied in the inferential analysis as shown in the next section.

4.4.1 Operational Performance

The results on the factor analysis for operational performance of the travel agent firms are presented in the Table 4.9 below;

Table 4.9 Factor Analysis of Operational Performance

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.348	33.546	33.546	2.348	33.546	33.546	2.315	33.066	33.066
2	2.144	30.632	64.178	2.144	30.632	64.178	2.178	31.112	64.178
3	.909	12.987	77.166						
4	.614	8.775	85.941						
5	.420	5.994	91.935						
6	.384	5.486	97.421						
7	.181	2.579	100.000						

Extraction Method: Principal Component Analysis.

The findings of the research show that two factor had eigenvalue, which was higher than 1 accounting for cumulative 64.178% of the variations for the study variables. The extracted components were analyzed further using Varimax rotation to determine the items that will be retained in each component.

Table 4.10 Varimax Rotation of Operational Performance

	Component	
	1	2
Through a revision of our operations the travel agency has improved the quality of service provided to our customers	**.688**	-.514
The travel agency routinely conducts evaluation of our services and product range to improve our competitive edge	**.678**	.292
The travel agency enacts customer-friendly service provision to enhance the quality of the service offering	-.063	**.874**
Through maintaining customer-centric product/service provision the form fosters our customer base in the market	**.875**	-.041
The travel agency conducts activities that foster the brand image of the firm	**.712**	.118
The travel agency obtains relevant market information that is applied in enhancing the brand recognition	.025	**.770**
The travel agency ensures there is seamless communication with our customers to foster complaints resolutions	.323	**.676**

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

The principal component analysis with varimax rotation was performed to identify the underlying factors of operational performance. The variables with a factor loading of above 0.4

were selected for each component which showed the items that were retained for each component for further analysis.

4.4.2 Interactive Website

The factor analysis of the variable interactive website is summarized and presented in Table 4.11 below

Table 4.11 Factor Analysis of Interactive Website

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.937	65.621	65.621	3.937	65.621	65.621
2	.814	13.559	79.180			
3	.456	7.597	86.777			
4	.385	6.414	93.191			
5	.247	4.115	97.305			
6	.162	2.695	100.000			

Extraction Method: Principal Component Analysis.

The results for the Exploratory Factor Analysis (EFA) analysis revealed that only one component had an Eigen value of above 1; as suggested by (Yong & Pearce, 2013); criteria which showed that only a component with values above 1 should be considered for further analysis. The component accounted cumulatively for a variance of 65.621% of the variable. Thus, no varimax rotation was considered for this factor.

Table 4.12 Component Analysis of Interactive Website

	Component 1
The travel agency relies on our website to continuously provide information to our customers	**.807**
The travel agency utilizes the website to respond to customer queries on a timely manner	**.814**
The travel agency ensures the website is well-maintained to support online bookings for our customers	**.785**
The travel agency uses the website to provide feedback to customers thus enhancing the service provision to our customers	**.874**
The travel agency utilizes the website to provide relevant information to current and potential clients on our service/product range	**.903**
The travel agency provides customers with price estimation services through the interactive websites	**.653**

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

The findings in Table 4.12 indicate the factor loadings of items measuring the variable interactive website. From the results, all the items had values more than 0.4 and therefore they were all accepted for inclusion in further analysis of the factor.

4.4.3 Digital Analytics

The factor analysis of the variable digital analytics is summarized and presented in Table 4.13 below

Table 4.13 Factor Analysis of Digital Analytics

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.949	49.152	49.152	2.949	49.152	49.152	2.634	43.906	43.906
2	1.060	17.665	66.817	1.060	17.665	66.817	1.375	22.911	66.817
3	.800	13.337	80.153						
4	.712	11.859	92.013						
5	.294	4.896	96.908						
6	.185	3.092	100.000						

Extraction Method: Principal Component Analysis.

The findings of the research show that two factor had eigenvalue, which was higher than 1 accounting for cumulative 66.817% of the variations for the study variables. The extracted components were analyzed further using Varimax rotation to determine the items that will be retained in each component of the factor.

Table 4.14 Varimax Rotation of Digital Analytics

	Component	
	1	2
The travel agencies rely on obtained market data to develop customer-tailored products	.014	**.959**
Through utilization of digital analytics, the firm is able to analyse customer demands and manage customer needs	**.661**	.063
The travel agency uses the available data analytics to support aligned decision making in the market	**.712**	.576
Through application of market analytics, the travel agency is able to meet the available market demands	**.762**	-.113
The travel agency relies on available market data to drive market penetration strategies	**.808**	.301
The utilization of available travel data is utilized by the firm as basis of predictive modelling for businesses	**.677**	.121

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

The principal component analysis with varimax rotation was performed to identify the underlying factors of digital analytics. The variables with a factor loading of above 0.4 were selected for each component which showed the items that were retained for each component for further analysis.

4.4.4 Social Media

The third variable reviewed the usage of social media tools and summary results for the factor analysis are shown below in Table 4.15

Table 4.15 Factor Analysis of Social Media

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.790	63.159	63.159	3.790	63.159	63.159
2	.985	16.410	79.570			
3	.675	11.253	90.822			
4	.343	5.719	96.541			
5	.128	2.138	98.679			
6	.079	1.321	100.000			

Extraction Method: Principal Component Analysis.

As recommended by (Yong & Pearce, 2013); only one component had an Eigen value of above 1; revealing that only a component with values above 1 should be considered for further analysis. The component accounted cumulatively for a variance of 63.159% of the variable. Thus, no varimax rotation was considered for this factor.

Table 4.16 Component Analysis of Social Media

	Component 1
The travel agency relies on available social media tools to improve the customer attraction to our services	**.853**
The use of select social media sites helps the travel agency to enhance the customer experience in accessing our services	**.931**
The travel agency routinely relies on social media networks to provide feedback on complaints/requests provided by potential customers	**.478**
The travel agency utilizes social media sites as tool of fostering engagement with our customers	**.843**
The travel agency conducts online promotional activities through the various social media networks available	**.865**

The travel agency manages brand awareness practices by utilizing social media channels	**.713**

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

The findings in Table 4.16 indicate the factor loadings of items measuring the variable social media. From the results, all the items had values more than 0.4 and therefore they were all accepted for inclusion in further analysis of the factor.

4.4.5 Ecommerce Tools

The summary of the factor analysis for the adoption of e-commerce tools within the firms sampled is presented in Table 4.17

Table 4.17 Factor Analysis of Ecommerce Tools

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.180	59.717	59.717	4.180	59.717	59.717	3.513	50.187	50.187
2	1.020	14.565	74.282	1.020	14.565	74.282	1.687	24.095	74.282
3	.757	10.810	85.092						
4	.542	7.736	92.828						
5	.238	3.406	96.235						
6	.158	2.253	98.487						
7	.106	1.513	100.000						

Extraction Method: Principal Component Analysis.

The analysis revealed that two factor had eigenvalue, which was higher than 1 accounting for cumulative 74.282% of the variations for the study variables. The extracted components were analyzed further using Varimax rotation to determine the items that will be retained in each component.

Table 4.18 Varimax Rotation of Ecommerce Tools

	Component	
	1	2
The travel agency utilizes ecommerce tools to facilitate payments processes	.351	**.740**
The travel agency has adopted ecommerce tools to display their products/services range	**.876**	.345
The travel agency utilizes available ecommerce tools to manage customer bookings	.107	**.906**
The travel agency routinely uses available ecommerce tools to manage customer queries	**.822**	.255
The travel agency conducts promotional marketing using available ecommerce tools	**.879**	.051
The travel agency relies on active engagement among customers through ecommerce platforms to tap into new markets	**.839**	.211
The travel agency uses the ecommerce tool as platform of fostering customer satisfaction through seamless communication and feedback processes	**.676**	.294

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

The principal component analysis with varimax rotation was performed to identify the underlying factors of ecommerce tools. The variables with a factor loading of above 0.4 were selected for each component which showed the items that were retained for each component for further analysis.

4.4 Correlation Analysis

In this study correlation was used to determine the strength and direction of the relationship between the conceptualized variables of the study. The variables retained from the factor analysis were utilized and results are shown in the Table 4.19 below.

Table 4.19 Correlation Results

			Operation Performance 1	Operation Performance 2	Interactive Website 1	Digital Analytics 1	Digital Analytics 2	Social media 1	Ecommerce Adoption 1	Ecommerce Adoption 2
Spearman's rho	Operation Performance 1	Correlation Coefficient	1.000							
		Sig. (2-tailed)	.							
		N	94							
	Operation Performance 2	Correlation Coefficient	-.003	1.000						
		Sig. (2-tailed)	.979	.						
		N	94	94						
	Interactive Website 1	Correlation Coefficient	.172	.311**	1.000					
		Sig. (2-tailed)	.097	.002	.					
		N	94	94	94					
	Digital Analytics 1	Correlation Coefficient	.524**	.349**	.336**	1.000				
		Sig. (2-tailed)	.000	.001	.001	.				
		N	94	94	94	94				
	Digital Analytics 2	Correlation Coefficient	.563**	.040	.271**	-.003	1.000			
		Sig. (2-tailed)	.000	.700	.008	.977	.			
		N	94	94	94	94	94			
	Social media 1	Correlation Coefficient	.384**	.050	.341**	.504**	.137	1.000		
		Sig. (2-tailed)	.000	.630	.001	.000	.186	.		
		N	94	94	94	94	94	94		
	Ecommerce Adoption 1	Correlation Coefficient	.376**	.593**	.491**	.437**	.431**	.419**	1.000	
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.	
		N	94	94	94	94	94	94	94	
	Ecommerce Adoption 2	Correlation Coefficient	.029	.069	.011	.278**	-.098	.294**	.237*	1.000
		Sig. (2-tailed)	.785	.509	.915	.007	.349	.004	.022	.
		N	94	94	94	94	94	94	94	94

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

Table 4.8 shows that there existed a statistically insignificant weak positive linear relationship between adoption of interactive website and operational performance1 (quality of service, improving competitive edge, customer-centric provision of services/products and enhancing brand image of the firm) of travel agency firms in Kenya, r (94) = .172, .097>.05. Further analysis revealed that interactive website does have a weak and significant effect on operational performance2 (customer friendly service provision, improvement of brand recognition and improved customer complaints resolution), r (94) = .311**, .002<.05.

Analysis also revealed the existence of a statistically significant strong positive linear relationship between adoption of digital analytics1 (utilization of digital analytics, application of market analytics, reliance on market penetration and predictive modelling) significantly improve the operational performance1 (quality of service, improving competitive edge, customer-centric provision of services/products and enhancing brand image of the firm) of

travel agency firms in Kenya, r (94) = .524**) and operational performance2 (customer friendly service provision, improvement of brand recognition and improved customer complaints resolution), r (94) = ..349**). The study also noted that social media tools1 had a weak and significant effect on the operational performance1 (quality of service, improving competitive edge, customer-centric provision of services/products and enhancing brand image of the firm) of travel agency firms in Kenya, r (94) = .384**).

Results also revealed there was a statistically significant moderate positive linear relationship between adoption of e-commerce tools1 operational performance1 (quality of service, improving competitive edge, customer-centric provision of services/products and enhancing brand image of the firm) of travel agency firms in Kenya, r (94) = .376**) and operational performance2 (customer friendly service provision, improvement of brand recognition and improved customer complaints resolution), r (94) = .593**) with sig value <.05

4.5 Regression Analysis

The results below on Table 4.20 presents the model summary analysis of the regression between adoption of digital technology (interactive websites, digital analytics, social media and e-commerce tools) and the operational performance of travel agency firms in Kenya. The components from the factor analysis were utilized in the regression analysis.

Table 4.20 Regression Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.847[a]	.717	.697	.77789

a. Predictors: (Constant), Ecommerce Adoption 2, Ecommerce Adoption 1, Digital Analytics 1, Digital Analytics 2, social media 1, Interactive Website 1

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	133.356	6	22.226	36.730	.000[b]
	Residual	52.644	87	.605		
	Total	186.000	93			

a. Dependent Variable: Operational Performance FA

b. Predictors: (Constant), Ecommerce Adoption 2, Ecommerce Adoption 1, Digital Analytics 1, Digital Analytics 2, social media 1, Interactive Website 1

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	6.626E-16	.080		.000	1.000
	Interactive Website 1	-.284	.110	-.201	-2.570	.012
	Digital Analytics 1	.894	.105	.632	8.503	.000
	Digital Analytics 2	.496	.097	.351	5.105	.000
	Social media 1	.046	.015	.033	3.067	.002
	Ecommerce Adoption 1	.522	.126	.369	4.145	.000
	Ecommerce Adoption 2	.306	.089	.217	3.431	.001

a. Dependent Variable: Operational Performance FA

The results showed a R square value of 0.717 indicating that digital technology adoption could be used to explain about 71.7% of the variance in the operational performance of travel agency firms in Kenya as measured by the level of quality of service, improving competitive edge, customer-centric provision of services/products and enhancing brand image of the firm within the firms. The F statistics from the regression ANOVA were used to examine the existence of a statistical linear relationship between the predictor variables and the dependent variable. Table 4.21 shows that there existed a statistically significant linear relationship between digital technology adoption and the operational performance of travel agency firms in Kenya (F (6, 87) = 36.730, .000 p<.05).

The regression coefficients were used to measure the relationship between the predictive adoption of digital technology (interactive websites, digital analytics, social media and e-commerce tools) and the operational performance of travel agency firms in Kenya. The findings show that when individually analyzed interactive websites have a statistically significant effect on the operational performance of travel agency firms in Kenya (β = -.284, t (94) = -2.570, .012<.05) showing that changes in interactive websites have a negative and significant effect on performance of the firms.

The regression on digital analytics has a positive and significant effect on the operational performance of the travel agency firms (β = .894, t (94) = 8.503, .000<.05) revealing that changing digital analytics1 (utilization of digital analytics, application of market analytics, reliance on market penetration and predictive modelling) will significantly improve the operational performance by a factor of .894 while digital analytics2 (quality of service, improving competitive edge, customer-centric provision of services/products and enhancing brand image of the firm) will significantly enhance operational performance by .496 ((β = 0.496, t (94) = 8.503, .000<.05).

The analysis also revealed that adoption of social media tools will have a statistically significant effect (β = 0.46, t (94) = 3.067, .002<.05) contributing positively to changes in operational performance by .046. The regression coefficients revealed that adoption of e-commerce tools1 does also have a significant effect (β = .522, t (94) = 4.145, .000<.05) that changing (quality of service, improving competitive edge, customer-centric provision of services/products and enhancing brand image of the firm) will improve the operational performance of the travel agency firms in Kenya by a unit of .522. Further e-commerce tool2

(customer friendly service provision, improvement of brand recognition and improved customer complaints resolution) will also significantly improve operational performance by a factor of .306 ($\beta = .306$, $t(94) = 3.431$, $.001<.05$).

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The firth chapter of the research presented the summary of the study and the discussion of the results in relation to the empirical literature. The chapter also presented the conclusions of the study, the recommendations drawn and the suggestions for further research work.

5.2 Summary

The travel agency was one of the biggest hit industry's' by the pandemic which resulted in disruption in service provision which ultimately led to poor operational performance of the firms. Given that the use of digital technologies has proved to be a significant contributor to efficiency, effectiveness and quality service provision within firms, this study had sought to identify if the digital technology adoption influenced the operational performance of travel agency firms. The study analyzed on the effect of interactive websites, digital analytics, social media and e-commerce tools on operational performance.

The research was grounded on the innovation diffusion theory. A positivist philosophy was used in the course of the study with a quantitative descriptive research design being applied. The population for this study was the 142 firms registered under the Kenya Association of Travel Agencies. The sample size for the study as computed by the Yamane formula was 104 firms from which the study obtained 94 responses which translated into 72%. A structured research questionnaire was employed in the collection of quantitative research data. Both drop and pick as well as electronic data collection procedures were used. The collected study data was analysed using both descriptive and inferential tests.

The correlation results showed a weak positive relationship between adoption of interactive website, adoption of social media tools and operational performance of travel agency firms in Kenya, a moderate positive relationship between adoption of e-commerce tools and operational performance of travel agency firms in Kenya and a strong positive linear relationship between adoption of digital analytics and operational performance of travel agency firms in Kenya. The regression analysis showed that digital technology adoption could be used to explain about 71.7% of the variance in the operational performance of travel agency firms in Kenya. The study results indicated that digital analytics, adoption of social media tools and adoption of e-commerce tools had a positive and significant effect on the operational performance of the

travel agency firms while interactive websites reflected a statistically insignificant effect on the operational performance of travel agency firms in Kenya.

5.3 Discussion

This section presents a discussion of the findings. The study findings are showcased in line with the objectives of the study. The main objective of the study is to analyse the effect of digital technology adoption on the operational performance of travel agencies in Kenya. The study analysis revealed that there existed a statistically significant linear relationship between digital technology adoption and the operational performance of travel agency firms in Kenya.

5.3.1 Interactive Websites on Operational Performance

The study sought to investigate the relationship between interactive websites and operational performance. The study established that interactive website have a statistically significant negative effect on the operational performance of travel agency firms in Kenya. According to the innovation diffusion theory as applied by Lien & Jiang, (2017), As more people adopt interactive websites, the rate of adoption will likely increase, eventually reaching a point of saturation where most individuals and organizations have already adopted the innovation thereby explaining the insignificant effect on operational performance.

Findings from the first objective were corroborated by studies by Talwar, Dhir, Kaur and Mäntymäki (2020) who sought after the customer's perspective when investigating the reason for their usage of online travel agencies in Indonesia. The study was informed by the Theory of consumption values (TCV) as compared to the current study which was anchored on the innovation diffusion theory. The study results confirmed that the presence of an interactive website did not have a significant effect on the overall perfomance of online travel agencies in Indonesia

However, the research findings were contradicted by Ye, Barreda, Okumus and Nusair (2019) who sought to understand the relationship between website interactivity and brand value on purchase intention among online travel agencies. The analysis determined that travel agencies' website interactivity has a positive relationship on brand experience and brand choice. The study results were further opposed by Mohd-Any, Winklhofer and Ennew (2015) who carried out a study seeking to measure multidimensional user's value experience when using travel websites and established a positive and significant relationship between website usage and value creation. The study concluded that actual usage significantly influences customer experience which determines e-value generation. Stringam and Gerdes (2019) further sought

after customer satisfaction by examining the effect of website quality on hotel performance. The study revealed a negative and significant effect of website quality on hotel perfomance. The researcher affirmed that slow load times contribute to low hotel bookings and eventually brand devaluation.

In Kenya, the study results were further disputed by Kikemu (2017) who investigated the marketing opportunities that exist for tour firms to market the country as a tourist destination to American consumers. The analysis revealed a significant positive impact of website information and online word of mouth on the attraction of travel agencies. The study also reported a significant relationship between the quality of website information and agency services purchase which was also contrary to the study results. Further studies by Maswera, Dawson and Edwards (2015) assessed the travel and tourism industry from Kenya, South Africa, Zimbabwe and Uganda to examine the promotional techniques employed by the firms in the industry. The study revealed a positive significant relationship between quality and interactive websites and value proposition leading to improved customer retention.

5.3.2 Social Media Tools Adoption on Operational Performance

The study's second objective investigated the relationship between adoption of social media tools and the operational performance of the travel agency firms. The study found that adoption of social media tools has a positive and significant effect on the operational performance of the travel agency firms. The objective was grounded on the innovation diffusion theory which posits that social media tools, such as Facebook, Twitter, and Instagram, are examples of innovations that have diffused widely through society (Rogers, Singhal, & Quinlan, 2014). The diffusion of innovation is not only a matter of technology, but also social and cultural factors. Social media and other digital tools are not only adopted but also used differently, depending on the user and the context to enhance performance (Rogers, Singhal, & Quinlan, 2014)

The study results were in line with studies by Ana (2019) but disputed by Prantl (2018). Ana (2019) investigated millenials' travel behaviour to determine the influence of social media and User-Generated Content on destination intentions and revealed a significant relationship between social media marketing and the attraction of specific tourist destinations. The study determined that social media user generated content is informative and generates significant visibility effects, especially if the promotional content is valid and relevant to the season. Orabi (2021) investigated the Egyptian tourism sector to examine the mediating role of value co-creation of tourism experience on sales promotion of travel agencies through social media

channels. The results ascertained that use of social media in marketing has a weak but positive and significant effect on sales promotion when it comes to domestic tourism attraction. The study further established that social media presented a unique opportunity for consumers to co-create value which improves satisfaction and validates people's opinions which in-turn stimulates purchase decisions.

In Africa, the study findings were further corroborated by Arasli, Abdullahi and Gunay (2021) who investigated the use of digital marketing technologies such as social media, website and electronic word-of-mouth to promote a particular annual heritage festival in Nigeria, and its impact on tourists satisfaction and on the events' sustainability. The analysis showed a strong positive effcet of digital channels' use on the level of satisfaction among tourists. Mwalukasa and Assenga (2021) further aimed at investigating the effect of digital marketing on the performance of Tanzanian tour firms. Conclusions showed improved performance among tour firms that integrate digital marketing tools in their operations. Website and social media marketing tools were instrumental in getting more tourists and collecting feedback. In Kenya, Karani (2020) focused on tourism travel agencies in Kenya to investigate the effect of social media marketing strategies on the performance of the country's tourism industry and determined that the high rate of adoption of social media marketing tools improved firm performance through enhancing audience reach, facilitation of client-seller interactions and driving traffic to official firm websites.

The study findings were in disagreemint with the study by Prantl (2018) who aimed to determine the relationship between social media use and tourism attraction in the Czech tourism market. The analysis determined that social media has an insignificant effect on profit generation, noting that the most socially active agency still reported reduced earnings during the year under review. However, the study concluded that social media use generates social experiences, improves brand strength and enhances customer relationship management which improves loyalty levels.

5.3.3 Digital Data Analytics on Operational Performance

The study's third objective explored the relationship between adoption of digital data analytics and the operational performance of the travel agency firms. The analysis also revealed that adoption of digital data analytics will have a statistically significant effect on the operational performance of the travel agency firms. The objective was anchored on the innovation diffusion theory which was in agreement with the study objectives. According to the theory, the adoption

of digital data analytics follows a specific pattern, with certain individuals and groups being more likely to adopt it, and others waiting until it has been proven successful before adopting it themselves. Businesses that do not adopt digital data analytics may miss out on valuable insights and opportunities. They may struggle to catch up to their competitors and may not fully realize the potential benefits of data-driven decision making (Dearing & Cox, 2018).

The study results were justified by Miah, Vu, Gammack and McGrath (2017) who sought after the effcet of big data analytics on the ability of tourist firms to analyze and predict tourist behaviour. The study determined that data analytic tools are essential in enabling companies understand their customers and predict purchase behaviour. The study thereby concluded that there existed a significant relationship between data analytics and performance of these companies. Li, Xu, Tang, Wang and Li (2018) also investigated the application advantages of big data in the tourism industry and revealed a significant influence of data analytic tools on the firm's strategic decision making.

The study results were also corroborated by Höpken, Eberle, Fuchs and Lexhagen (2019) who looked into the Swedish tourism market in their investigation into the effect of Google Trends data on the ability of tourist firms to predict online search behaviour. The analysis revealed a weak positive and significant effect of data analytics and understanding of consumer behaviour which increases the accuracy of predicting tourist arrivals. In Kenya, Mwatha (2020) also sought to understand the influence of big data on value creation and competitiveness of tour firms in emerging markets from which the analysis revealed a strong positive effect of big data usage on firm's dynamic capability to shape its value creation agenda. The data analytic tools were determined to strengthen a firm's sensing, seizing, and transformation capabilities which are responsible for improving the firm's competitive positioning.

The study findings were however refuted by Magno, Cassia and Bruni (2017) who study investigated the adoption and impact of digital market assessment systems on the performance of travel agency performances. The study drew on the Knowledge-Based View theory and sought after whether a firm's acquired market knowledge mediates travel agencies' performance as compared to the study which was anchored on the innovation diffusion theory. Analysis revealed that digital technologies had a positive but insignificant effect on performance outcomes.

5.3.4 E-commerce Tools on Operational Performance

Finally, the study further sought to find out the link between adoption of e-commerce tools and the operational performance of the travel agency firms in Kenya. The research established that adoption of e-commerce tools does have a significant effect on the operational performance of the travel agency firms in Kenya. The study findings were supported by the Innovation Diffusion Theory which posits that a business that is an early adopter of new e-commerce tools and technologies, such as a new payment gateway or a new marketing automation software, may be more likely to see success in their online sales compared to a business that waits to adopt these tools until they have been proven successful by others (Al-Razgan, et al., 2021). The Innovation Diffusion Theory can also help businesses that utilize e-commerce understand the characteristics of their target audience and how they may be more likely to adopt new tools and technologies (Al-Razgan, et al., 2021).

The study findings were confirmed by Styvén and Wallström (2019) who explored the Swedish tourism market to explore the perceived benefits and barriers that contribute to the uptake of digital marketing channels and revealed that digital channels increase the firms' internal efficiency, marketing capability, financial outcomes and competitive positioning thereby showcasing a significant relationship. Hossain, Suchana and Avi (2020) also carried out an exploratory study which sought to explore the effect of internet channels on sustainability of the Bangladesh tourism sector. The analysis also determined significant positive impacts on performance outcomes among firms using digital marketing channels. However, although performance metrics improved, the study did not establish a direct effect of digital channels on profitability since factors such as security and safety standards were key to spending decisions and visit intentions.

The study findings were also in line with results by AL-Zu'bi (2022) who researched on the effect of E-marketing on tour firms' competitiveness. The analysis showed medium application of digital channels in Jordan which were key to information dissemination and significantly impacted destination choice. Further, using electronic channels of promotion had the most significant effect followed by e-distribution and e-pricing. In Africa, the study results were further supported by Misganaw and Singh (2019) who reviewed Ethiopian tourism businesses to investigate the impact of e-marketing adoption on the performance of the firms involved in the sector, including travel agencies and tour operators. Study results showed that most firms in the sector had adopted e-marketing strategies and developed company websites where they could advertise their products at low costs and with increased efficiency than using

travel agents. Finally, Sawe (2019) investigated member firms of the Kenya Association of Tour Operators (KATO) to assess the impact of e-commerce adoption on the firms' sustainability and revealed a positive relationship between e-commerce application and sustainability of tour agencies.

5.4 Conclusions

Findings on the first objective formed the basis for the conclusion that interactive websites have a significant negative contribution to the operational performance of travel agency firms in Kenya. The study further established that travel agencies have failed to provide feedback to customers and respond to customer queries on a timely manner using their websites thereby decreasing the rate of interactions through websites. The study further concluded that the lack of updated information in the firm's website has discouraged customers from utilizing these websites.

The research further concluded that adoption of social media tools will lead to an improved operational performance of travel agency firms in Kenya. The study further established that travel agencies have excelled at utilizing social media sites as tool of fostering engagement with their customers and improving the customer attraction to their services which has contributed to their improved performances. The study also concluded that for better performance, a firm should manage brand awareness practices and conduct online promotional activities through the various social media networks available. The study also noted that there is need for improvement in utilizing social media networks to provide feedback on complaints/requests provided by potential customers so as to enhance operational performance.

The study findings on the third objective led to the conclusion that digital data analytics possesses a significant positive effect on the operational performance of travel agency firms in Kenya. The study concluded that the agencies reliance on obtained market data to develop customer-tailored products and drive market penetration strategies has led to improved operational performance of the firm. Additionally, utilization of available travel data used by the firm as basis of predictive modelling for businesses has contributed to their improved performance. Improved operational performance of a travel agency can also be attributed to the firm's ability to analyze customer demands and manage customer needs through digital analytics.

The study findings on the final objective established the conclusion that adoption of e-commerce tools has a positive significant effect the operational performance of travel agency

firms in Kenya. These findings further established that adoption of e-commerce tools to facilitate payments processes has gone a long way in enhancing the operational performance of the travel agencies. Further, utilization of these e-commerce tools to display their products/services range and manage customer bookings has contributed to operational efficiency. The study also concluded that these firms should invest more in using the e-commerce tools as a platform for fostering customer satisfaction through seamless communication and feedback processes while also managing customer queries as fast as possible.

5.5 Recommendations

The study concluded that interactive websites have no significant contribution to the operational performance. Based on this conclusion, the study recommends that the travel agencies continuously gather and analyze customer feedback to identify areas of improvement on their websites. The study further recommends that firms consider alternative methods of reaching and interacting with customers, such as social media and email marketing. These firms should also shift focus to research and investing in technology that can improve other areas of the business and other aspects of the business that have a more direct impact on operational performance, such as customer service and sales strategies. The research also recommends that the firms make sure that the website is optimized for mobile, as many social media users access the platforms via mobile devices.

Social media tools were identified to be essential in improving operational performance. In this regard, the study recommends more utilization of social media platforms to promote travel deals and packages to target audiences. The study recommends that the travel agencies should leverage the seamless communication offered through various social media networks to interact and engage more with their customers. The study also recommends that these travel agencies should deploy social media tools that are focused on providing feedback on complaints/requests provided by potential customers to ensure there is increased performance. The study also recommends that the travel agencies create engaging and informative content, such as destination guides and travel tips, to attract potential customers and build trust. Furthermore, these firms can leverage customer reviews and testimonials on social media to build credibility and establish a positive reputation.

The study established that digital data analytics possessed a significant impact on operational performance. The study recommends that the firms implement a data analytics system to track

customer behaviour, preferences, and buying patterns as well as identifying customer segments and tailor marketing efforts to specific groups. The firms maya also analyze website data to optimize the user experience and increase conversions. The study also recommends usage of digital data analytics to identify trends and patterns in the travel industry, and use this information to inform decision-making. The firms can also implement a data-driven approach to pricing, using data analytics to optimize prices based on demand and competition. Digital data analytics can also be used to improve operational efficiency by identifying and addressing bottlenecks in the booking and travel process. The study also recommends that policy makers and regulators in digital technology design regulations for the protection of data and privacy to ensure that the collected digital data is not misused and is utilized appropriately.

Finally, adoption of e-commerce tools was considered key in enhancing operational performance of a firm. The study therefore recommends that the travel firms offer a variety of payment options, including online payments, to make the booking process as seamless as possible. The firms should also efficiently utilize the e-commerce features such as upselling and cross-selling to increase revenue. The study further recommends utilization of the e-commerce tools for email marketing and retargeting campaigns to reach potential customers and encourage repeat business. Finally, the study suggests utilizing e-commerce tools to automate repetitive tasks such as inventory management and email confirmations to enhance performance.

5.6 Suggestion for Further Studies

The study's main focus was on the digital technology adoption and its impact on the operational performance of travel agency firms. Travel agency firms were affected during and post Covid era due to the decreased engagement in tourism activities. Further research ought to be done on other areas in the tourism sector and how they have adopted digital technology to remain sustainable and maintain profitability. Additionally, further research may be conducted on how digital technology adoption has impacted the overall performance and financial performance especially given that the latest technology may be costly and may impact the finances of various firms particularly small firms. Lastly, this study only employed a few methodologies of data interpretation and analysis; therefore, further studies should adopt different methods from those adopted in this study, as this will be vital for verifying this study's findings.

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APPENDICES

Appendix I: Introduction Letter

Godliver Ikol

P.o Box……..

Nairobi, Kenya.

July 2022

Dear respondent,

RE: Questionnaire for Academic Project

I am a student pursing a master's degree in Business Administration, at Strathmore University. As a degree requirement, I am supposed to undertake an academic research project on digital technology and the operational performance of travel agencies in Kenya.

It is my humble request to you as the respondent, to kindly fill in the attached questionnaire towards achieving the objectives of my academic research project. The information that you provide in this questionnaire shall be handled with utmost confidentiality and personal details shall not be referred to in any way.

Results of this study was instrumental beneficial to the travel agency industry to be more informed on the key digital technology aspects that can stimulate better operational performance within the firms.

Thank you.

Yours Sincerely

Godliver Ikol

Appendix II: Research Questionnaire

Your participation in the study is entirely voluntary and the information will not be shared with any unauthorized people.

Part 1: Background Information

For each of the following questions, please check the item corresponding to your status.

1. **What best describes your gender?**

   Male ( )

   Female ( )

2. **What best describes your age group?**

   Below 35 years ( )

   36-50 years ( )

   Over 51 years ( )

3. **What is your position within the travel agency firms in the Country?**

   Managing Director ( )

   Marketing/Sales Manager ( )

   Operations Manager/ IT Manager ( )

   Travel Manager / Finance Manager ( )

   Tourism Regulator Authority ( )

   KATA ( )

4. **What is your highest education qualification?**

   Diploma holder ( )

   Undergraduate degree ( )

   Masters Degree ( )

   Doctorate degree ( )

5. **How long has the travel agency firm been operating in the Country?**

   Less than a year ( )

1-3 years ( )

4-6 years ( )

Over 7 years ( )

6. **How many employees work within travel agency firm in the Country?**

Less than a 10 ( )

11-20 employees ( )

21-30 employees ( )

Over 31 employees ( )

7. **How long has the firm been utilizing digital technology systems in the provision of your services?**

Less than a year ( )

1-3 years ( )

4-6 years ( )

Over 7 years ( )

8. **In which country does your travel agency offer services?**

Only locally ( )

Only within East Africa ( )

Across the continent ( )

Globally ( )

PART B: OPERATIONAL PERFORMANCE OF TRAVEL AGENCY FIRMS

Please indicate in the table with a tick (√) or across (×) with a scale of

5= strongly agree 4= Agree 3= Neither agree nor disagree 2= Disagree 1= Strongly Disagree

	Statement on Operational Performance	**1**	**2**	**3**	**4**	**5**
1.	Through a revision of our operations the travel agency has improved the quality of service provided to our customers.					

	The travel agency routinely conducts evaluation of our services and product range to improve our competitive edge					
	The travel agency enacts customer-friendly service provision to enhance the quality of the service offering					
	Through maintaining customer-centric product/service provision the form fosters our customer base in the market					
	The travel agency conducts activities that foster the brand image of the firm					
	The travel agency obtains relevant market information that is applied in enhancing the brand recognition					
	The travel agency ensures there is seamless communication with our customers to foster complaints resolutions.					

PART D: DIGITAL TECHNOLOGY ADOPTION OF TRAVEL AGENCY FIRMS

Please indicate in the table with a tick (√) or across (×) with a scale of

5= strongly agree 4= Agree 3= Neither agree nor disagree 2= Disagree 1= Strongly Disagree

	Statement on Interactive Websites	**1**	**2**	**3**	**4**	**5**
	The travel agency relies on our website to continuously provide information to our customers					
	The travel agency utilizes the website to respond to customer queries on a timely manner					
	The travel agency ensures the website is well-maintained to support online bookings for our customers					
	The travel agency uses the website to provide feedback to customers thus enhancing the service provision to our customers					

.	The travel agency utilizes the website to provide relevant information to current and potential clients on our service/product range					
.	The travel agency provides customers with price estimation services through the interactive websites					

5= strongly agree 4= Agree 3= Neither agree nor disagree 2= Disagree 1= Strongly Disagree

	Statement on Digital Analytics	**1**	**2**	**3**	**4**	**5**
.	The travel agencies rely on obtained market data to develop customer-tailored products					
.	Through utilization of digital analytics, the firm is able to analyse customer demands and manage customer needs.					
.	The travel agency uses the available data analytics to support aligned decision making in the market					
.	Through application of market analytics, the travel agency is able to meet the available market demands					
.	The travel agency relies on available market data to drive market penetration strategies					
.	The utilization of available travel data is utilized by the firm as basis of predictive modelling for businesses.					

5= strongly agree 4= Agree 3= Neither agree nor disagree 2= Disagree 1= Strongly Disagree

	Statement on Social Media tools	**1**	**2**	**3**	**4**	**5**
.	The travel agency relies on available social media tools to improve the customer attraction to our services					
.	The use of select social media sites helps the travel agency to enhance the customer experience in accessing our services					

.	The travel agency routinely relies on social media networks to provide feedback on complaints/requests provided by potential customers					
.	The travel agency utilizes social media sites as tool of fostering engagement with our customers					
.	The travel agency conducts online promotional activities through the various social media networks available					
.	The travel agency manages brand awareness practices by utilizing social media channels.					

5= strongly agree 4= Agree 3= Neither agree nor disagree 2= Disagree 1= Strongly Disagree

	Statement on E-commerce Tools	**1**	**2**	**3**	**4**	**5**
.	The travel agency utilizes e-commerce tools to facilitate payments processes					
.	The travel agency has adopted e-commerce tools to display their products/services range					
.	The travel agency utilizes available e-commerce tools to manage customer bookings					
.	The travel agency routinely uses available e-commerce tools to manage customer queries					
.	The travel agency conducts promotional marketing using available e-commerce tools					
.	The travel agency relies on active engagement among customers through e-commerce platforms to tap into new markets					
.	The travel agency uses the e-commerce tool as platform of fostering customer satisfaction through seamless communication and feedback processes.					

Thank you for the Time.

Appendix III: Research Ethical Approval

Strathmore UNIVERSITY

4th November 2022

Mrs Ikol Godliver,
godliver.ikol@strathmore.edu

Dear Mrs Ikol,

RE: The Effect of Digital Technology Adoption on the Operational Performance of Travel Agencies in Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU- master's** research proposal. Your application reference number is **SU-ISERC1499/22.** The approval period is from **4th November 2022 to 3rd November 2023.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 48 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 48 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to SU-ISERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) https://research-portal.nacosti.go.ke/ and obtain other clearances needed.

Yours sincerely,

for: **Dr Ben Ngoye,**
Secretary; SU-ISERC

Cc: Prof Fred Were,
Chairperson; SU-ISERC

STRATHMORE UNIVERSITY INSTITUTIONAL SCIENTIFIC AND ETHICAL REVIEW COMMITTEE
(SU-ISERC)
04-Nov-2022
Email:ethicsreview@strathmore.edu
P.O BOX 59857-00200
NAIROBI-KENYA

Appendix IV: NACOSTI Research Licence

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **402258**

Date of Issue: **07/November/2022**

RESEARCH LICENSE

This is to Certify that Ms.. Godliver Ikol of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: THE EFFECT OF DIGITAL TECHNOLOGY ADOPTION ON THE OPERATIONAL PERFORMANCE OF TRAVEL AGENCIES IN KENYA for the period ending : 07/November/2023.

License No: **NACOSTI/P/22/21504**

402258

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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See overleaf for conditions

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