

DURBAN UNIVERSITY OF TECHNOLOGY

**THE ADOPTION OF INFORMATION COMMUNICATION TECHNOLOGY (ICT) IN SMALL AND
MEDIUM ENTERPRISES (SMES) IN TOURISM SECTOR IN EASTERN CAPE PROVINCE**

BUKELWA MBINDA

OCTOBER 2024



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MEDIUM ENTERPRISES (SMES) IN TOURISM SECTOR IN EASTERN CAPE PROVINCE**

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degree of **Doctor of Philosophy in** Management Sciences
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OCTOBER 2024

APPROVED FOR FINAL SUBMISSION

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DECLARATION

I, Bukelwa Mbinda, declare that the dissertation titled “The Adoption of Information Communication Technology (ICT) in Small and Medium Enterprises (SMEs) in Tourism Sector in Eastern Cape Province” is my own original work. It has not been submitted previously, in whole or in part, to any other institution for academic purposes towards any qualification. All sources consulted during the research have been fully acknowledged, with detailed references provided.

Bukelwa Mbinda

ABSTRACT

This study focuses on the factors influencing ICT adoption in tourism SMEs in the Eastern Cape and proposes practical solutions to drive digital transformation and business growth. Many SMEs fail to adopt ICT due to a lack of skills and knowledge, which negatively affects productivity, long-term income, and overall business growth. The aim of the study was to examine both internal and external factors affecting ICT adoption in the tourism sector.

A mixed-methods approach was used, with 114 SME owner-managers participating in surveys, in addition to follow-up semi-structured interviews conducted with eight participants from Eastern Cape municipalities. Non-probability sampling was employed to ensure the participants were relevant and the findings accurate. The study was grounded in theoretical literature and a conceptual framework, with clearly defined hypotheses guiding its direction. Key areas derived from the objectives and literature review were tested against these hypotheses, and each premise examined using Cronbach's reliability scores to ensure robustness and validity, in addition thematic analysis was applied to identify key patterns in the data.

The findings reveal ICT adoption in SMEs is shaped by a combination of external pressures and internal dynamics. Adoption is particularly influenced by the perceived ICT benefits for business, with SMEs more likely to use ICT solutions when they understand its advantages. The study highlights the need for better training, awareness campaigns, and verifiable case studies to demonstrate how ICT adoption can improve business performance and close existing gaps. This research provides valuable insights for scholars, policymakers, and practitioners, representing a significant contribution to advancing ICT adoption among SMEs in the Eastern Cape and across South Africa's tourism industry.

Key words: ICT adoption, Tourism SMEs, Eastern Cape, Digital transformation, Technology acceptance

DEDICATION

This thesis is lovingly dedicated to my dear grandmother Tina Mbinda, who is no longer with us but whose love, wisdom, and unwavering support continue to guide me every day. Her memory inspires me to persevere and to always strive for excellence.

To my mother, Nomfundo Mbinda whose endless encouragement, sacrifices, and belief in me have been the foundation of my success. Her strength and love have been my greatest motivation throughout this journey.

To my dear niece and nephews, this work is a testament that anything is possible with hard work, determination, and belief in yourself. May this inspire you to chase your dreams and know that you can achieve anything you set your mind to.

To the Black African child, the child of the soil, umntana womgquba, no matter what struggles you face, know that perseverance is the key. Through your brilliance, strength, and determination, you can achieve greatness. Never doubt your ability to succeed—you can do this.

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ACRONYMS AND ABBREVIATIONS

AMOS	Analysis of Moment Structures
BCM	Buffalo City Metropole (Metropolitan Municipality)
BEE	Black Economic Empowerment
CE	Circular Economy
CEO	Chief executive officer
CFA	Confirmatory Factor Analysis
COVID-19	Corona Virus Disease of 2019
CWB	Counterproductive Work Behaviour
CR	Composite Reliability
CRM	Customer Relations Management
DSBD	Department of Small Business Development
DEDEAT	Department of Economic Development and Environmental Affairs
Dti	Department of Trade and Industry
EC	Eastern Cape
EFA	Exploratory Factor Analysis
ERP	Enterprise Resource Planning
4IR	Fourth Industrial Revolution
ICT	Information and Communications Technology
IS	Information System
LBE	Local Business Enterprise
LED	Local Economic Development
MD	Managing Director

MM	Measurement Model
NDP	National Development Plan
NDT	National Department of Tourism
NGO	Non-government organisation
NMM	Nelson Mandela Metropole (Metropolitan Municipality)
PC	Personal Computer
PDA	Personal Digital Assistant
PEOU	Perceived ease of use
POPI Act	Protection of Personal Information Act
PU	Perceived Usefulness / Utility
QDA	Qualitative Data Analysis
SA	South Africa
SADT	South Africa Department of Tourism
SDG	Sustainable Development Goal
Seda	Small Enterprise Development Agency
SEM	Structural Equation Modelling
SME	Small and medium Enterprise
SMME	Small, Medium, and Micro Enterprise
SMTA	Small and Medium-Sized Travel Agency
SMTE	Small and Medium Tourism Enterprise
SPSS	Statistical Package for the Social Sciences
STE	Small Tourism Enterprise
TAM	Technology Acceptance Model

TMS	Top Management Support
TPB	Theory of Planned Behaviour
VR	Virtual Reality

CHAPTER ONE

INTRODUCTION AND OVERVIEW OF THE STUDY

1.1 INTRODUCTION

This study concentrated on the dynamic intersection of small and medium-sized enterprises (SMEs), Information and Communication Technology (ICT), and tourism, investigating how these interconnected components contribute towards corporate success. This chapter offers an overview of the study, providing the reader a roadmap to travel through the complex interplay, challenges, opportunities, and insights revealed in the chapters to come. The reasoning behind this study, the research questions, and study significance in relation to academic contribution and practical contexts, are also set out in this introductory chapter.

The focus area of this study is SMEs in the Eastern Cape (EC) tourism sector of South Africa (SA). The province is primarily rural but draws tourists with its breath-taking scenery. As a result, SMEs in these regions are frequently isolated and strongly dependent on tourism-related activities. It is essential for these SMEs to be sustainable and able to create jobs in order to help local communities, making it vital they use ICT to improve business. The purpose of the study was to empower SMEs to explore the benefits of ICT that can assist them in managing their business operations digitally. Furthermore, the impact of globalisation and quick pace of technological advancements have increased the need for SMEs to adopt ICT (Akin 2024: 1). As a result, SMEs must possess essential business skills, while also remaining adaptable to technological advancements.

SMEs need to adopt innovative technologies to improve growth, competitiveness, productivity, and efficiency, while also lowering costs and luring new customers by aligning with evolving market needs (Cranmer *et al.* 2021; Gupta *et al.* 2023; Akin 2024). The misfortunes of insufficient finance and low ICT adoption is a recipe for disaster making it crucial to provide a vehicle that will assist businesses to move their businesses online. SMEs have a high rate of business failure, due to financial implications and lack

of technology adoption that can assist businesses. The study identified several barriers to ICT adoption, including limited resources, high costs, concerns regarding online security, and inadequate client preparation, as well as lack of advice and support (Nazir and Khan 2022a). According to Mbinda (2015), lack of access to technology can hinder business success by preventing enterprises from staying up-to-date with technological advancements. Bosma and Harding (2016, cited in Ibitomi *et al.* 2024) found SMEs often fail due to a lack of financial literacy, which hinders entrepreneurial activity.

The aim of the research was to investigate internal and external factors affecting ICT adoption by SMEs in the EC Province tourism sector in SA and offer possible solutions for ICT adoption and business transformation. The study proposes a framework for improving the adoption and use of ICTs in SMEs in the EC province. Vermeulen-Miltz *et al.* (2023) highlight the Corona virus disease of 2019 (COVID-19) affected many parties in the tourism sector, and each had a distinct viewpoint on the difficulties facing the industry, because of the uncertain and temporal nature of the tourism sector recovery.

The tourism sector in SA used to be a booming sector prior to the advent of the COVID-19 pandemic, as the tourism industry slowly starts to revive post-COVID-19, domestic travel has been recognised as a glimmer of hope and a stimulus (Adinolfi, Harilal and Giddy 2021; Nkosana 2022). The tourism landscape has changed drastically, not only in SA, but globally. Therefore, it is this vital tourism sector SMEs are adequately equipped with ICT to deliver their services online, while government legislation should make changes that enable these SMEs to compete with their counterparts in the EC SME tourism industry. Nyikana and Bama (2023) propose, domestically, tourism development is an important part of destination management during off-peak times for inbound international tourism, shown to have previously been the case in SA. Due to its enormous potential for developing sustainable tourism, there has been a growing trend in developing nations such as SA to prioritise domestic travel (Nengovhela, Tshipala and Nyikana 2017).

A United Nations World Tourism Organization (UNWTO) report (2022, cited in SA Department of Tourism (SADT) 2023) indicates the tourism sector is highly vulnerable and significantly impacts related industries, both globally and nationally, which key

indicator analysis of tourism sector performance monitoring revealed (SADT 2023). In addition, Shafi, Liu and Ren (2020) reported COVID-19 affected national and international economies severely, with numerous businesses dealing with various problems that resulted in some losses. The 2020 report from the Organisation for Economic Co-operation and Development (OECD) identified transportation challenges for air and sea cargo, as well as issues related to food loss and waste. This is evidence that businesses were disrupted, more specifically the supply chain in many sectors (Aday and Aday 2020).

In a study in India, businesses were found to have faced significant disruptions in transportation and logistics services, including data loss, time delays, and cargo cancellations, due to reduced freight capacity, limited mobility, port closures, and issues with customs clearance. Consequently, there were significant interruptions in production, transportation, and planning and coordination services, resulting in massive delays and rerouting for consumers (Sudan and Taggar 2021). This is an indication of the losses that have hampered small and large businesses, as well as the government.

According to Hudechek *et al.* (2020), businesses must be prepared for unexpected disruptions, as waiting until a crisis occurs to secure cash flow and alternative suppliers can result in significant operational challenges. Business organisations have faced enormous challenges due to unprecedented disease outbreaks in recent decades. Moreover, an epidemic or pandemic can have a significantly negative effect on supply chains and businesses by lowering performance and efficiency (Guan *et al.* 2020). In addition, epidemic outbreaks are a unique type of supply chain risk, characterized by prolonged disruptions, cascading effects across the network, and high levels of uncertainty (Ivanov 2020).

This is reflection that the epidemic had a major impact on all businesses internationally, no matter how big or small. Consequences were evident in the decline in demand, issues with the supply chain, export order cancellations, and shortages of raw materials, along with transportation problems were some of the consequences (Paul *et al.* 2021).

A number of sectors have been affected by COVID-19, with research that covered a variety of industry sectors, including the following: aviation and tourism (Ibn-Mohammed

et al. 2021). Additionally, Chowdhury *et al.* (2021) draws attention to the fact that a number of studies have examined a wide range of industry sectors, citing these authors with their associated field, such as agriculture, construction, transportation, service, production, and grocery (Veselovská 2020); automotive and earth-moving equipment (Handfield *et al.* 2020); aviation and tourism (Ibn-Mohammed *et al.* 2021); healthcare, food, clothing, retail, automotive, airline, and high-tech industries (Xu *et al.* 2020a); and the automobile, personal computer (PC), and home furnishing sectors (Ishida 2020). It is evident a range of industries worldwide have been affected, as the pandemic left many businesses no option but to file for bankruptcy, With the market contracting, and shaky consumer involvement a normal stage of the lifecycles of goods and services (Balcan, Prasad and Sandholm 2022). Consumer confidence subsequently decreased and the state of the global economy has suffered (Cai and Luo 2020).

The majority companies and institutions across the globe were affected by the pandemic, which prompted most governments to impose full and partial lockdowns during the worst of the COVID-19 outbreak. Consequently, it was found individuals in Kuwait might have encountered differing levels of financial volatility or uncertainty, commonly referred to as economic anxiety (Zainal *et al.* 2022). The pandemic has had a devastating impact on hotels, restaurants, bars, and other hospitality and tourism businesses, due to its unexpected nature, highly uncertain environment, and widespread impact.

The absence of demand for intermediary goods and services and the inefficiency of resources, furthermore, caused indirect negative upstream effects across numerous sectors (Kahveci 2023). The demand and supply in this instance did not meet, due to scarcity or strain on the supply chain, which further increased the challenge. EC SMEs were also not immune to the pandemic and could not provide services as normal.

Around the world, the pandemic was a crisis event with the potential to change SA's tourist business, as well as the context in which it operates. In order to structure the supply and demand of the sector to suit the demands of potential domestic visitors, the country's main players must, nevertheless, consider the opportunities and difficulties that lie ahead (SADT and University of Johannesburg 2021).

Strategy (2020, cited in Rogerson and Rogerson 2021) highlight that with COVID-19 having disrupted human touch in daily life, it is clear physical connectedness can be a vulnerability. Furthermore, this is the catalyst for an advancing mega-trend globally towards a contactless economy through the accelerated digitalisation of everyday life and business, primarily driven in Japan by 4IR technologies (Strategy 2020, cited in Rogerson and Rogerson 2021). The relevance of ICT and its disruptive impact on all spheres of life can thus not be ignored, where advancements in technology serve as an external stimulant that drives innovation in the travel and tourism sector (Huang and Leung 2024). Investing in the right processes and technology can be costly for small businesses, including those in the hospitality and accounting industries (Thukral 2021). This means it is vital for tourism SMEs to invest in technology, despite the associated costs, to remain competitive.

The pandemic has forced tourism businesses to operate in newer and more resilient ways, as they must shift priorities and respond to its challenges (Verma and Gustafsson 2020). According to Rogerson (2021), with the domestic sector looking so promising, it is imperative SA stakeholders consider the opportunities and challenges that lie ahead in order to customise the supply and demand of the sector to suit the demands of domestic tourists.

Tourism businesses, which include both major corporations and smaller family-owned operations, also incorporating lifestyle entrepreneurs, are at the heart of tourism recovery strategies (Dias *et al.* 2021a). Therefore, the rapid changes in the ICT landscape necessitate a strategic realignment of SMEs towards ICT adoption to ensure their survival and competitiveness, particularly in the tourism sector, where innovation is crucial. There is already a wealth of international data indicating customer demand is changing, along with the nature and trends of domestic travel in North America, Europe, and Australia. It is possible some additional changes will surface in the distant future (Rogerson and Rogerson 2021).

According to Rwigema and Celestin (2020) in the African region, the business tourism segment is unlikely to return to its pre-pandemic state, as it is expected to face significant long-term negative impacts. Businesses are increasingly reassessing and distinguishing between essential and non-essential travel. The COVID-19 pandemic has affected almost all African countries and is expected to worsen dramatically. The negative growth can be attributed to disruptions in global value chains, falls in commodity prices and fiscal revenues, and travel and social restrictions imposed in many African countries (Rwigema and Celestin 2020). The tourism industry must, therefore, change for its betterment, making ICT imperative to their establishments.

The emerging new tourism mind, along with changing travel mobilities, inevitably cause shifts in the complexion and patterns of consumer demand for specific types of tourism products and destinations Rogerson (2021). In addition, due to changes in customer preferences, it is crucial SMEs adapt to evolving tastes through ICT innovation (Thukral 2021). The COVID-19 crisis highlighted gaps in operations and technology investments, demonstrating the potential for true disruption, with businesses increasingly prioritising digital capabilities as a necessity rather than a luxury, while resilient SMEs consider expanding into online sales (Rwigema and Celestin 2020).

Consider too that Cloud computing offers a secure platform accessible 24/7 and eliminates the need for physical data centres (Thukral 2021). ICT is relevant to businesses, because the pandemic has disrupted them, requiring them to be as creative and innovative as possible and to adopt ICT for their operations. Moreover, technology advancements have enabled workers to work remotely and avoid face-to-face interactions. EC businesses with access to this technology ought to use it as often as possible (Mishi *et al.* 2023).

Sixaba (2022) posits information technology (IT) use is essential for entrepreneurs running lodging businesses in the EC; this shows how fundamental technology is for businesses in the tourism sector. The study of Mishi *et al.* (2023) indicates the EC businesses claim since no company could withstand another lengthy lockdown, there should be opposition to such a measure. While the authors established closing the store would be the best course of action, businesses were, however, still function with minor adjustments, such as ICT investments. This means the best course of action would, in effect, be to invest in technology and ensure it is adopted more quickly.

1.2 RESEARCH BACKGROUND TO THE STUDY

SME owners-managers must completely embrace ICT to maintain their businesses in the modern day; this requires adapting to the changing environment. Tourism SMEs not only attract tourists but also satisfy tourist needs. To succeed, businesses need to incorporate the innovations of the fourth industrial revolution (4IR) and set up an environment that supports their operations (Ogedengbe *et al.* 2023).

Numerous studies have investigated ICT use by SMEs in industrialised nations (Cant, Wiid and Hung 2015; Mushtaq, Gull and Usman 2022; Özşahin, Çallı and Coşkun 2022). Limited research has, however, been done on ICT adoption and usage in developing nations, notably in the EC, SA. The findings of research on SMEs in industrialised countries cannot be extrapolated to SMEs in developing countries, because each faces unique challenges. This indicates a gap that needed to be tempered, which this study has investigated and explored.

Research further suggests many challenges for SMEs that implement ICT; these challenges include financial constraints, a lack of understanding, the potential for fraud, and intimidation from technology, as well as the perceived high costs of ICT (Modimogale and Kroeze 2009; Matekenya and Moyo 2022; Mushtaq *et al.* 2022). This implies numerous barriers for SMEs to deal with.

Eze and Lose (2023) add lack of access to necessary infrastructure in many rural communities in SA further exacerbates these challenges. Most of these challenges could be solved by SMEs becoming more knowledgeable regarding ICT and employing qualified ICT staff. Additionally, power cuts, caused by sporadic load shedding by the national electricity supplier, are a specific and unique challenge for SMEs in SA, with financial difficulties also counted among the numerous challenges SMEs in SA face. However, most of these obstacles may be overcome by SMEs learning more regarding ICT and hiring skilled ICT personnel. These businesses need an ICT infrastructure, and tools from the government to support their businesses.

1.3 PROBLEM STATEMENT

Several researchers have reported SMEs failure to acknowledge the use of ICT, due to their lack of skills and knowledge, which has subsequently hindered ICT use (Mbuyisa

and Leonard 2017; Enaifoghe and Ramsuraj 2023). In addition, since ICT skills are crucial for SME survival, these enterprises are expected to raise their productivity and increase market share to survive in the tourism and hospitality sectors. Inability to use ICT to increase access to information in these sectors, furthermore, negatively impacts their long-term income and growth (Woodley *et al.* 2015; de Mattos *et al.* 2023; Radicic and Petković 2023).

Studies by Heather (2019) and Kallmuenzer *et al.* (2024) indicate lower levels of digital dissemination as smaller businesses make less use of ICT, whereas the goal of digital dissemination is to use contemporary technology to reach a large audience swiftly and effectively. These businesses also face greater challenges in complementary investments in skills and organizational changes required to adopt and benefit from technology. Therefore, digital transformation seems to be a challenge among SMEs and EC tourism SMEs might not be different from other SMEs. Considering the EC is the nation's poorest and most rural province, digitalisation in the SME sector is extremely difficult for several reasons. The EC, which has the highest youth unemployment rate in the country and is the poorest province in SA in terms of GDP per capita, must nevertheless prioritise the development and promotion of SMEs (Thibane *et al.* 2023).

As Sixaba and Rogerson (2023a) found from their study in the EC, evidence that historically marginalised groups, such as emerging Black entrepreneurs, are forced to form social networks due to shared challenges in resource-constrained environments. The international experience shows one of the essential characteristics of the tourism industry is it primarily comprises small-scale enterprises and micro-firms (Thomas 2004; Işık *et al.* 2019; Yachin 2019; Kc *et al.* 2021; Trip *et al.* 2021, cited in Yachin 2021). One crucial issue is the need for a deeper comprehension of the characteristics, importance, and difficulties faced by small tourism businesses that operate in outlying areas (Yachin 2021). This outlines that some challenges are at the micro level within the businesses, with specific reference to the features and activities of small-scale tourism business owners in the resource-poor EC province of SA.

The region is part of the geographically concentrated cohort of Black-owned small tourism businesses in the former Bantustans of Transkei and Ciskei, created under apartheid planning (Sixaba and Rogerson 2019). The segregation within the former Bantustans depicts ill-construed plans of the past regime that neglected the economic potential in these areas. The results of a study by Ngumbela (2023) show rural SME

operations in the EC province are influenced by external variables, the study found rural SMMEs in the EC face challenges due to a lack of training and entrepreneurial education, affecting their daily operations. Therefore, EC SME survival could be affected by external forces beyond their control, including socio economic issues, such as the exorbitant cost of data.

Previous studies reported the digital divide in SA can be attributed to global technological advancements and financial disparities between large corporations and SMEs. Since digital transformation uses automation to break down barriers between people, businesses, and processes, it positively affects every industry, increasing productivity within each sector. In addition, this is an indication of digital barriers in all sectors as well (Akpan, Udoh and Adebisi 2020; Saruchera and Mpunzi 2023; Obokoh *et al.* 2024).

According to Obokoh *et al.* (2024) in SA, the COVID-19 pandemic accelerated the increasing adoption of digital technologies by SMEs to address challenges created by the pandemic. Relationships between employers, employees, and customers are changing because of technology's pervasiveness in almost everything people do (Ulas 2019). Digital transformation, in addition, improves and helps with innovating product and service offerings, as well as finding efficient collaboration techniques. Furthermore, businesses may experience these breakthroughs, regardless of size or industry.

Akpan *et al.* (2020) state companies in practically every industry have started a variety of initiatives to learn more regarding new digital technologies and exploit their advantages, such as the capacity to specialise or the increased flexibility and agility to adjust to changing circumstances. These traits are claimed to be clearly visible during the process of digital transformation, with "digital platforms" serving as the most pertinent illustration of the disruptive innovations made possible by ICTs (Sutherland and Jarrahi 2018; De Reuver *et al.* 2018, cited in Caputo *et al.* 2022).

SMEs confront numerous obstacles, including excessive production costs, insufficient experience, inadequate ICT infrastructure, and the need for vendor ecosystems to embrace digital capital (Saruchera and Mpunzi 2023). Moreover, there is a lack of ICT expertise in rural areas to manage the digital revolution; that expertise is, however, vitally important, and will capacitate tourism SMEs. Intangible assets of the technologies that currently power the digital economy are the other factors to consider. In this regard,

big data and analytics skills, along with the digital capture of consumer behaviour and trade patterns, fall under the category of intangible assets and act as catalysts for business success, namely increased market share and profit (Saruchera and Mpunzi 2023). Also, improving digital infrastructure, offering financial incentives, and training programs are essential for SMEs in EC to overcome technology adoption barriers (Saah and Mbohwa 2025).

According to Sogaxa (2024) contractors face resource management challenges, including labour distribution, equipment allocation, and limited access to modern technology for project planning and communication in Eastern Cape. Flepisi, Womack and Lekhanya (2024) add that construction SMEs need to acquire new knowledge to gain a competitive advantage through innovation. Construction SMEs in EC can use ICT for internal processes such as e-tendering, e-site, e-procurement, and e-quality. More recently, literature has emerged that rural entrepreneurs face challenges such as low purchasing power, insufficient sales volume, low profits, and pricing difficulties, SA's rural landscape is, however, more complex and diverse than its urban counterpart. Furthermore, post-COVID-19, rural entrepreneurs not only struggle to find skilled employees, but they are also feeling the pinch of data costs that will impact profits (Utete and Zhou 2024). In Poland, SMEs have not fully utilised available start-up capital, due to a lack of awareness among entrepreneurs and insufficient communication from start-up capital providers. SMEs face significant challenges in accessing start-up capital, including a knowledge gap (Ogujiuba *et al.* 2023). A study by Enaifoghe and Ramsuraj (2023) found, in order to address the socio-economic needs of a particular community, within a specified geographic area, Local Economic Development (LED) initiatives usually form part of a comprehensive strategy to reduce poverty, particularly at local government level. The political economy of SA has emphasised the role of SMEs in local government since the democratic era started in 1994, with Enaifoghe and Vezi-Magigaba (2022) highlighting the fostering of LED is aimed at stimulating empowerment, job creation, and economic growth, along with community development. The expansion of SMEs within local government is a critical part of an LED strategy, which aims to, among other aspects, implement the constitutional mandate of local governments to promote economic development in general (Enaifoghe and Vezi-Magigaba 2022). Therefore, the local government is required to participate in SME development. Additionally, SME turnover rates are extremely high, possibly due to the

low visitor levels in the EC tourism industry. Rogerson and Rogerson (2021) mention entrepreneurs in rural areas exhibit lower levels of creativity. Moreover, due to their low funding, high expertise, and small market share, SMEs have suffered greatly because of the digital divide. Robust financial enterprises allocate resources towards the acquisition of digital capital, thereby augmenting their competitive edge (Saruchera and Mpunzi 2023).

Most entrepreneurship experts believe the tourism and hospitality sector of the economy can promote economic expansion, employment creation, poverty eradication, and inequality reduction. Generally, to survive in the tourism and hospitality sectors, owners-managers are expected to raise their productivity and increase their market share, with SMEs contributing to economic expansion. This sector of the economy is regarded as the backbone of many countries (Enaifoghe and Ramsuraj 2023). Therefore, tourism SMEs play a vital role in the economy and assist in addressing socio economic issues.

Without ICT to increase information access, has tourism and hospitality sector income and growth are expected to experience negative long-term effects SMEs are unable to cope with changes due to a lack of skills, in terms of technology and innovation (Woodley *et al.* 2015; Radicic and Petković 2023). Ngumbela (2023) attests the absence of appropriate and comprehensive training programmes, particularly in technical and vocational schools, in rural areas specifically, makes things worse. Therefore, it is essential that entrepreneurs in rural area tourism SMEs receive training and education in tourism to acquire a variety of skills.

SMEs, in general, are urged to adopt ICT applications as part of their business operations to counter the competition (Nguyen, Newby and Macaulay 2015; Apriyanti 2024). Through increased use of ICTs in the hospitality industry, SMEs can improve demand for the services they render their clients. The degree to which SMEs within the tourism and hospitality sectors in rural areas could benefit from utilising ICT, nevertheless, remains to be seen.

ICT development has positively impacted business operations during the advent of globalisation and growing competition. According to Abdullah *et al.* (2018), adopting and applying ICT allows organisations to progress efficiently, and to adequately manage resources, as well as making communication faster.

A critical gap identified in this study is the need for additional research into the relationship between individual attitudes and the added value gained from the use of digital technologies. The lack of resources has been determined to negatively impact attitudes toward online activities, and attitudes toward technology have been found as significant predictors of digital technology usage (Haramban *et al.* 2013; Mota and Cilento 2020; Robinson 2009, cited in Merisalo and Makkonen 2022). According to Mwansa, Ngandu and Mkwambi (2025), rural areas in SA, such as Mkatazo village in the EC Province, exemplify these challenges, with significant barriers to digital inclusion. The study in the EC found most businesses are aware of the transformative potential of ICT and have a positive perception of its benefits (Lukose and Agbeyangi 2024). Education and training play a crucial role in promoting ICT adoption, a topic that has received limited attention. Small-scale businesses in rural areas often struggle to integrate technology due to staff lack of ICT literacy and technical expertise (Lukose and Agbeyangi 2024).

As a result, more comprehensive research is required to understand how individual attitudes influence ICT adoption and to identify strategies that can improve SME perceptions of digital technology benefits.

1.4 RESEARCH AIMS AND OBJECTIVES

The aim of this research was to investigate internal and external factors affecting ICT adoption by SMEs in the EC Province tourism sector, in SA. The following are the study objectives:

- To investigate the internal factors that influence the attitudes of tourism SME owners-managers to adopt ICT in the EC
- To investigate external factors likely to influence tourism SME owner-manager attitudes to adopt ICT in the EC tourism sector.
- To understand whether attitudes towards ICT adoption moderate the relationship between SME owners'-managers' ICT use and factors likely influencing their attitudes in EC tourism.
- To determine the intention by SME owners-managers to adopt ICT in the EC tourism and hospitality sectors
- To design a framework that will assist in improving ICT adoption by SMEs in the EC.

1.4.1 Research Questions

The following are the research questions of the study:

- What internal factors influence the attitude of SME owners-managers to adopt ICT in the EC tourism sector?
- What external factors are likely to influence tourism SME owners-managers attitudes towards adopting ICT in the EC?
- What are the attitudes towards ICT adoption to moderate the relationship between SME owners-managers and their ICT use in EC tourism?
- What is the intention of SME owners–managers in adopting ICT in the EC tourism sector?
- What is an effective framework to improve ICT adoption by tourism SME owners-managers in the EC?

1.5 RESEARCH HYPOTHESES

This section presents a null hypothesis (H0) and alternative hypothesis (Ha), along with a thorough conclusion made in terms of the set hypotheses. The following addresses the primary hypotheses for this investigation.

Ho1: There is no relationship between internal factors and attitude on ICT adoption by SME owners-managers in the EC tourism sector.

Ha1: There is a relationship between internal factors and attitude on ICT adoption by SME owners-managers in the EC tourism sector.

Ho2: There is no relationship between external factors likely to influence SME owners-managers computer skills and attitude on ICT adoption and SME owners-managers business performance in the EC tourism sector.

Ha2: There is a relationship between external factors likely to influence SME owners-managers computer skills and attitude on ICT adoption and SME owners-managers business performance in the EC tourism sector.

Ho3: There is no relationship between attitudes towards ICT adoption and moderate relationship between SME owners-managers ICT use in the EC tourism sector.

Ha3: There is a relationship between attitudes towards ICT adoption and moderate relationship between SME owners-managers ICT use in the EC tourism sector.

Ho4: There is no relationship between intention of SME owners-managers and business performance in the EC tourism sector.

Ha4: There is a relationship between intention of SME owners-managers and business performance in the EC tourism sector.

1.6 SIGNIFICANCE OF THE STUDY

The study's value stems from the valuable insights provided into the motivations driving ICT adoption decisions by SMEs in the tourism and hospitality sector, emphasising the positive impact of perceived benefits. The significance of this study lies in its contribution to the existing body of knowledge and its potential to inform policymakers, enabling them to make evidence-based decisions that address and align with the factors influencing EC SMEs.

Furthermore, the study contributes to a better understanding of the external factors that influence attitudes toward ICT adoption and provides practical implications for SMEs, such as leveraging competitive dynamics and supplier relationships to drive ICT adoption in the tourism sector.

The comprehensive and supportive study framework includes not only technological aspects, but also the broader business environment, skills development, and collaborative efforts, promoting successful ICT adoption among SMEs in the EC tourism sector. This thorough approach ensures SMEs have the tools and support they need to effectively integrate ICT into their operations, thereby increasing their competitiveness

Top management support (TMS) will improve senior management's understanding and acceptance of ICT. With government support and ICT infrastructure, SMEs will improve, and their financial burden will be reduced. Obtaining support will, furthermore, mean closing the skills gaps and increasing technological proficiency among SME employees through skills development initiatives. In addition, it will create a supportive ecosystem for ICT adoption and leveraging external pressures for positive attitudes through stakeholder engagement. Overcoming infrastructure barriers and creating a positive organizational culture for ICT adoption will assist SMEs, while also encourage creativity, innovation, and lifelong learning, as well as improve business procedures and performance in the tourism sector.

The conclusions of the study conducted in SA in 2013 by Mpofu, Milne and Watkins-Mathys (2013) found environmental factors such as customers, guests, suppliers, and competitors influenced ICT adoption. Involvement of owners/managers appeared to be critical in terms of business planning, ICT adoption, and purchasing decisions. Furthermore, their background experience, skills, and knowledge suggested a significant influence on ICT adoption decisions in some case studies. According to

research by Lukose and Agbeyangi (2024) in the EC, conclusions indicate that many businesses still rely very little or not at all on digital technologies, highlighting the urgent need for specialised educational programmes to increase ICT adoption. The EC study discovered, despite increased production, digital technologies were viewed as expensive, unequal, and poorly adapted to local conditions (Bontsa, Mushunje and Ngarava 2023). Prior research indicates rural EC SMEs recognise the potential value of ICT but are limited by skills gaps, cost and contextual fit concerns, and uneven external pressures, resulting in a persistent awareness-adoption gap rather than contradictory evidence.

The study of El-Gohary (2012) highlights the identified gap in the research model developed in this study, which suggests it could be expanded to include additional internal or external environmental factors derived from the literature—such as information intensity, product characteristics, security, and consumer readiness, as well as support from technology vendors—including further insights from studies by El-Gohary, within their specific context. A previous study of Mwansa, Ngandu and Mkwambi (2025) indicates additional research should be conducted using longitudinal studies and various sampling techniques to better understand the potential and constraints of 4IR for SMEs.

Conclusions from the study by Ninh *et al.* (2025) agree and indicate one main environmental factor influencing the intention to adopt ICT is competitive pressure. Rural tourism businesses must use ICT to remain relevant in the market, as they face increasing competition from digitally sophisticated businesses. In addition, Ninh *et al.* (2025) identified that understanding the specific barriers and drivers influencing ICT adoption intention in these contexts will provide policymakers, development agencies, and tourism stakeholders with valuable insights into promoting inclusive and sustainable digital transformation in the tourism industry. Analysis in a previous study by Enaifoghe and Ramsuraj (2023) demonstrates that SMEs face greater skill gaps than larger businesses, and their training efforts are typically less effective per employee. A pattern emerges from all studies reviewed: external pressure raises the stakes, internal capability determines response, and perceptions of fit mediate both.

1.7 RESEARCH DESIGN

Williams (2007) asserts researchers must be prepared to use a variety of methods throughout their research to ensure a thorough understanding and generate credible and repeatable findings. The research methodology used in this study was a mixed method, where both qualitative and quantitative methods were utilised (Flick 2018). Since the nature of the research questions determines the kind of research design (Gibson and Brown 2009), a mixed methods approach was selected, because it covered all the desired study objectives.

Using both qualitative and quantitative methods result in a more comprehensive understanding by combining detailed insights with broad data patterns. This increases the validity and reliability of the findings through triangulation. A mixed methods design enables contextualisation, in which quantitative data anchor qualitative insights within larger trends. The approach also takes advantage of complementary strengths to address various aspects of the research problem. Furthermore, qualitative findings can help to shape the design of quantitative instruments, ensuring they are based on participant experiences.

According to Gibson and Brown (2009), the process of working through a specific research focus and creating a research plan and design for that topic, is referred to as the research design process. Defining analytical interests and determining the type of data needed to investigate them, as well as how to generate these, are key components of research design. Data collection methods are divided into two categories: primary and secondary data collection. The primary stage in research can overshadow the quality of results by reducing the possibility of errors during a research project. These characteristics are important in some types of research methods, such as statistical surveys, because the information used is unique to the problem and cannot be obtained from published references (Taherdoost 2021).

Good design is necessary for good research, but research design is a challenging and frustrating process (Murray and Overton 2003). Data collection refers to various techniques for obtaining information on study variables, with the intention of using them in the data analysis phase to achieve the study results, obtain an answer to the research questions, or test the hypotheses. McLeod (1999) highlights asking insightful questions is a key component of conducting quality research; in many cases, questions have

greater significance than answers. The study question, therefore, guides a prudent research design, also influenced by the resources at hand.

The overarching goal of this study deals with ICT adoption in EC tourism SMEs with the aim to find the best solution to the research topic. In accepting the concept of methodological pluralism, it is understood the use of multiple methodologies may be required to address the research subject completely and generate reliable results. Gliner, Morgan and Leech (2017) conclude a specific research design helps to visualise the independent study variables, the levels within these independent variables, and when measurement of the dependent variable will take place.

1.7.1 The study population

According to Sekaran and Bougie (2016), a population is considered the complete group of people, events, or items of interest the researcher desires to investigate. The population of this study consists of registered owners-managers operating in tourism and hospitality businesses in the EC, located in two municipalities: Amathole and OR Tambo Municipality, and two metropolitan municipalities, Nelson Mandela Metropole (NMM), and Buffalo City Metropole (BCM). As reported by the EC Tourism Board (2019, cited in Nguza-Mduba and Mutambara 2021), the target population consisted entirely of tourism business owners, totalling 500 Small and Medium Tourism Enterprises (SMTEs).

In view of the limitations in accessing a complete database, which either did not exist or could not be shared, in compliance with the POPI Act. The researcher used a convenient sampling approach, focusing on specific SME groups in the tourism and hospitality sectors that demonstrated unique characteristics relevant to the study. This method allowed the researcher to purposefully select participants who were easily accessible and available, making it easier to identify suitable SMEs in the designated regions. Convenient sampling enables the researcher to ensure representation of specific groups of interest to the study, such as SMEs in tourism and hospitality with distinguishing characteristics. This is particularly important when the research aims to investigate specific segments, rather than generalise to a larger population.

1.7.2 Research sample size

Numerous studies, such as Greener (2011), Daniel (2012a), Campbell *et al.* (2020), and Hennink and Kaiser (2022), have attempted to explain the various aspects of sample

size; for example, the sample size for purposive or snowball sampling should depend on the research questions and objectives. Purposive sampling involves selecting specific cases for inclusion in a research study.

Generally, a larger sample size will provide better data and represent the population with fewer errors. Moreover, the size of a population is an important consideration when making sample decisions; prior to making sampling decisions, one should be aware of the population size. A bigger sample size and more resources may be required to examine a large, as opposed to a small population.

In this study, a thorough roster of 200 willing SME owner-manager participants was assembled, serving as the foundation for the current research project in the assigned region. Of the target sample of 200 SMEs, the sample for this study consisted of 114 tourism SMEs in the EC. The appropriate sample size depends on how well the sample population matches the general population.

A similar study conducted in the EC in tourism and hospitality had a sample size resembling this study. The study involved a survey of 79 Black-owned accommodation establishments and semi-structured interviews with tourism entrepreneurs (Sixaba and Rogerson 2023b). While another study in the EC used a quantitative design with 30 business owner participants (Mxunyelwa, Matarinano and Vallabh 2021). Other studies that have investigated ICT adoption by SMEs have employed sample sizes ranging from 103 to 256 (Faisol *et al.* 2022).

1.7.3 Sample design

According to Kumar (2019) and Campbell *et al.* (2020), there are two types of sampling: probability (also known as random) and non-probability (also known as unlikely). Probability sampling involves using a random method to select elements from the population, giving each element a known and non-zero chance of being selected. Non-probability sampling was adopted in this study. Blair and Blair (2014) provide a similar explanation of probability and non-probability sampling and sample design.

The use of the term "known" in the definition of probability sample design, refers to the population size being known at the time of sample selection, and the probability of any element being selected can be calculated. The term "non-zero" implies every element in the population had a chance to be selected, but not necessarily an equal chance. In certain cases, subjective selection may be necessary, and purposive sampling, a non-

probability method, may be the best option. Probability samples can be used to draw conclusions of a population using statistical techniques, such as confidence intervals and hypotheses. Results from big research using probability sampling may take up to three years to become public. Should quick judgments need to be made based on collected data, non-probability sampling may be more suitable than probability sampling (Daniel and Grimshaw 2002; Wiśniowski *et al.* 2020).

According to Emmel (2013), sampling is explicit in the planning and execution of research; it, refers to the process of selecting a population subset to include in a research study. It can be either theoretical or intended and is conducted by reflexive researchers, who aim to create and test theories regarding the social environment. The selection of the sample is influenced by the researcher's understanding of the nature and essence of the social world, as well as the evidence or knowledge required to investigate a social phenomenon and the target audience.

1.7.4 Sampling method

Non-probability sampling was adopted in this study. The study's adoption of non-probability sampling was justified by time constraints, including a short window of time for fieldwork, insufficient resources, target population accessibility, and geographically dispersed locations that required more resources (Pace 2021). The data gathering process was done more rapidly and affordably by using a non-probability sampling method. Non-probability sampling requires the population to be split into mutually exclusive subgroups. Interviewers or other data collectors then approach members of the subgroups to participate in the study, until a predetermined number of elements from the subgroups are sampled (Daniel 2012b). As a kind of purposive sampling, convenient sampling focuses on employing stratification to draw in a sufficient number of subpopulations with a variety of characteristics. Through this type of sampling, researchers determine how many people with a particular characteristic should be sampled and guarantee inclusion of a sufficiently large sample of people with a rare characteristic (Wang *et al.* 2024).

1.7.5 Sample technique used

In the opinion of (Daniel 2012b) and Zickar and Keith (2023) convenience sampling involves selecting participants based on accessibility or availability. Convenience sampling is a simple and affordable way to gather data in circumstances when it could

be difficult, expensive, or time-consuming to reach a larger population. While it streamlines the sampling procedure, it also introduces some bias, because participants are chosen based on their accessibility or availability, potentially deviating from the characteristics of the general population. Convenience sampling was utilised in this study, where the chosen participants for the study were SMEs in tourism establishments only, as they fit the study's inclusion criteria, and were conveniently selected from the EC province. The justification is it was swift and simple to obtain an easily accessible sample in the EC; hence convenience sampling was employed. In addition, the choice was based on resource scarcity, time constraints, and logical barriers to reaching SMEs.

A snowball sampling technique is explained by Daniel (2012b) and Zickar and Keith (2023) to involve identifying initial participants who meet the criteria for inclusion in the study. Snowball sampling is a useful technique for studying social groups whose members conceal their identities for various reasons, such as illegal immigrants, religious members, and activists. As the process continues, the number of individuals should increase exponentially, resulting in a larger sample size. In the same vein, Zickar and Keith (2023) advise snowball sampling involves identifying potential participants who meet specific inclusion criteria and sharing study information with them.

In this study, since these business owners-managers know one another and operate in the same area, snowball sampling was used, particularly in the areas where no database was provided. The rationale behind the use of snowball sampling meant the research team could progressively increase the sample size, because these participants were asked to recommend or nominate other pertinent SMEs in their network.

Using convenient sampling also allowed the researcher to obtain data from participants knowledgeable on the topic under study, thereby better understanding the business characteristics and personal attitudes of EC urban and rural tourism SMEs, including external and internal environmental factors, attitudes, and intentions of the SMEs. This approach facilitated an in-depth examination within the constraints of limited resources, time, and logistical barriers. The convenient sampling respondents for this study were selected from both rural and urban EC areas, specifically Umtata, Butterworth, Dutywa, East London, and Gqeberha.

1.7.6 Data collection instrument

A questionnaire is the most common method of gathering quantitative primary data (Malhotra 2011). A questionnaire allows for quantitative data collection in a standardised manner, resulting in internally consistent and coherent data for analysis. The questionnaire is the main primary data collection tool for quantitative research (Ibert *et al.* 2001; Hennink and Kaiser 2022). Stuart, Maynard and Rouncefield (2015a) and Knott *et al.* (2022) add a set of questions is used in structured interviews.

Malhotra (2011) clarifies questions can either be structured or unstructured. Unstructured questions, also known as open-ended questions, enable respondents to answer in their own words and are ideal for initial inquiries, as they allow for the expression of broad views and ideas. They can be useful in determining underlying motives, beliefs, and attitudes (Foley *et al.* 2021). Semi-structured interviews were, therefore, used in this study to allow owners-managers to elaborate further. To meet the study objectives, data were gathered through traditional survey questionnaires and semi-structured interviews.

1.7.7 Data collection

The study utilised quantitative data collection methods by distributing questionnaires to SMEs and collecting them on completion. Additionally, the researcher used field assistants who dropped off questionnaires at the workplaces of participants who agreed to complete them immediately. The fieldworkers were also asked to collect questionnaires later, at a time convenient to those unable to complete them immediately. This was done to accommodate busy schedules. The use of questionnaires allowed for the collection of numerical data, a common technique in quantitative research (Stuart, Maynard and Rouncefield 2015b; Dubé *et al.* 2023).

To gain informed permission from participants, proper procedures included a letter for information and consent, as well as ensuring participants understood their participation was voluntary and confidential (Polit and Beck 2017; Wu *et al.* 2024a).

1.8 DATA ANALYSIS

The Statistical Package for Social Sciences (SPSS) is a versatile system for data management and statistical analysis. In this study, instruments were coded, keyed, and edited by means of SPSS version 28, and Structural Equation Modelling (SEM) -

Analysis of Moment Structures (AMOS) 28, for the quantitative survey (numerical). SPSS 28 was used because of its extensive statistical tools, user-friendly interface, and advanced features required for both descriptive and inferential analyses. SEM and AMOS were used to model complex relationships, conduct confirmatory factor analysis (CFA), and test theoretical models using path diagrams. Combining SPSS 28 and SEM-AMOS ensured thorough and robust data analysis, allowing for detailed statistical tests and effective measurement model (MM) validation.

The qualitative (non-numerical) survey instrument for the interview schedule was coded using NVivo version 12 software. Hilal and Alabri (2013) posit that NVivo, a computer software package for Qualitative Data Analysis (QDA), offers numerous benefits and has the potential to greatly enhance research quality. Thakur and Das (2023) assert SPSS is a valuable tool for market research, due to its ability to provide relevant data for decision-making purposes. SPSS is, furthermore, a popular tool for data analysis, statistical modelling, and predictive analytics in social sciences.

1.8.1 Quantitative data analysis

In this study, a comprehensive range of statistical tests was applied for data analysis. Descriptive statistics, such as mean and standard deviations, were used to summarise data, while frequencies were presented in tables. Both Exploratory Factor Analysis (EFA) and CFA were employed to validate and assess model reliability. In addition, multiple regression analysis was conducted to test seven hypotheses, examining relationships between independent and dependent variables, with SEM utilised to fit the theoretical model, providing insights into complex interrelations.

In this study, the quantitative survey (numerical) data were coded, keyed, and edited using SPSS 28, STATA, or R, and analysed with AMOS 28. The statistical software programs, such as SPSS and AMOS, facilitated the processing and interpretation of numerical data, enabling robust statistical analysis.

1.8.2 Qualitative data analysis (QDA)

The study used deductively coded data, collected during unstructured interview sessions by means of semi-structured questions, which thus entailed systematically categorising transcribed data into distinct codes, based on observed patterns and themes. Data coding begins with selecting the coding unit (Sekaran and Bougie 2016; Dalkin *et al.* 2021), achieved by assigning a number to each participant's responses,

with responses stored in a database. The labelled codes given to units of text were, thereafter, grouped and turned into categories.

The study's qualitative technique was based on eight semi-structured interviews. The rationale for this decision was to capture essential information from the participants, with selected SME owners-managers from the tourism sector well-represented. The data analysis of qualitative information from documents from interviews, required the data format to comprise compatible text files. The data were imported to the NVivo project, allowing nodes to be created for storage of coding references, based on the themes and subjects the researcher anticipated appearing in the data. Nodes were generated automatically by NVivo's auto-coding feature.

To see how nodes and themes relate to one another, concept maps and mind maps were made. The researcher also ensured the coding was thorough and consistent, improving the analysis by reviewing the coding and nodes on a regular basis. The process further involved splitting up big nodes, merging similar nodes, or creating new nodes. The findings were interpreted by synthesising coded data and interpreting the results. Inferences and deductions were then made, according to the relationships and patterns found during analysis. Once the findings were completed, models, visualisations, and coding reports were exported from NVivo. These results were used in the research presentation to bolster the written analysis and conclusions. Through NVivo the researcher was able to efficiently analyse qualitative data in an orderly and comprehensive manner, resulting in solid and perceptive research findings.

1.9 PILOT TEST STUDY

A pilot study was done to test for any problems with the measurement instrument (survey questionnaire) to check whether it was compatible with the overall study. The instrument was tested to check for any missing information using five colleagues from the department of Entrepreneurial studies and Management at the Durban University of Technology (DUT). According to Riley and Love (2000), this is an easy way of examining whether the intended method(s) meets the research objectives. Moreover, it permitted the researcher to develop a series of questions that maximise opportunities for securing the views of the respondents.

1.10 VALIDITY

According to Polit and Beck (2017) and Arcos, Hausman and Storm (2023), validity in research refers to the research findings and degree to which they can be generalised to other populations or situations. Validity can be assessed in different ways, including internal, external, construct, and statistical conclusion validity. Research needs to be valid and reliable; to check validity there should be a relationship between things. Validity means the measurable represents what it is supposed to represent. Nonetheless, reliability is crucial, which means the test, model or measurement is consistent, reliable, and supplies the same answer at different times (Fox and Bayat 2008; Ahmed 2024).

Leedy (1993) explained validity deals with the soundness and effectiveness of the measuring tool. In the standardised test, validity will raise questions such as: what does the test measure, does it measure what it is supposed to measure, how well, how comprehensive, and how accurately does it measure? There are many types of validity such as face, criterion, content, and construct validity, as well as internal and external validity. The instrument-measuring tool is, therefore, used to see whether one is measuring what is supposed to be measured. Validity is focused on the authenticity of the cause-and-effect relationships (internal and external). The set of questions developed is a measuring tool to assist in tapping the concept set out in measuring and not something else (Sekaran and Bougie 2016).

1.11 RELIABILITY

The process of assessing study findings and their validity is called reliability (Welman, Kruger and Mitchell 2011; Hartono *et al.* 2023). The question to be answered to assess the reliability of the findings is whether the evidence and conclusions will hold up to the strictest examination. Mathers, Fox and Hunn (2009) advise reliability is the degree to which a measurement yields consistent outcomes. It also serves as a prerequisite for validity.

Stafford (2006) and Haq *et al.* (2023) state, in reference to measurement concerns, dependability is often defined as the correctness or trustworthiness of a measurement. Furthermore, when discussing measurement issues, consistency and stability are frequently used. On the one hand, the degree to which every component of a test or every variant of a test measures the same thing, is known as consistency. On the other

hand, the degree to which a test assesses the same thing under various conditions or at different periods, is known as its stability. In addition, test scores are what are referred to by a reliability coefficient, not the test itself. Therefore, what matters in measurement is the consistency and stability of participant scores. A reliability test was done in this study.

1.12 ANONIMITY AND CONFIDENTIALITY

Obtaining informed consent from participants, guaranteeing confidentiality and privacy, avoiding injury or exploitation, and conducting research with integrity and honesty are all ethical principles. There should be confidentiality of the data obtained by the researcher (Lincoln and Guba 2013; Ligtenberg, Stolper and Molewijk 2024). Therefore, the researcher informed the participants that the information was confidential, and their identities protected. The respondents were advised prior to their participation in the study regarding the nature of the study, their involvement was voluntary, and they could withdraw from the research at any time, with confidentiality and anonymity guaranteed.

According to Polit and Beck (2017), obtaining informed permission is a crucial ethical aspect in research to preserve participant rights and wellbeing. The correct procedures were used to gain informed permission from participants, while also ensuring the voluntary and confidential nature of their participation was understood (World Medical Association 2013; Shaw 2023). Therefore, for this study, proper ethical procedure was adhered to.

A request was made to the DUT Faculty Research Ethics Committee (FREC) to conduct the research, and a Clearance Ethical Certificate was granted. The researcher also obtained permission from the EC Department of Economic Development and Environmental Affairs (DEDEAT), to carry out the research. The survey questionnaires used were accompanied by a covering letter from DUT that explains the aim of the study, its importance, and stressed the data were used for the benefit of small business entrepreneurs and the ethical clearance certificate (see appendix).

1.13 LIMITATIONS OF THE STUDY

The study was limited to only the owners-managers in the tourism and hospitality sector of the EC province.

The limitations are as follow:

The study may have a limited sample size, which may restrict the generalisability of the findings to a larger population and may thus represent only the areas under study and not all regions in SA.

Sampling bias, due to the non-probability convenience sample, means the sample selected for the study may not be representative of the entire population of SMEs, potentially leading to biases in the results. As a result, the sample may not be representative of SMEs in the district municipalities, in the EC province, or SA. Furthermore, convenience sampling may introduce biases, because it does not use random selection, which could affect the findings' generalisability. Time constraints meant the lack of time for data collecting or study duration may impact the research depth and scope, because there was insufficient time to prolong and wait for more responses from small businesses.

With regard to data accessibility, access certain data was problematic as it is held by institutions or authorities. It was, furthermore, difficult to obtain data on small businesses from authorities, due to the new Protection of Personal Information (POPI) Act, because contact information is not permitted to be shared. This restricted access to data limits the study's thoroughness.

Research funding was insufficient for this study, carried out in rural locations, which may impact the study size and scope. The financing was insufficient for the areas to be extended and stayed in longer.

Lockdowns, travel restrictions, and social isolation policies during the pandemic may have hampered or delayed data collection efforts, resulting in inaccurate or inconsistent data. The preference of some SMEs for online interviews over in-person meetings was also mentioned.

In respect of the limitations, to ensure the study's contributions to the body of knowledge are accurate, pertinent, and well-informed, these restrictions were noted. The scientific study, with the literature review, will assist in triangulating the existing evidence of

factors that influence SME ICT adoption. The findings of this study could contribute to improved comprehension of ICT acceptance.

1.14 OVERVIEW OF CHAPTERS

The chapters that follow were sequenced in a manner that seeks to provide the reader with a logical understanding of the study overview.

Chapter 1: The overview of the study

This served as an introduction to the research problem formulation. The introduction to the study is followed by an outline of the research problem, and a literature review on the SME definition, ICT adoption, and summary of the tourism sector in SA. The aims and objectives provided the rationale for the study, while the research methods and design explained the scientific approach utilised and the structure of the entire thesis.

Chapter 2: Literature review: Background and introduction of the study

The chapter offers a narrative explaining the concepts and literature from different scholars regarding, for example, the role SMEs play in terms of contributing to the Gross Domestic Product (GDP) of the country and creating jobs. Government policies that support businesses, particularly in the tourism sector, are also highlighted as crucial in providing the necessary infrastructure. As tourism is a rapidly growing sector worldwide, and SA a popular tourist destination, policies that can help businesses in the sector to flourish have become necessary for survival of the SME tourism sector, with the chapter touching on existing policies. ICT use is becoming increasingly important for businesses; the chapter thus shows the importance of supporting small and medium enterprises (SMEs) to enable their adoption of ICT and improving the sustainability of their businesses.

Chapter 3: Literature review: Internal/External factors and attitude of EC tourism SME owners-managers regarding ICT adoption

The chapter constitutes the literature review focused on the internal and external factors, as well as SME owner-manager attitudes on ICT adoption that influence business owners to adopt ICT, in addition to the theoretical framework used. The various aspects raised by different authors will provide a better understanding of the business owners, in line with the study objectives.

Chapter 4: Research Methodology

This chapter discusses the methodology utilised in the study, detailing the process followed. It indicates the research methodology used, the research design, data collection and ethical considerations.

Chapter 5: Findings, interpretation, and discussion of the results

In this chapter the interpretation of the findings of both qualitative and quantitative data is presented, combining a full spectrum of the findings gathered, in relation to the study aims and objectives. The findings are presented in a similar, logical order and further assessed in conjunction with the secondary data, tested in relation to the generated hypotheses.

The chapter presents critical discussions and analysis of the results from the findings, with key findings from the analysis discussed using a literature review to justify the statements and implications.

Chapter 6: Conclusions and recommendations

This chapter provides a comprehensive synopsis of the study conclusions, providing in-depth recommendations for practise, which can be supportive and beneficial to SMEs. It presents a model as major contribution towards the body of knowledge on SMEs in tourism, with this business framework for the effective use of ICT for tourism SMEs, proposed in the EC province.

1.15 CONCLUSION

This chapter offered an outline of the study background, provided the problem statement, aims and objectives of the study, as well as the rationale and the research methodology. Improved comprehension regarding the vitality of the SME environment, including their contribution to the GDP in SA was provided, while emphasising the need for SMEs to be geared and adapted to the changing environment of the 4IR. It also indicates tourism as a service product, which makes it crucial that the business sees ICT as an asset, not a liability to the business. For businesses to survive and compete fairly in a global context it is crucial that they utilise ICT.

Chapter two will explore the internal and internal factors that influence SME owners in adopting ICT. The various aspects raised by different authors will enable a better understanding of the business owners in the tourism and hospitality sector.

CHAPTER TWO

THEORETICAL FRAMING OF THE STUDY

2.1 INTRODUCTION

Two pertinent theories were incorporated into the study, the Theory of Planned Behavior (TPB) and the Technology Acceptance Model (TAM). These theories make sense because they concentrate on attitudes and behaviour, which helps to explain why SMEs might use technologies. Perceived utility and business benefits impact their adoption, which is consistent with the study goals. This section investigates relevant theories regarding ICT adoption in tourism SMEs. These theories are integrated with the study's empirical findings.

2.2 RELEVANT THEORIES FOR THIS STUDY

The following section identifies the theories relevant to this study. The Technology Acceptance Model (TAM) and Theory of Planned Behaviour (TPB) have been utilised in this study ensuring congruence between the study aims and objectives.

2.2.1 Technology Acceptance Model (TAM)

Elshafey *et al.* (2020) is of the view the TAM assumes two convictions determine the behavioural intent of a person to make use of a scheme. One is perceived usefulness (PU), defined as the degree to which a person trusts his or her job performance will be enhanced by using this method. Second is the perceived ease of use (PEOU), defined by the degree to which an individual trusts that it will be free of effort to use this device. The impact of external influences (for example, preparation, device features and implementation procedures) on the intention of use are believed to be intended by perceived utility (PU) and PEOU (Venkatesh and Bala 2008, cited in Elshafey *et al.* 2020).

The TAM theory, however, only tests the behaviours of consumers regarding the use of new technologies at a single point in time. Another hypothesis is that the model for confirmation of expectations is built based on the model of customer satisfaction/dissatisfaction Oliver and Burke (1999, cited in Hsu, Yu and Wu 2014), which means the decision to disconfirm influences satisfaction. These options refer to the discrepancy between user perceptions prior to using the technology and actual

output of the technology after using it. Therefore, it is crucial to understand the behaviour of SME owners-managers in the EC, for the benefit of their entities.

Attitude is deemed the most vital factor in terms of ICT utilisation, which successively, are directly prejudiced by the external variables encompassing the appearances of the system. Even though TAM is extensively accepted and adopted by numerous researchers, others also denounce it for not considering other perceptive practices to end-user behavioural selections. Notwithstanding the restriction, TAM is an extensively utilised model in the prediction of technology acceptance (Seth *et al.* 2019).

Fahriawan (2020) explains the technology appears to be adopted, since it offers benefits in the form of improved productivity and effort performance, as well as reliability and validity of the TAM model for individual measurements. The TAM model focused on the perception/attitude of SME owners regarding behavioural intentions towards ICT adoption, which means ICT adoption is related to ease of use and usefulness (Fahriawan 2020). When townships view ICT as complex, the probability is that SME owners-managers will not adopt or use these ICTs (Bvuma and Marnewick 2020). Therefore, there are benefits for adopting ICT in a business and, using ICT, a business may achieve better performance.

According to Skafi, Yunis and Zekri (2020), there are three adoption community predictors. Groups are divided according to individual characteristics, such as individual creativity, as well as internal and external organizational factors, for instance the company size, available resources and the procedures for dealing with ICT. Among these models, the important common point is the socio-technical perspective on which each paradigm is based. In other words, each model has shown empirically that successful IT adoption is not only a technological factor, but also a mixture of technology, individuals, culture, and aspects correlated with the climate; (Skafi *et al.* 2020).

These technical features do not, however, stress the subjective characteristics in the minds of decision-makers, focusing on the main, objective dimensions of technology instead. Therefore, researchers, such as Tornatzky and Klein (1982), Goldman (1982), and Holloway (1997) have proposed theories on the relationship between innovation attributes and individual characteristics. This suggests the likelihood of SMEs adopting

cloud computing is heavily influenced by both market dynamics and their employees' specific IT skills and characteristics (Skafi *et al.* 2020).

In the view of Lin, Jhan and Tseng (2019), TAM is not the only theory used in several studies on the acceptance level for new technology but has also been the operative vehicle for estimating in explaining the individual's intention to use new technology and information. To date, it remains a popular theme of many research programmes, owing to the adequate supportiveness on the inclusive outcome for the theory (Lin *et al.* 2019).

Notwithstanding the tributes to the theory, it is too general in nature and cannot provide sound interpretation for advance mobile services and technology. Boucher (2019) agrees challenges are presented in terms of devices such as desktops, laptops, and tablets and access services such as dial-up and broadband cable. This identifies a loophole, more specifically since most businesses use these devices to do businesses, particularly the portable devices. Researchers propose expanding the scope to consider other variables to reinforce the research model. A further suggestion is to customise as per individual industries through TAM and not have only a one-size-fits-all solution. Alternatively, other measuring influences may be put in place and be debated, together with the TAM, to clarify the behaviour of public and consumers in a further effective way (Linan 2018).

In the view of Nazir and Khan (2022b), PU is defined as the degree to which each individual believes a system, when implemented effectively, will improve their performance and play a positive role in the organization. It demonstrates how the use of technology in business can increase user productivity, performance, functionality, and benefits (Davis, Bagozzi, and Warshaw 1989; Idris *et al.* 2017; Kala Kamdjoug *et al.* 2021, cited in Nazir and Khan 2022a).

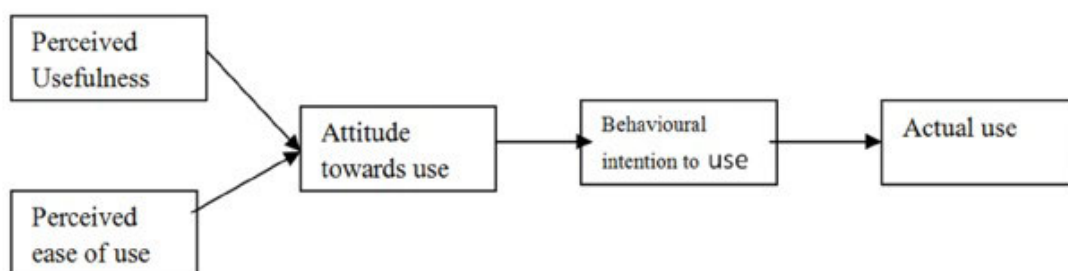
It has been suggested technology users in businesses will use the technology if they believe it will eventually be to their benefit. PEOU, the second TAM dimension, is defined as the degree to which each person believes using a technology is free of physical and mental effort (Davis *et al.* 1989). Awa, Awara and Lebari (2015) discovered, while technology can benefit individuals by providing competitive advantages, several factors impede the successful adoption of ICT in organisations. As a result, this study employs TAM at both the organizational and individual levels to uncover entrepreneurial

(individual) intentions to use and adopt ICT that may be beneficial to SMEs when both PU and PEOU are considered.

Najib and Fahma (2020) posit several previous TAM studies have consistently revealed PU has a strong influence on the intention to use technology. According to TAM, PEOU influences perception of usefulness, because the easier it is to use a system, the more useful it is. The relationships between independent variables, such as PU, PEU, and resources, are considered dependent variables, because they have a direct impact on behaviour. Additionally, in this study the social factors and external influences are investigated, as they influence behavioural intentions and guide SMEs through the adoption process.

This combined approach allows us to better understand how internal attitudes and external pressures influence technology adoption in SMEs. Some literature also shows the role of government and IT developers further affects the SME's decision to adopt technology to compete with large-scale businesses (Nazir and Khan 2022a). In addition, customers similarly contribute to shaping decision-making on technology adoption. Figure 2.1 depicts the extension to TAM.

Figure 2.1: Original technology acceptance model (TAM) (Davis 1989)



Source: Tella and Olasina (2014)

Davis and Warsaw (1989, cited in Igwe, Eбенуwa and Idenedo 2020: 47) advise "Perceived usefulness" (PU) is the degree to which a person assumes using a particular method can boost job efficiency. Yu and Tao (2009) clarified that conduct is a collective behaviour of individuals, because a company comprises a group of individuals. Therefore, the PU of TAM at the business level can be defined as the number of

individuals and benefits achieved by the business using the latest technology, subjectively judged in businesses by key decision-makers.

Compared with other conventional technological alternatives, it tests how powerful, productive, fast, and less risky, as well as reliable ICT is. TAM is a theory of information management that models how a technology is adopted and used. The model suggests that when users are intending to use a modern technology, they need to assess the drawbacks and evaluate the effectiveness against many parameters (Igwe *et al.* 2020).

According to Igwe *et al.* (2020) PEOU is the degree to which a person feels it would be effortless and less stressful to use a specific device (Davis 1989). It can also be seen as the degree to which the new technology can be used effectively by a firm. In addition, PEOU reflects and calculates monetary expenditure, training time for workers, obstacles to technology switching and maintenance cost of using modern engineering. Igwe *et al.* (2020) assume PU and PEOU have a huge influence on SME adoption of ICTs. Therefore, SMEs use technology as they see it useful, particularly since the SMEs in tourism depend on many stakeholders from big to small companies, with intricate and complex networks.

2.2.2 Theory of Planned Behaviour (TPB)

In the opinion of Altinay and Taheri (2018), TPB and prospect theory are informed by the psychological perspective. Ju *et al.* (2018) explain TPB concerns attitudes, norms, and perceived behavioural mechanisms, almost a precise behaviour, forming a function to envisage individual behaviour, particularly for premeditated and planned behaviours.

Linan (2018) conceptualises the reasons for the entrepreneur to adopt are based on the inspiration aspects that consist of beliefs and results. At the same time, the theory does not reveal the motives entrepreneurial behaviour is pursued. This is because TPB cannot differentiate beliefs and results why people opt to follow out of preference and true self, and beliefs and results that people are obliged to select out of commitment. As the theory assumes humans are rational and make systematic decisions based on available information, unconscious motives are not considered. This shows these scholars are aware of the theory's flaws and that it 'falls short of the mark'.

Meng and Cui (2020) agree, even though TPB has been attested to as a handy framework in forecasting human behaviour, numerous scholars affirm the theory

requires further broadening, in addition to introducing a new important variable or transforming fundamental associations grounded in a precise state.

According to Ju *et al.* (2018), TPB offers a helpful theoretical context for the prediction of expected behaviours. In TPB, Ajzen (1991, cited in Ju *et al.* 2018) states behaviours are the product of behavioural attitude, subjective norm, and perceived regulation of behaviour output. Whereas attitude towards behaviour is the perception and assessment of behaviour by the individual, subjective norm refers to the interpretation of social pressure by the individual to perform the action and the degree to which it is appropriate to others to perform it.

TPB is seen as a complete model that describes how several variables contribute to predicting the execution of planned behaviours (Ajzen 2001, cited in Ju *et al.* 2018), as all other planned behaviour histories can be channelled through the planned behaviour, according to the model's three variables (Conner and Armitage 1998, cited in Ju *et al.* 2018). The rationale of the theory of planned actions is drawn on to theorise three factors can jointly activate the Counterproductive Work Behaviour (CWB) of employees: abusive supervision, CWB norms of the workgroup, and because of their respective impacts on the positive attitude assessment of CWB by personnel, personal control felt normative pressure to execute CWB, and perceived ease of conducting CWB (Ju *et al.* 2018).

Ajzen (1991, cited in Al-Jubari, Hassan and Liñán 2018) indicate, in using the TPB, entrepreneurial intention is influenced through attitudinal factors that comprise beliefs regarding an outcome. Yet, the TPB does not explicitly indicate the reasons why entrepreneurial behaviour is pursued (Deci and Ryan 1985, cited in Al-Jubari *et al.* 2018). This is because the TPB does not distinguish between beliefs concerning outcomes that people choose to pursue out of volition and true self, and beliefs on outcomes that people are compelled to accomplish out of obligation.

As reported by Carfora *et al.* (2019) the TPB posits that a person's intention to perform a certain behaviour is influenced by their attitude towards the behaviour, subjective norms, and perceived behavioural control (PBC). The purpose behind TPB indicates incentives and cognitive planning for engaging in the behaviour, and is unwavering through three key perceptive aspects, the attitude, subjective norm, and PBC. Attitudes can be either be positive or negative appraisal of behavioural consequences.

Subjective norm imitates the alleged social pressure in the behaviour, whereas PBC is correlated to the individual's insight of his/her capability to accomplish the behaviour, Erul, Woosnam and McIntosh (2020) add that TPB progresses the perception that an individual's intention to participate in a specific behavioural control is a principal element in the theoretical model, enlightened through attitudes, professed behavioural control and personal norms.

Taylor (1995, cited in Seth *et al.* 2019) explains TAM and TPB have been innovative theories in determining the power level of adopting technology and allow a better understanding of the user's purpose to accept definite technology. Despite well-established theories, they have not provided a concrete prediction of user behaviour in terms of adoption, and the results frequently fail to focus on practical outcomes.

2.2.3 Reason for using TPB and TAM

The reviewed literature and development of the research questions for this study have provided in-depth information and a foundation of theories that have informed this study. Bano and Siddiqui (2024) highlight the use of smart technologies in the hospitality and tourism sectors is a major innovation that affects how people behave. The TAM, TPB, and trust have thus been combined to study consumer adoption of innovations and intentions regarding smart technology use. Therefore, in this study these theories will assist to determine the behaviour of the tourism SMEs owners-manager and the intention in adoption of ICT in the EC. Nazir and Khan (2024) explain the TAM is used in the manner suggested by earlier studies to close this gap. Additionally, a new category called "entrepreneurial (individual) characteristics of owners-managers" is added to qualitatively investigate the different factors associated with SME adoption of ICT.

The TPB contains certain aspects pertinent to this study that will improve the conceptual framework and provide a theoretical basis for understanding the link between the independent and dependent variables, which are attitudes toward behaviour and actual behaviour. Individual behaviour is impacted by attitudes, subjective standards, and perceived behavioural control, according to TBP. Therefore, in the context of the conceptual framework for this study, top management (TM) attitude, stakeholders (SH), government support (GS), and competition and supplier (CS) attitude may be viewed as a measure of attitude (ATT), while perceived behavioural control could be viewed as

a measure of business performance (BP). TPB might thus be utilised to explain the beneficial effects of TM, SH, GS, and CS on ATT, as well as the beneficial effects of BP on ATT.

In this study, TAM used the PU, Performance Expectancy (PE), and PEOU influences on entrepreneurial intentions to use and adopt ICT in SMEs. This triangulated approach offers a thorough understanding of entrepreneurial technology adoption in the SME context, by capturing the complex interplay of individual beliefs and attitudes, as well as considering outside variables that may moderate the relationships between TPB and TAM constructs. TAM and TPB are the theories founding the relationships between the conceptual framework independent and dependent variables, based on the above theories. In the empirical portion of this study, the theories were used to develop hypotheses and guide data analysis.

2.3 CONCLUSION

There are two chosen theories relevant in this study, namely TAM, TPB. The theories focus on the external and internal aspects concerning ICT adoption by SMEs in tourism, providing guidelines for the framework and research methodology utilised by this study. The theoretical backbone of the literature review research was formulated to enhance the conceptual framework for ICT adoption by SMEs in the tourism sector for this current research. Different theories were integrated in comprehending the framework that works best for SMEs in ICT acceptance. The theories used in this study underpinned the congruence between aims and objectives, the reviewed literature, and development of the research questions for this study. The in-depth information obtained provides a craft of theories that informed this study.

The following chapter discusses the literature on ICT adoption, factors that contribute to successful implementation, whether internal or external, and tourism SME owners'/managers' attitude.

CHAPTER THREE

LITERATURE REVIEW

3.1 INTRODUCTION

This chapter provides an overview of the external and internal components, focusing on the forces that drive SMEs to embrace ICT in the tourism sector. It also emphasises the challenges and barriers to accepting ICT. As SMEs are seen to be the major drivers in assuring technological innovation, it is critical for the owners or managers of SMEs to have a positive mindset in embracing the smart tools that will help them be competitive to e-market their firm. Having the tools will allow SMEs to be more competitive and sustainable.

The internal focus has been entirely on the management team, employees and the business's strategic alignment to innovativeness, as well as the capabilities necessary to support SMEs. Along with discussing the barriers to ICT, the benefit and influences that encourage the acceptance of innovation will also be covered. The external component has already been shown to include external elements such as the government, suppliers, competing companies, and customers. These components are fundamental to a company and have a major impact on how competitive it can be. The final section of chapter three emphasises the necessity of ICT adoption within the company and explains why this adoption is essential to its success.

3.2 INTERNAL FACTORS THAT INFLUENCE ICT ADOPTION IN SMEs

The successful adoption of ICT within enterprises depends on the backing of top management. When the leadership team actively supports and promotes ICT integration, it creates a good atmosphere and inspires staff to accept technology advancements. According to Lin *et al.* (2024), IT competitive advantage and capability can be enhanced by IT infrastructure and IT human resources. Hence, IT plays a critical role in any business associated with EC tourism SMEs.

Nazir and Khan (2022a) state support from top management facilitates the acquisition of sufficient human and financial resources for the execution of ICT projects. Additionally, it encourages a culture of creativity and openness to new technologies, inspiring workers to adapt and effectively use ICT. Organisations may overcome change

aversion, match business goals with ICT activities, and harness the advantages of technology to increase productivity, competitiveness, and overall business success (Nazir and Khan 2022a; Kallmuenzer *et al.* 2024). Attaran, Attaran and Kirkland (2020) assert technology and labour force changes necessitate an agile, collaborative, and competitive workplace that also lowers IT and business operating costs.

3.2.1 Concept of ICT business in the SME sector

According to Shahadat *et al.* (2023), ICT improves the competitiveness of SMEs in emerging economies and streamlines decision-making processes. Adoption of digital technology, particularly ICT, can expand the ability of SMEs to flow information. It can also reduce operational costs and improve quality to gain a competitive edge Zide and Jokonya 2022, cited in Shahadat *et al.* 2023). Therefore, using ICT will assist the SMEs in EC tourism with the nature of information flow, internally and externally, and make informed decisions with less cost.

Bayo-Moriones *et al.* (2013 cited in Shahadat *et al.* 2023) found investing in ICT improves organisational capability and significantly impacts internal and external communication. In the twenty-first century, businesses rely heavily on technology to manage all aspects of their operations, including network connectivity, e-commerce, financial management systems, and application development.

Dassanayake and Krishnanunni (2023) add that IT uses various technologies to generate, analyse, process, and evaluate data, which is crucial for business performance. In addition, office automation can reduce the need for additional employees, while information optimisation has reduced business costs for producing various goods and services. Hence, ICT acceptance is crucial in tourism SMEs, as technology use in small and large businesses may positively impact the businesses in all spheres.

In the opinion of Amron *et al.* (2019, cited in Majengo and Mbise (2022: 29), top management is a group of executives who set policies and make decisions for the organization. Its assistance is critical to the successful implementation of cloud computing in the enterprise. It is critical to have top management support to create a healthy organizational climate and to give sufficient resources for SMEs to adopt new technology breakthroughs (Karkonasasi *et al.*, 2016). According to Kim *et al.* (2017), senior management support is more crucial than resources or IT capacity where

adoption is concerned. As a result, without senior management backing, the decision to embrace SaaS is unlikely to be successful (Martins *et al.*, 2016).

3.2.2 Top management support (TMS) for ICT within the business

In the opinion of Amron *et al.*, 2019 and cited in Majengo and Mbise (2022: 29) top management is a group of executives who set policies and make decisions for the organization. Its assistance is critical to the successful implementation of cloud computing in the enterprise. It is critical to have top management support to create a healthy organizational climate and to give sufficient resources for SMEs to adopt new technology breakthroughs (Karkonasasi *et al.* 2016). According to Kim *et al.* (2017), senior management support is more crucial than resources or IT capacity when it comes to adoption. As a result, without senior management backing, the decision to embrace SaaS is unlikely to be successful.

In the view of Chertchom *et al.* (2019), in order to understand the internal and external factors, there is a need to determine the characteristics of the individual/owners of an organization, along with issues and external variables, referred to as system and system development approaches. The owner's level of commitment and encouragement to use ICT is supported by the role of the owner or top management. Furthermore, the organisational context of a company significantly influences how it decides to implement and integrate ICT. Top management backing (TMS), ICT skills of the personnel, and organisational innovation orientation facilitate successful acceptance of an innovation (Premkumar 2009; Wang, Mao and Archer 2012; Willaddara 2023). Therefore, it is vital to know whether the owners-managers are inclined to accept ICT in tourism SMEs.

In the opinion of Karkonasasi *et al.* (2016), Amron *et al.* (2019) and Majengo and Mbise (2022), top management comprises a group of executives who set policies and make decisions for the organisation; such as successful technology implementation, for instance, cloud computing in the enterprise. This makes it critical to have TMS in creating a healthy organisational climate and provide SMEs with the resources required to adopt new and inventive technology. This means strategic involvement of top management is crucial. According to Martins *et al.* (2016) and Kim, Jang and Yang (2017), senior management support is more crucial than resources or IT capacity with regard to adoption. As a result, without senior management backing, the decision to embrace ICT is unlikely to be successful. Hence, the resources necessary for EC

tourism SMEs to embrace ICT as business, depend solely on executive management for strategic goals.

Lutfi (2022) states the significance of TMS in IS innovation implementation stems from its resource-intensive character; material and managerial resources are required for IS application and infrastructure development, as well as for supporting workers' utilisation. Sharma and Yetton (2003) add the representational activities and support by managers contribute to implementation success, since these acts legitimise innovations, demonstrate management commitment to implementation success, and persuade end-users to extend their efforts toward innovation adoption. In essence, managers' actions and support contribute to the creation of a favourable climate for innovation adoption, resulting in successful implementation throughout the business. Equally so, the resource allocation by management to ICT will bear benefits and productivity of employees on the business in EC tourism SMEs.

According to Yu *et al.* (2022), it has also been recognised successful adoption of Management Innovation (MI) depends on the acceptance and implementation of MI by employees. Top Management Teams (TMT) is a concrete resource that assists employees in developing the ability to adopt MI. TMT promises to provide cash, time, and other organisational resources to support employees in implementing MI are common examples of tangible resource support (Lee *et al.* 2014; Abbu, Fleischmann and Gopalakrishna 2021). Therefore, TMS is essential at a strategic level, so they can make all kinds of resources available to SMEs. In addition, Lutfi (2022) emphasises the importance of providing users with training and help when they encounter problems while utilising the system. As employees lack training, it is essential for SMEs in tourism in the EC to have ICT skills.

The adoption of e-business is branded by the manipulation of entrepreneurial opportunities, according to Chege, Wang and Suntu (2019), based on the value added for the business, done in consideration of the long-term values and significant sustainability. Al Omoush, Al-Qireem and Al Hawatmah (2018) indicate senior management support, organisational culture, and staff expertise are all parts of the organisational context. The role of tourism management systems, essential to the strategic planning of tours and the dissemination of critical information to system users, such as weather updates, geographic locations, and upcoming events, is a significant

aspect of this evolution (Willaddara 2023). ICT thus adds value to the business making it crucial to be strategically aligned with the business in EC tourism SMEs.

Previous researchers such as Lashitew (2023) suggest managerial attitudes play a significant role in digital technology adoption, moreover, actively championing new technologies among top managers can reduce uncertainty, gain support from lower-level managers, and allocate adequate resources for their implementation. Taking steps to improve organisational preparedness is essential. Examples of these include adopting virtual communication tools and working by objectives (Tokarchuk, Gabriele and Neglia 2021). Hence, management attitude is crucial in adopting ITC for resource allocation and training provided to the employees in EC tourism SMEs.

Nicoletti, von Rueden and Andrews (2020) highlight the successful adoption of new technologies requires strong managerial practices, innovative working arrangements, and effective leadership. They further indicate the need for more widely disseminated general ICT skills among job seekers and employees, as well as for off- and on-the-job training programmes to develop and retain such abilities, may also be necessary. In their view, there is a scarcity of cross-country evidence for such complementarity. Therefore, SMEs need ICT skills to be competitive, which Chua *et al.* (2022) state creates a problem for small businesses with few technologically skilled personnel (Parida, Sjödin and Reim 2019). Hence, SMEs should be provided with digital skills in tourism.

According to Liao, Palvia and Chen (2009, cited in Lutfi 2022), ineffective management strategies for supporting adoption behaviour across multiple phases may also result in negative results, such as a reduction in overall IS effectiveness or the system's discontinuation of usage. Therefore, the positive behaviour towards ICT adoption plays a crucial role in EC tourism SMEs. Furthermore, effective IT management reduces uncertainties and errors, resulting in lower costs and higher quality IT services (Wang *et al.* 2015, cited in Pashutan, Abdolvand and Harandi 2022). Effective IT management creates value for businesses and provides a competitive advantage (Maes, De Haes, and Van Grembergen 2012; Wang *et al.* 2015, cited in Pashutan *et al.* 2022).

3.2.3 Business performance

Prior to the COVID-19 pandemic, ICT played a significant role in the economic development of SMEs. In the opinion of Beynon, Munday and Roche (2021), it is

important to comprehend how SMEs believe they gain from ICT use and the problems they encounter, where ICT use ultimately results in greater business performance. A policymaker's ability to design and promote business assistance initiatives and business advice depends on understanding how ICT use enhances business value. This makes it fundamental that top management understands the value ICT will bring to the business and the value gained in terms of using ICT, by distinguishing a range of contributory variables that impact e-commerce trading activity in the SME context (Pickernell *et al.* 2013; Thurik *et al.* 2024).

Esselaar *et al.* (2007, cited in Basak, Wotto and Bélanger 2022) highlight the impact of ICT on the profitability of SMEs in Botswana, Cameroon, Ethiopia, Ghana, Kenya, Mozambique, Namibia, Nigeria, Rwanda, SA, Tanzania, Uganda, and Zimbabwe. The findings showed ICT improves labour productivity and overall profitability. This is an indication of a change in business performance; hence, EC tourism SMEs should take advantage.

Kwabiah (2019) and Soman, Paul and Patnaik (2024) posit the outcomes of ICT use may lead to positive results, as it will assist the owners with strategies for implementing IT in developing countries for improved business performance. ICT has become a requirement for all jobs, requiring flexibility and proficiency in application to perform tasks. This impacts productivity, in-role behaviours, and task performance (Bhat, Bashir and Jan 2024). As productivity is important in any business, it is crucial for SMEs in tourism that their employees are equipped with the necessary ICT skills.

The ICT skills essentially implies that certain technologies do not only improve the organization's competences and its ability to remain competitive but also help in personnel development (McRae 2019). Implementing ICT, including digital technologies, improves productivity, efficiency, and innovation for individuals and organisations (Thurik *et al.* 2024). Moreover, these competitive benefits not only apply to the general performance of the organization, but to the personnel and profits of EC tourism SMEs. Therefore, to enable process innovation, related software functions should be provided to aggregate, reconfigure, and implement ideas, transforming abstract planning into practical outcomes.

In the opinion of Mokoena and Twinomurinzi (2019), the multitude of internet and other ICT related technologies provided a prospect for developing countries to be networked,

while generating new industries and sectors. It has been alarming and overwhelming to admit ICT plays a major role in addressing issues regarding sustainability and global competitiveness. Therefore, many developing countries require the establishment of new abilities associated with the use of ICT linked industries.

Several researchers highlight a significant difference in how different countries and regions benefit from ICT for growth (Vu *et al.* 2020; Gardona *et al.* 2013; Stanley *et al.* 2018; Nadiri and Banani 2015, cited in Ketteni 2024). Surveys show the amount of ICT's contribution to growth and its effect on productivity are both significant and tend to increase over time. Hence, tourism SMEs could be competitive using ICT for productivity to benefit the business. Spencer and Spencer (2019) point out it is an 'open secret' that we live in a technology-mediated world. Furthermore, over the past decade, ICT has become an invaluable tool in most if not all facets of life. In addition to the overwhelming use for entertainment and leisure, these tools democratise access to goods and services, afford faster and more efficient communication and decision-making, and connect persons across the globe in an instant, all the while cutting costs and waste in many organisations (Spencer and Spencer 2019). It is thus important for EC tourism SMEs to use ICT to their advantage.

Investment in ICT can spur gains in productivity in many ways, it contributes to overall capital deepening, helping to increase labour productivity; technological progress may contribute to improved multifactor productivity growth in the ICT producing industry (Ketteni 2024). In addition, greater use of ICT outside the ICT industry helps firms and public and private institutions to increase efficiency and develop new products and services, thereby increasing productivity growth for multiple factors (Spencer and Spencer 2019). Therefore, ICT plays a crucial role in all aspects of the business, whether in the service or production industry.

In accordance with Foss and Saebi (2018, cited in Zhao and Liu 2024), the swift progress in IT has made digital transformation an essential aspect for businesses, promoting both internal and external integration. This change goes beyond one-dimensional growth patterns, allowing enterprises to reframe their business logic and value propositions to maximise opportunities for value creation and acquisition. Hence, tourism SMEs in the EC need to be aggressive in ICT adoption to benefit in the value chain. According to León-Gómez *et al.* (2022), utilising ICT allows businesses to

significantly boost productivity, while decreasing expenses, which improves performance. The literature

Fahriawan (2020) explains the technology appears to be adopted, since it offers benefits in the form of improved productivity and effort performance, as well as reliability and validity of the TAM model for individual measurements.

3.2.4 Innovative strategy in managing e-business in tourism SMES

In accordance with Al Omoush *et al.* (2018), innovation is defined as a technique of embracing the necessary tools that enhance firms in forging changes in the business such as advanced and evolving technology conditions, with the changing business world in terms of clients and product life cycles. Additionally, it encompasses the degree of familiarising involved in creativity and testing to try new products and services, in addition to support of unknown ideas and fostering creative processes, which entail the continuation of capturing and exploitation of new technologies. Due to changing technology, it is important for EC tourism SMEs to become creative and innovative in attracting more clientele.

In this context, innovation ecosystems (IEs) are collaborative networks that provide SMEs access to information and expertise, while emphasising value co-creation within the supply chain (Arroyabe *et al.* 2024). Therefore, it is critical to have networks that will feed the SME value chain in the EC, as tourism is a complex sector.

Wang (2018) and Hailu and Chebo (2024) concur SMEs strive to innovate and indicate three strategies to achieve innovation, namely opportunity-, product-, and technology-driven strategies. In a product-driven strategy, innovation entails designing a novel product to develop a completely new market. In a technology-driven strategy, a firm discovers or develops new technology and applies it in product invention. The innovation strategy must suit a company's market, core competencies and vision. When a company pursues technology-driven innovation, investing heavily in identifying new technical solutions for perceived opportunities, its competitor may achieve more success through an opportunity-based innovation strategy. Therefore, innovation is an important aspect from a business perspective in tourism SMEs.

Several authors point to the importance of innovation in order to achieve and sustain competitiveness, boost efficiency, and thrive in today's dynamic marketplaces (Chege *et al.* 2019; Apulu, Latham and Moreton 2011; Yunis, Tarhini and Kassar 2018; Pagell

and Wu 2024). Therefore, for better performance and to increase market share, SMEs in tourism should enhance ICT in their business. These modifications fuel technologically based innovation-related activities aimed at enhancing performance. However, despite the widespread use of ICT by organisations across a variety of industries, surveys have revealed many businesses struggle to move forward through the stages of the business lifecycle (Igun 2014; Amankwah-Amoah 2018). This makes it crucial that SMEs outperform themselves on acceptance of ICT.

Numerous studies, including Fidha and Tarifa 2009; Bhat and Gaur 2009, cited in Mulungula *et al.* 2022), find a key component in describing much of organizational behaviour is corporate culture. It is assumed organisational culture, competitive pressure, the number of customer-supplier partners, and a lack of resources are independent variables. Therefore, independent variables are crucial in the business for tourism SMEs, making it vital the organisational culture and behaviour should change to overcome any challenges from the external environment in EC tourism SMEs.

Mingaleva *et al.* (2022, cited in Barber III, Peake and Harris 2024) examine how organizational culture and personal values interact in creative businesses, emphasizing the importance of organizational culture in the creative growth of businesses. Hence, changes are crucial within EC tourism SMEs to overcome any challenges from outside stakeholders. To empower people to try new things, learn new skills, and adapt to new ways of doing, a positive cultural shift is needed that embraces change (Bozkus 2023).

Since tourism involves several stakeholders, it is crucial for EC tourism SMEs to be competitive, by moving swiftly to embrace changes with employees, and accepting ICT and being innovative for the betterment of business. Therefore, research of recent processes and technologies in the various industries and their technologies should be a priority for tourism SME owners-managers, who should also consider strategies outside their traditional business boundaries (Mahadea and Youngleson 2013).

Chege *et al.* (2019) are of the view innovative ideas include the use of IT, selling, and marketing of the business to gain a competitive advantage and exposure, where there will be closer intimacy with the consumers and partners in terms of communication, in addition to cheaper transactions. Likewise, EC tourism SMEs need to be competitive, as tourism is competitive by nature. Shin, Kim and Yang (2018) assert being involved in innovation creates uncertainties, in terms of the consumers not knowing whether they

will be interested or the affordability of the innovativeness and, hence, may end up not buying the service or product, as they may not see the monetary value in using the technology. Therefore, with the nature of tourism being competitive, it is essential for SMEs be innovative and creative to gain more customers, as they are the final decision makers to choose the tourist destination.

3.2.5 Benefits of ICT in SMEs

Zhou (2004, cited in Khan 2019) is of the view that all businesses, including tourism and hospitality, now have more opportunities and potential, due to the advent of e-commerce and e-business. As a result, e-commerce and the adoption of ICT offer significant economic possibilities. Taking advantage of technology is, therefore, vital for tourism, with continuous changes in the environment that require e-commerce adoption, as it benefits SMEs. E-commerce provides for expansion of the client base by entering a larger market, generating a competitive edge, and increasing customer communication (Parra-Sánchez, Talero-Sarmiento and Guerrero 2021). Therefore, EC tourism SMEs need to take advantage of e-business to reap the benefits.

Many studies on the benefits of ICT primarily focus on improving productivity, for example Tisdell (2017; Bartelsman *et al.* 2019, cited in Beynon *et al.* 2021), ICTs should ideally benefit all parties equally (Beynon *et al.* 2021). However, Holverson and Revaz (2006, cited in O'Connor 2023) alludes that size matters considerably, because bigger firms can benefit more from new technological advancements. Technology thus benefits SMEs on acceptance of ICT use, with productivity gains.

Colombo, Croce and Grilli (2013) and Slinger, Pather and du Plessis (2024) focused on the adoption of broadband technology and ICT services and their influence on small enterprises' productivity gains, indicating that broadband adoption alone does not favourably affect productivity. Significant productivity benefits occur only when SMEs adopt broadband-enabled services relevant to their industry, and only when this adoption is accompanied by major strategic and organisational changes to the way business is done.

The implementation of digital transformation has led to increased agility within the firms, resulting in more flexible allocation of resources (Priyono, Moin and Putri 2020). Improvements in company productivity and flexibility have been observed, due to SMEs having remote access to digital resources, which reduces the requirement for physical

infrastructure in the office (Slinger *et al.* 2024). Therefore, broadband plays a crucial part of ICT in tourism SMEs, particularly since the service is offered online and customers would view their establishments using the internet.

Slinger *et al.* (2024) state the realisation of IT benefits in organisations necessitates an understanding of user behaviour, which frequently fails, due to humans' approaches to technology. Consequently, the manager's assistance is critical. Moreover, the inability to provide management skills and support can lead to staff failures to meet demand, as well as tasks, which can end in discontinuance of technology (Lutfi 2022). Hence, empowering managers with ICT skills can assist for the betterment of the EC tourism SMEs.

Kamal (2019) and Ochuba *et al.* (2024) advise access to new markets is one of the biggest potential benefits of technology use for microbusinesses, made available by a growth in internet usage and e-commerce globally. Since the EC tourism SMEs will benefit from e-commerce, it is important they should be focused on ICT implementation to facilitate competing in the global arena. According to Baena-Navarro *et al.* (2024), training and the use of quality software also foster growth, as does training employees to effectively use and maintain the new software. This means it is vital for EC tourism SMEs to train employees to use ICT effectively and efficiently.

Understanding the value of ICTs for STEs is important, as these enterprises have gained widespread recognition as a major source of employment, income generation and poverty alleviation in developing countries (Abeysekara 2017; Kusumastuti *et al.* 2024). Hence, it is vital to understand the extent of how ICT can bring value to EC tourism SMEs.

Ziemba (2019) reported there are benefits in ICT utilisation, as it enhances the business to be productive, nurtures innovation, cuts costs, and increases the effectiveness of process services, while also supplementing the competence of business decision-making, being proactive to clientele needs, responding timeously, and gaining new clients. In a related study, Calvo (2019) found ICT will benefit these businesses, through increased revenue and sales, although the author highlights it is not easy to introduce ICT adding it is extremely crucial for the organisations to succeed. Subsequently, adoption of ICT by EC tourism SMEs will increase productivity.

As mentioned by McRae (2019), the inception of communication technologies dictates how organizational members use non-verbal communication skills to make decisions. It is crucial for the businesses to utilise these tools effectively to run the businesses. Calvo (2019) and Arroyabe *et al.* (2024) attest companies will interconnect with similar companies within the same field with ICT, which will allow data sharing amongst the companies, ultimately assisting businesses. As a result, EC tourism SMEs know each other, as they are in the same industry network and are intertwined.

García-Muñiz, Vicente and Billon (2022) advise utilising ICT for both internal and external business support operations is one of the important factors for SME success in the global marketplace. According to the OECD (2021), SME and entrepreneurial activity have been significantly impacted by recent economic shocks and volatility, which have also tested the limits of SME adaptability. Digital technologies can help SMEs absorb negative effects, innovate, and adapt their offers and business models in response to market changes. Examples of these technologies include cloud computing, supply chain management solutions, and software that enables teleworking.

The advent of ICT has driven several organisations to establish new and unique operating models, as well as encouraged supply chain partners to collaborate closely, to diverse degrees and through various techniques (Ayala *et al.* 2020; Bilbil 2019; Ku *et al.* 2020; Mandal and Dubey 2020). Therefore, SMEs in tourism need to be creative and innovative and look for a business model that will benefit and fit their establishments. Kyakulumbye and Pather (2022) state pre-usage beliefs of benefit expectation, ICT learnability, user-confidence, and user-friendliness have a significant influence on decisions to adopt and use ICT.

3.2.6 Types of ICT tools used by SMEs

Devices are critical to the widespread use of ICT. They enable users to connect to and engage with digital tools, software, and the internet. These devices range from smartphones and tablets to PCs and desktop units.

- **Mobile Phones and Tablets as tools for SMEs**

Gitonga and Moyi (2019) state mobile ownership has been associated with better producer prices; these devices have also been instrumental in promotion of financial inclusion and incapacitates the autocracy of distance to banking infrastructure. The social benefit of technology is linked to social inclusion and poverty reduction. This

means mobile phones will be trending tools for SMEs due to their affordability. In 2019, the number of mobile phone users was expected to reach 4.68 billion; it is noted more than seven billion people use mobile phones worldwide in 2019 (Statista 2024a). The number of smartphone mobile network subscriptions worldwide reached nearly seven billion in 2023 (Statista 2024b).

In addition, over the last decade, the development of smartphones with advanced features such as web browsers, games, cameras, and video players, as well as e-banking, and navigational systems, has significantly increased mobile phone usage (Cordella *et al.* 2021). These features are particularly beneficial for SMEs in the tourism sector of the EC, proving vital for business operations.

According to Mushi (2022), SMEs rely heavily on mobile phone technology due to limited desktop computing capabilities. Mobile phones and the internet have enhanced access to high-quality information, underscoring the importance of entrepreneurship in fostering innovation (Gomes, Lopes and Ferreira 2022). Gupta *et al.* (2023) highlight that less powerful devices, such as smartphones and netbooks, can access a company's back-end IT systems through simple web-based interfaces such as the Amazon Web Service (AWS) Management Console (Marston *et al.* 2011).

According to Zott and Amit (2017) organisational procedures and systems are also becoming outdated, because they do not generate sufficient value, in addition to goods and services. New ideas are required to seamlessly account for business and customer digitalisation, and the entire business model is increasingly evolving into a new innovation source. The "new platform featured new governance, revenue-generating mechanisms, and organizational structures". It is necessary to install a new co-developer, a new app distribution system, and new revenue streams (Matarazzo *et al.* 2021).

Hasbi and Dubus (2020) provide a better perspective of the state of adoption in developing economies. Although Nigeria and Kenya have comparable profiles, they are the greatest developed with an advanced rate of mobile phone and Subscriber Identity Module (SIM) card ownership, where Kenya was graded first in terms of mobile money use, whereas it is not so usual in Nigeria. Therefore, some African countries are progressing in the use of mobile phones.

Hasbi and Dubus (2020) examined mobile broadband use in SSA, finding the use of mobile internet the most credible, displaying advance indications of a prospective immediate growth of dissemination rates. Tanzania and Uganda are the minimally infiltrated countries, with a large quantity of non-mobile owners and non-SIM card owners. This shows the developing economies in SSA are thriving, with regard to telecommunication, and this is recognised. The political stability exhibited in developing countries attracting foreign direct investment, to the telecommunications sector in particular (Hasbi and Dubus 2020). Therefore, this indicates an increase in mobile phone usage in African countries, particularly for tracking and analysing data trends.

Harris and Patten (2014) and Himawan, Djuwaini and Putra (2024) assert the rapid pace at which smartphones and tablets are adopted is again changing how small businesses compete. Therefore, assisting tourism SME employees in the EC with devices will increase their individual productivity at lower service costs; these new services make technology more accessible to small businesses. Muriuki and Sankat (2022) indicate mobile phone applications are an important component of ever-changing ICTs, playing a major role in reconceive the way business is conducted in the intensely competitive globalised corporate climate of today. The steady growth in mobile phone use would have a substantial positive impact on the performance of SMEs, when dealt with correctly.

Eze *et al.* (2019a) suggest although mobile applications are relatively inexpensive, observation showed economic hardship and the unstable nature of the business environment in Nigeria make adoption even more challenging. Due to a lack of resources, this prevents most SMEs from adopting the applications. It also implies most small businesses would not implement new mobile applications if they were difficult to use and complicated, because they have limited IT application skills and knowledge. (Rakshit *et al.* 2021).

- **Desktop and laptop as ICT tools for SMEs**

In the opinion of Maryama and Suhong (2022), the use of ICT technologies, such as PCs with various built-in managerial tools and procedures, provide SMEs and their employees with essential professional skills and administrative advantages that will ostensibly boost business. Hence, a PC is one of the popularly used tools by tourism SMEs in the EC.

According to Özşahin *et al.* (2022), both the internet and basic computers are used in the company. skills to use and navigate the internet are, therefore, crucial for SMEs in EC tourism. In contrast, Alma, Coskun and Ozsahin (2018) identify fundamental communication tools as restricted use computers, whether desktop or laptop, with limited use of the internet as well as rudimentary communication features. The introduction of communication tools and the internet starts with ICT development. Alma *et al.* (2018) find, while desktop PCs and laptops are also available, they are rarely used for business. Furthermore, the use of PCs with networking hardware/software solutions and security services was recommended for all employees. Therefore, the tools for ICT are all crucial in business, which makes proper enterprise resource planning (ERP) a necessity for EC tourism SMEs.

Diyaolu and Oso (2023) determined the most used gadgets among SMEs are smart phones, desktop computers, and laptops, indicating some level of satisfaction and confidence are derived from their use. It is also possible for SMEs to obtain more such services in adopting other electronics. These include Personal Digital Assistants (PDAs), tablets, and a variety of server-based applications. Hence, it is crucial EC tourism SMEs should investigate adopting these tools to their advantage.

As highlighted by Dayour, Adongo and Kosoe (2023), a variety of ICT equipment is employed by Small and Medium Tourism and Hospitality Enterprises (SMTHEs), the equipment includes PCs, laptops, Point of Sale (POS), mobile phones, smart televisions, CCTV cameras, printers, and radios, among others) and software (such as PMS, social media applications, and office-based applications). Moreover, there are a variety of tools used by EC tourism SMEs. Santos-Jaén *et al.* (2022) indicated the rapid growth of ICT has resulted in a fundamental transformation in the conditions of the hotel sector, as it provides these enterprises with new tools for management and adding value to their customer experiences. Similarly, it is vital for EC tourism SMEs to continue to advance in technology use.

- **Use of social media as marketing tool by SMEs**

Calvo (2019) posits that social media networks are regarded as one of the strategic instruments to increase the client base irrespective whether it is commercial or social, through social networks such as Twitter, Facebook, Google+ or LinkedIn. These networks assist in marketing products and brands by connecting the old and enticing

new clients. Therefore, SMEs should navigate in all the social networks to market their businesses.

Rozak *et al.* (2021) and Rachinger *et al.* (2018) advise SMEs with sufficient digital skills are proficient in using digital tools for e-commerce, such as social media, blogs, and other tools for online marketing and collaboration. This use aids in achieving organisational agility, with the growing influence of social media and analytics, the “mobile revolution” has facilitated the digital transformation of the customer value generating process. Therefore, digital skills are crucial for EC tourism SMEs in digital transformation and ability to navigate all these platforms. Chertchom *et al.* (2019) highlight that social media plays a crucial role in corporate marketing. The availability of inexpensive equipment is critical to SME survival due to their limited financial resources.

- **Impact of ICT as a tool on business**

Ivars-Baidal *et al.* (2019) believe ICT encompasses the digital economy’s programmes of practice. This development has generated complimentary surroundings for new management approaches for cities. Calvo (2019) and Saba, Ngepah and Odhiambo (2023) agree ICT plays a major role in the industries with a need to change from old to new and improved production methods, so that companies can improve digitised production and develop new processes to have a competitive advantage. Therefore, aggressive changes in ICT are crucial in EC tourism SMEs.

It is fundamental to enhance the processes in relation to purchase, sales of products and services, as well as electronic information to adopt e-commerce. Due to this revolution, the IT systems need to be improved, with increased adoption feasibility in various areas, as well as a decrease in the cost involved (Lara, Garcia, and Chico 2017; Boulesnane, Monia and LaÃ 2022).

Eze *et al.* (2019b) and Telukdarie *et al.* (2023) emphasise the significance of SMEs embracing technology as a crucial step to leverage and harness it as a competitive tool. Likewise, ICT is a crucial tool for EC tourism SMEs that will enhance competitive of the business. Accepting ICT becomes essential in navigating the evolving dynamics of the new e-economy, characterised by its dynamic and rapidly changing nature. It is, therefore, critical for SME owners and management, as well as the government or authorities, to deal with these difficulties in order to expand SME ICT usage (Rozmi *et al.* 2020).

3.2.7 Challenges of SMEs with ICT adoption

Technology adoption enables SMEs to achieve economies of scale and lets them accomplish their objectives (Kumar and Ayedee 2021). Hence, it is vital for SMEs to maintain growth within their entities in tourism. Kamarudin *et al.* (2022) agree SMEs face several challenges, including power shortages, finance constraints, a lack of management skills and competencies, and a lack of knowledge, as well as corruption. Therefore, empowering EC tourism SMEs is essential. Sadiq *et al.* (2022) advise there are some external-related variables, such as government policies, cultural challenges, and regulatory issues that prevent effective application of recently developed technologies.

The most important environmental element influencing the successful integration of ICTs among SMEs in less developed nations is, however, government policy (Nazir and Khan 2024). Therefore, policy makers are the drivers in EC SME development. Orser, Riding and Li (2019) suggest government regulations are required to safeguard both online customers and sellers from unethical actions, such as fraud and unlawful access to personal data that could be detrimental to a business. Hence, the SA government has a mandate to overlook the regulations, with a stringent approach on e-business to protect these SMEs.

The absence of proper ICT infrastructure and insufficient skills among stakeholders to use smart tourism-related technologies are major obstacles impeding the digitalisation of tourism in rural areas of developing countries (Salemink, Strijker and Bosworth 2017; Nchake and Shuaibu 2022; Torabi *et al.* 2023). Moreover, infrastructure plays a crucial role in accepting ICT, hence, government plays a critical role as a stakeholder, particularly in previously disadvantaged areas such as rural areas of the EC.

SMEs face various barriers to adopting digital technologies, including limited financial resources, undefined economic benefits, cultural challenges, and insufficient skilled employees, along with weak IT infrastructure, lack of standards, uncertainty regarding system reliability, and legal concerns regarding data security (Arroyabe *et al.* 2024). Companies with a digital orientation are often thought to have substantial training requirements, because some digital tools require much training from their employees. Employee resistance to changing hiring practices so that only candidates with a high

degree of digital literacy are hired is a major barrier to employee adoption of digital orientation (Kallmuenzer *et al.* 2024).

- **Skills as a barrier in SMEs**

Lertpiromsuk, Ueasangkomsate and Sudharatna (2022) describe the skills gap as the absence of the necessary abilities for effective participation in the labour market, which prevents them from gaining a competitive edge. In other words, when the existing workforce cannot fulfil the needs of the business because it lacks the necessary capabilities, the result is a skills gap, particularly in the technical area. Hence, there is a need to empower employees with skills, as technology is changing at a rapid pace, emphasising the need for EC tourism SMEs to be equipped with skills.

In the opinion of Hashim (2007) and Cant *et al.* (2015), SMEs' ability to embrace ICT is directly related to the ICT abilities of the owners, managers or workers. Even though governments in countries such as Malaysia and Taiwan encourage SMEs to adopt ICTs by offering a variety of support structures, many still have not done so, since they lack the necessary ICT skills. Hence, it is crucial to have SMEs in tourism encouraged and developed with skills,

Digital technology accessibility is explained by Smidt and Jokonya (2022) to encompass their accessibility, affordability, and the necessary operating skills. Similarly, EC tourism SMEs should determine whether the kind of technology needed is indeed required as well as the cost implications. Arroyabe *et al.* (2024) highlight the most frequent obstacles to SMEs implementing digital technologies are a lack of funding and unclear financial gains, cultural issues ranging from employee resistance to lack of management support, a lack of technical expertise and skilled workers, as well as inadequate IT infrastructure, technical difficulties such as a lack of standards and unpredictability regarding system reliability, in addition to legal worries where data security is concerned.

The barriers to ICT likewise vary for SMEs in tourism, which are internal and external. Nazir and Khan (2024) add ICT adoption in business processes is influenced by the firm's overall size and organizational structure. Moreover, generally, the more the employees the more skills are required depending on size of the entity, resulting in more need for IT expertise.

Smidt and Jokonya (2022) maintain profit gains in the agriculture sector may be hampered by difficulties, because the digital divide in agriculture is also marked by inefficient knowledge sharing, poor information content management, and a lack of institutional and human capacity (Mago and Mago 2015, cited in Smidt and Jokonya 2022). Therefore, lack of information will hamper the business even in EC tourism SMEs, as it is a service industry. Among others the lack of information, against the backdrop of an enterprise's constantly being on the verge of failure, can lead to short-term risk aversion and or fearful behaviours.

Surprisingly, the cost of ICTs was not viewed as a barrier to ICT adoption (Gono, Harindranath and Özcan 2013; Lei *et al.* 2023). Hence, many SMEs have no skills and outsourcing in tourism EC is essential. According to Amini and Jahanbakhsh Javid (2023), the availability of skilled labour is another environmental factor that influences the adoption process. The government's influence on the innovation process is unclear. Government regulation can either help or hinder the adoption of new technologies.

- **Lack of ICT expertise in SMEs**

Gono, Harindranath and Özcan (2016) and de Mattos *et al.* (2023) suggest technological incompatibilities can hinder effective ICT use and make it difficult for firms to derive benefits from the adopted ICT. This implies firms that acquire ICT systems incompatible with their business practices may lack the necessary technical skills and capabilities. Subsequently, support provided by government agencies, sector institutions, or consultants to address these challenges may benefit these firms.

ICT competence is now essential to firms in today's quickly changing digital landscape (Hu *et al.* 2024); for enterprises to adopt ICT use, expertise is vital. As organisations increasingly rely on technology-driven solutions to streamline processes, boost productivity, and gain a competitive advantage, the demand for experienced employees with a thorough understanding of ICT has grown. Tourism SMEs should, therefore, explore this space and determine how to use it to their advantage, as the business landscape has changed.

Joel and Oguanobi (2024), however, highlight although technologies present fresh opportunities for creativity, effectiveness, and market disruption, they also necessitate capital, expertise, and adjustment to remain competitive. Aremu and Arfan (2023) indicate that industry digital transformation is, furthermore, changing competitive

environments, customer expectations, and business models. Therefore, tourism SMEs should be creative and innovative in the digital space. In this regard, de Mattos *et al.* (2023) highlight obtaining the right advice, expertise external to the firm, and appropriate software are significant challenges faced by SMEs in utilising ICT effectively. This makes it essential that ICT expertise is employed to assist tourism SMEs to use ICT to their benefit.

Research by Izushi (2005, cited in Nguyen *et al.* 2015) advises, because IT expertise and skills are typically lacking in small businesses, firms often seek professional consultants in dealing with IT adoption (Fuller 1996; Shin 2006, cited in Nguyen *et al.* 2015). Lei *et al.* (2023) further find advice from professional consultants or IT vendors could aid SME owners-managers without sufficient experience or understanding of IT. ICT is thus fundamental for tourism SMEs.

- **Financial implications of ICT adoption**

SMEs frequently encounter several obstacles while implementing ICT. Arroyabe *et al.* (2024) highlight smaller enterprises may face major challenges due to scarce financial resources and high implementation expenses.

While SMEs throughout the world are currently confronted with the difficulties of paying excessive costs and having insufficient resources, Lutfi (2022) finds recent developments in the business environment indicate SMEs are at the top of the list in terms of risk exposure, compared to their larger counterparts. In the competitive, knowledge-oriented business climate, SMEs are, therefore, more likely to fail.

For an organization to succeed in ICT and achieve their goals in their systems, there are several departments involved that form part of this success, as technology does not work in isolation to bring value. It should be strategically aligned from the top management and other departments within the business, combining resources such as people and finances that enable a business to gain strategic advantage through ICT. Hence, it is essential ICT adoption should be strategically aligned by top management of the SMEs in tourism. Chua *et al.* (2022) add insufficient investment in ICT and personnel shortcomings, such as a lack of computer skills, will impact user adoption. Therefore, poor planning in adoption would hamper EC tourism SMEs in the long-term.

Lamine and Brahim (2024) maintain the significance of financing as a vital component for SME growth is emphasised, considering the persistent challenges many nations face

in this domain, which have prompted government interventions. The finance component is thus crucial to EC tourism SMEs. Several authors concur ICT adoption by SME leaders becomes difficult without the counterbalance of access to financial resources to the expense of technology that quickly changes (Okundaye *et al.* 2018).

Internal hurdles are identified by Okundaye *et al.* (2018) and Liñares-Zegarra and Wilson (2024) as, among others, organizational features, owner-manager characteristics, cost of adoption and implementation, and return on investment (ROI). The high ICT maintenance costs, a lack of SME legal ICT framework, and staff members' lack of understanding of ICT are identified as barriers to adopting ICT (Cao 2021). Hence, financial implications will remain a factor for SMEs in deciding on, irrespective of the sector.

Several researchers additionally suggest the costs of purchasing software and computers, recruiting trained ICT people, educating current employees, and other expenses related to the use of ICT are prohibitive for many small businesses (Okundaye *et al.* 2018; Mushtaq *et al.* 2022). SMEs in the EC are not different in terms of the challenges in adopting ICT. Nonetheless, despite the advantages of adopting ICT, other obstacles prevent SMEs from implementing ICT that not only include cost, but also security concerns, and an unstable internet (Chertchom *et al.* 2019).

- **Security of ICT as a barrier in SMEs**

Apprehension with regard to integrating ICT into daily operations may also arise from worries concerning data security and privacy. Furthermore, SMEs may be confused how to utilise technology efficiently without clear ICT policies and adequate planning. For SMEs to effectively utilise ICT's potential and maintain their competitiveness in the digital environment, it is imperative these impediments be removed.

Baiocco and Paniccia (2023) assert challenges related to IT security are seen as stimulants for digital transformation, particularly for SMEs. Therefore, stringent approaches on security are necessary to protect SMEs in EC tourism from any cyber security threats. Gupta *et al.* (2023) highlight security and privacy as the main factors impacting cloud utilisation by SMEs, followed by simplicity of use and convenience. In the opinion of Beynon *et al.* (2021), ICT use may result in advantages through greater ICT security and data protection, even though other aspects of the research on the benefits of ICT may seemingly link to competition and improved communication effects.

Securing the information costs pertaining to effective security management is crucial as this requires time, effort and money, with SMEs not in any position to commit in terms of the costs. This makes it vital for effective security management to be in place for the company's strategic survival (de Mattos *et al.* 2023; Dubé *et al.* 2023). Hence, cost implications will always be an impediment for EC tourism SMEs in adopting ICT, as they do not differ from other SMEs.

In a study in the United Kingdom (UK), research reported even though there are appropriate security solutions to address cyber-attacks, SME ICTs are the most vulnerable, and due to the intricacy of positioning, such solutions become a restraining force for small organisations that infrequently have specialists within the organization devoted to security. As a result, SMEs suffered 72 percent of recorded cyber-attacks in the UK (Dube and Flowerday 2018). Therefore, EC tourism SMEs should use their expertise in protecting themselves against cyber-attack. The biggest challenges SMEs have to meet in this context are the development of an appropriate strategy, a cost-benefit analysis of the relevant technologies and lack of data security, as well as uniform standards (Kumar *et al.* 2024). Hence, strategies should be put in place by tourism SMEs in the EC to strategically secure the business.

Eze *et al.* (2022) highlight although ICTs have unlocked diverse opportunities for businesses, this has also stimulated SMEs, because it opens them up to reservations and risks. Hence, information has become vital for SME decision-making to reduce risks and uncertainties. ICT adoption is now strategically necessary for their competitiveness and sustainability (Kumar *et al.* 2022).

As stated by Gitonga and Moyi (2019), entrepreneurs require a large amount of information on markets, price, quality, and inputs, as well as skills, technologies and so forth. In this regard, entrepreneurs find mobile phones useful in various ways. Mukwarami, Mukwarami and Tengeh (2020) advise, other than a high crime rate, the most significant challenges to the development of SMMEs are a lack of financial assistance, managerial skills, and inaccessible global markets.

- **Education level of SME owners-managers in adopting ICT**

ICT has caused one of the biggest transformations in any industry and have significantly impacted generations, culture, and education. The urgent need to master the use of ICT

extends beyond merely its use; rather, it necessitates having a certain level of digital literacy that can address the new learning that comes with ICT (Marulanda *et al.* 2022).

In a study in Kenya, it was discovered the education level of Kenyan SME owners-managers influenced ICT adoption; those with at least a college level not only used ICT tools but were also more likely to utilise ICT on a regular basis, compared to those with a lower education (Cant *et al.* 2015; Njuguna, Mokaya and Mukhweso 2015). Another aspect, highlighted in a study of Majumdar *et al.* (2019), is the digital divide in terms of age, reflecting SME owners-managers aged 50 years or more, with less formal education, made less use of software, as opposed to young and educated SME owners-managers. These groups may experience difficulties in adopting and successfully implementing software solutions in their businesses, which implies this age group will significantly impact the use of software solutions. Therefore, tourism SMEs could experience these barriers, considering level of education and age. According to Majumdar *et al.* (2019), the age, education level and SME owner-manager experience indirectly impact technology adoption means. This makes it important for tourism SMEs to have dedicated IT personnel for ICT adoption.

- **Knowledge as a barrier to ICT adoption in SMEs**

The resistance to risk in ICT adoption shows SMEs tend to be reluctant to devote resources to knowledge-building activities, due to their concerns regarding the return on potential investment, attributable to an unpredictable future market climate (de Mattos *et al.* 2023). Therefore, SMEs typically delay in hiring and deploying their resources, which results in “wait and see” actions. This implies a postponed strategy in decision-making, taken at the appropriate time, particularly when decision makers considered the worst-case scenario (Odulaja *et al.* 2023).

Learning from this, tourism SMEs should take advantage and thoroughly use ICT constantly. Several challenges to SMEs are, nonetheless, highlighted by Kamarudin *et al.* (2022), such as power unavailability, financial limits, a shortage of ICT skills and competencies in management, and insufficient knowledge, in addition to corruption.

Kwabiah (2019) attests small businesses in developing countries fail due to inadequate IT implementation strategies. Nazir and Khan (2022a) also caution that ICT adoption in SMEs is constrained by a lack of ICT competence within the businesses. To effectively deal with and deploy the newest ICT gadgets for online projects, ICT knowledge is

necessary. Thus, a moderate effect on SMEs was caused by a lack of ICT knowledge, expensive employee training costs, a lack of a clear plan to promote ICT adoption, and difficulties hiring suitable candidates (Cao 2021). Hence, tourism SMEs have several challenges pertaining to ICT adoption.

Xin and VincentKow (2022) identify businesses using basic technology appear to lack internal expertise. Due to a lack of ICT competence inside the business, ICT implementation in SMEs is found to frequently be constrained (Nazir and Khan 2022a). There is thus a need for SMEs to have ICT expertise, so they may excel. Moreover, the support and role of government are critical in equipping SMEs with the necessary knowledge to enable ICT adoption, in addition to other outside influences (Mukamanzi and Ndikubwimana 2018; Jere and Ngidi 2020).

ICT adoption is, moreover, significantly influenced by perceived benefits to the business (Jere and Ngidi 2020). Mwika (2022) finds the lack of ICT knowledge among SME owners-managers, the high adoption cost, PU, and PEOU were all significant factors. Hence, SME adoption of ICT in developing countries faces numerous challenges due to: insufficient information, a lack of knowledge, poor infrastructure, and a negative attitude toward ICT, as well as non-customised software to fit their budget. Chertchom *et al.* (2019) point out SMEs do not know ICT, as they have no knowledge regarding how the system works; therefore, there is a lack of knowledge.

3.3 ATTITUDES ON ICT ADOPTION IN SME OWNERS-MANAGERS

Having a positive mindset means being open to change and investing in ICT, which can increase productivity, efficiency, and competitiveness. The ability to recognise or discern good opportunities is important in determining whether a person would consider starting a business (GEM SA 2023).

Several authors believe acceptance of technology by the firm's owners is critical to ICT adoption (Jaganathan *et al.* 2018; Agarwal *et al.* 2020; Geng *et al.* 2023). Should the owner not recognise the utility of the technology or have a limited understanding of its potential, the owner will be hesitant to adopt. Therefore, tourism SMEs, including those operating in the EC, should use ICT to ensure their businesses succeed.

Rozmi *et al.* (2020) advise ICT has a significant influence on business performance and profitability. However, the attitude and knowledge of the SME owner in ICT are key determinants of a business' ICT acceptance. Moreover, a recent study by Alam *et al.*

(2022a) found people can be better prepared when organisations deliberate the adoption process and the resulting business cultural behaviour changes the new technological developments will introduce, which shows an open and positive attitude toward digital technology. This means it is important for SMEs, particularly those in the EC tourism sector, to use ICT in maintaining their market share sustainability.

Several studies believe being competitive will assist enterprises in terms of growth (Radicic and Petković (2023). In addition, technology has never more greatly impacted factors such as familial and social support, entrepreneurial tradition, culture, and frugality, as well as inventiveness, and resilience, which affect individuals' attitudes and behaviours (GEM SA 2023). Personal circumstances and location play a significant role in determining these differences. Furthermore, access to new technology may boost competitiveness, allowing SMEs to overcome scale disadvantages in particular business areas (Simba *et al.* 2024).

Oladimeji and Owoade (2024) assert new digital ecosystems provide SMEs with opportunities to connect with customers, streamline operations, and expand their reach these systems also require significant investment in new technologies, upgrading old systems, learning new skills, and addressing data security and privacy concerns However, the digital transformation presents untested challenges for privacy and data protection, requiring new solutions at all levels (Reddy and Reinartz 2017). Therefore, EC tourism SMEs should take advantage of the opportunity for their businesses.

Beynon *et al.* (2021; Chonsawat and Sopadang 2020, cited in Costa *et al.* 2024) emphasise the lack of digitalisation can hinder SME growth and prevent attracting customers seeking innovative products and services. To thrive, SMEs must stay relevant and meet the needs of their customers and stakeholders (Moeuf *et al.* 2018, cited in Costa *et al.* 2024). This makes it crucial that SMEs in tourism should strive to satisfy their customers and remain up to date with digitalisation for productivity. The success of the e-business mostly depends on the entrepreneur's readiness to be more proactive in adopting ICT (Al Omoush *et al.* 2018; Nkwei, Rambe and Simba 2023). It is thus crucial for EC tourism SMEs to take the initiative in embracing ICT, with a positive attitude.

In the opinion of Eze *et al.* (2022), small businesses have perceived rapid changes in terms of technology, such as the 4IR, making it crucial the behaviour and attitudes with

these changes can be embraced and forged with activities associated with ICT adoption. Therefore, changes of behaviour are crucial for tourism SMEs in the EC to reap the benefits of ICT adoption. The problems facing SME owners-managers most of the time are, ICT anxiety, SME managers' sense of control loss, and provoking ICT-related negative perceptions (Mhlongo, van der Poll and Sethibe 2023).

According to Knight *et al.* (2017) and Xanthopoulou and Sahinidis (2022), norms, attitudes and views can establish a positive or negative perception in the organization, with behaviours and discovery that could direct the strengths or weaknesses of the organization's strategy and operations. Therefore, it is essential for tourism SMEs to determine their strengths and weakness within the business. ICT acceptance and submission additionally depend on individual factors, such as entrepreneurship, innovation and business environment, which impact the correlation between IT and innovation and organisational performance. With manager preferences, expectations, and attitudes that influence the adoption and utilisation of new technologies (Chege *et al.* 2019; Lashitew 2023), SMEs need to be cognisant of ICTs and check the resource allocation is done strategically.

Chege *et al.* (2019) and Nazir and Khan (2024) agree SMEs in developing countries face obstacles with technology innovation, owing to size and undefined environments. There are internal elements that can be controlled within the organization and external factors outside the organization's control, and these aspects may either serve as obstacles or prevent enterprises from advancing. These internal and external variables affect the businesses, inhibiting SMEs in tourism from accepting ICT.

3.3.1 Change of customer behaviour due to technology

Khan (2019) and Della Corte *et al.* (2023) emphasise internet technologies, with their ubiquitous accessibility and interactive features, have altered customer attitudes and behaviour toward conventional types of tourist and hospitality services. Tourism and hospitality organisations used self-designed questionnaires to gather customer feedback on visitor attitudes towards leisure trips and tours during the COVID-19 pandemic (Shareef *et al.* 2023); This points to the significance of determining customer satisfaction levels and that tourism SMEs need to provide better service.

Consumer behaviour has changed through the development of internet technologies, because with globalisation much is accessible through the internet, compared to

traditional ways of tourism and hospitality services (Khan 2019; Suherlan and Okombo 2023). Therefore, SMEs in tourism should change accordingly, to adapt to customer behaviour regarding the product. Armutcu *et al.* (2023) find a shift to ICT, in terms of tourism and travel products, due to the internet.

3.4 EXTERNAL FACTORS THAT INFLUENCE ICT ADOPTION

According to Al-Ayed (2024), it was discovered e-business adoption is influenced by numerous environmental factors, including those pertaining to competitors, customers, the government, and business partners, along with supporting industries. Hasani *et al.* (2023) state external factors organisations may encounter when interacting with their surroundings are known as environmental variables. In the context of the environment, firms are typically more sensitive to the dynamic external ecosystem. However, because environmental variables are critical, it is essential tourism SMEs should recognise them, Jeza and Lekhanya (2022) advise that changes as a result of external factors, such as technologies, have a direct and indirect impact on global business performance.

The current global market is driven by digital transformation, particularly through SMEs, which indicates these changes create critical environments that can shape the businesses performance in tourism SMEs. Several authors highlight that environmental influences are frequently linked to outside pressure from rivals and the government (Rawash 2021; Alraja and Malkawi 2015; Satar and Alarifi 2022; Thaha *et al.* 2022, cited in Al-Ayed 2024).

3.4.1 Exploiting marketing using social media in tourism SMEs

Chertchom *et al.* (2019) assert SMEs can benefit from ICT when using it to manage their operations. For a firm to succeed, advanced customers influence both suppliers and the business to use ICT. Therefore, customers as external stakeholders are crucial to EC tourism SMEs. Kassem *et al.* (2019) identify the company will be able to modify internal behaviours and approve further improvement and growth by recognising and using external environment feedback, predominantly from customers and competitors. In so doing, the company will also respond to the needs of its employees, because they are considered “internal customers” across all levels and sections, roles, and responsibilities.

Al Omoush *et al.* (2018) state ICT usage may help SMEs respond more quickly to requests from customers or suppliers, raising the calibre of their services. Hence, CRM

is vital to satisfy the EC tourism SME customers, particularly to exploit marketing using social media. According to Daniel and Grimshaw (2002) and Beynon *et al.* (2021), small businesses recognised increasing customer service and having better connections with customers, made possible by broadband-enabled services, were critical to boosting their market competitiveness; ideally suited to social media marketing.

SMEs need to engage a changed mindset and embrace the digital shift in tourism because of the shift in customer behaviour. Sundberg, Gidlund and Olsson (2019) proclaim, due to changes in the digital world, there are changes in behaviour from the customers' side, attributed to the increased use of digital environments, while marketers have seen the worth in customer-related data. Due to this trend to fully benefit from the data, many marketing determinations have been conveyed back into own organisations.

Matarazzo *et al.* (2021) assert social media and mobile application use has revolutionised how corporate brand communication strategies are implemented, fostering collaboration, involvement, and interaction. Therefore, SMEs in tourism should take advantage and use social media to create good relations with customers first-hand. According to Armutcu *et al.* (2023), social media encourages constant communication with customers, shaping brand meanings and messages, and directing the development of products or services. Instead of the conventional "one-to-many" strategy, social media involves users creating content and connecting with people through a "many-to-many" model, allowing customers to develop and actively participate in the process. Hence, being aggressive in social media is crucial for interaction and getting to know their clients better.

Shareef *et al.* (2023) point out digital media enable both information sharing and exchange between buyers and sellers, as well as between consumers. Therefore, EC tourism SMEs should capitalise on social media use, as the business deals directly with the customer, requiring the contact be personalised. Kassem *et al.* (2019) state the company will be able to perceive and use signs from the external environment, mainly from customers and competitors, to modify internal behaviours and permit additional improvement and growth Khan (2019). ICT-based competitive advantages may be accomplished by tourism and hospitality enterprises through distinctive internet marketing campaigns, continuing effective communication with several organisational stakeholders and in several other methods The best SMEs can do is to be maintain a

competitive edge, because the reality is technology is now part of business and is evolving.

Torabi *et al.* (2023) explain social media is a crucial tool for attracting customers, particularly since smartphones are widely used. Many stakeholders found success in promoting their businesses through social media. Exploiting smartphones to the advantage of the entity will assist in the operation of EC tourism business. Sugiharto (2024) highlights using social media, online advertising, and data analysis assist to improve visibility and better understand consumer preferences. Furthermore, Arroyabe *et al.* (2024) emphasise the importance of digital marketing strategies in e-commerce. The rise of e-commerce, social networking, and online collaboration can be attributed to the internet's transformation of how we access and exchange information. Hence, being innovative and pursuing cost-effective ways are necessary for the business and attracting more clients for EC tourism SMEs.

3.4.2 Stakeholder support

The various stakeholders in the tourism value chain are diverse and range from suppliers, tour operators, competitors, and partners, to governments, and other companies involved in complementary activities (Gupta *et al.* 2023; Tasnim *et al.* 2023). There are, therefore, numerous role players in this industry making ICT vital. Shareef *et al.* (2023) maintain there are stakeholders in place that play a different role for these systems in place to work, including the managers, individuals, government, and IT experts and vendors, as well as the customers, as they share these systems in accepting and implementing, to achieve socio-economic goals. This requires all stakeholders to fulfil their roles in support of tourism SMEs. Fernandez-Villaran, Rivera-García and Pastor-Ruiz (2024) assert the tourist business is so competitive, many stakeholders play critical roles, including the industry, travel agents, intermediaries, and lodging, along with ICT experts, to name a few. This involves numerous suppliers essential to these businesses, that rely on one another to ensure the success of tourism SMEs in the EC.

Previous studies highlight role players can range from immediate employees to powerful and important stakeholders, all of whom must work together to achieve the organization's aims of establishing and contributing to a CE (Kapoor *et al.* 2021; Sohal *et al.* 2022). Furthermore, the environmental dimension comprises several tourism

stakeholders such as government, industry, and society. as well as the socio-technical factors. Hui *et al.* (2024) highlight e-commerce can aid modern industries by facilitating access to the global market for local companies, opening new options for exporting goods and services, and improving organizational operational efficiency, while building digital stakeholder engagement. As a service industry that combines a variety of goods and services from different stakeholders, tourism is currently one of the fastest growing businesses in the world (Altin, Memili and Sonmez 2017).

In the opinion of Alam *et al.* (2022a), inter-organizational collaboration within a network of partners is a key factor in driving innovation performance. This includes tying ICT to technologically creative ideas, products, and processes, particularly in small, emerging SMEs. Therefore, having a close relationship with stakeholders is essential in tourism SMEs. Ozdemir *et al.* (2023) highlight that government and local business should look for ways to build inter-organizational collaboration across a network of regional partners, where earlier research has shown excellent innovation outcomes, most of which might come from government and industry funding.

Previous studies suggested significant innovation outcomes, where many might result from government and industry support, indicating local government and regional industry should look for ways to develop inter-organisational collaboration across a network of regional partners (Barney 1991; Paulraj, Lado and Chen 2008, cited in Murray 2018). Hence, it is crucial for all stakeholders to cooperate for the betterment of the SMEs in EC tourism. Ghobakhloo *et al.* (2022) and Masood and Sonntag (2020) emphasise the environmental context refers to external variables that may affect the firm's technology adoption. As a result, determinants related to the business environment of SMEs, such as industry structure or external stakeholders, will be classified as environmental determinants of ICT adoption. The most well-known environmental influence is external support, closely followed by external pressure.

Sehnem *et al.* (2024) highlight that the CE affects supply chain structure and relationships, requiring integration with the business ecosystem. External assistance includes stakeholder support, external financial assistance, and government assistance. The need for wide-ranging collaboration between numerous stakeholders, including SMEs, government, industry groups, large enterprises, and consumers is emphasised by Masood and Sonntag (2020), because the vital ecosystem needed to run the CE is comprised of these stakeholders. Hence, it is crucial to understand the

complex network within EC tourism SMEs. Sohal *et al.* (2022) assert, because SMEs are micro in nature, they are frequently hampered by a lack of cash and a consistent link with prospective stakeholders, governments and relevant industry groups, where the relationship is essentially top-down.

ICT adoption is shown by León-Gómez *et al.* (2022) as a component crucial to the growth of business practices that are socially responsible, which strengthens their ties to stakeholders and the environment through new tools that enable socially responsible initiatives. This kind of technology has, subsequently, become crucial in the hotel sector, with consideration for environmental factors in operational planning.

3.4.3 Government support in SMEs

Nazir and Khan (2024) draw attention to e-commerce doing more than assisting in decreasing transaction cost, it also improves on the transitional method and offers convenience of selecting from the range of products and services available within the shop. This makes it crucial that SMEs adopt e-commerce as a business tool in a competitive environment, in marketing the business with the aid of support from all spheres of the government. In other words, once tourism SMEs use e-commerce in business, they will be competitive. Studies by Nazir and Zhu (2018), Chan and Al-Hawamdeh (2002) and Dunt and Harper (2002) concur the level of e-commerce, particularly in developed economies, has been boosted by the intervention of government participation, which have generated a conducive environment for the adoption of ICT.

According to Ahmad and Nawaz (2023), many researchers have claimed, because ICT systems are readily available, e-commerce can benefit businesses greatly at a number of levels, including raising profitability and earnings, cutting operating expenses, and providing services more quickly and effectively in both domestic and foreign markets. Therefore, ICT assists business operations in the business and tourism SMEs in global markets. The ability to adopt IT is essential for the technological, marketing, and entrepreneurial orientation of businesses in Singapore and Indonesia. Additionally, businesses with greater technology orientation (TO) integration are better equipped to address market demands and produce novel goods, which boosts performance going forward (Türkeş 2024).

Institutional bodies that enhance e-commerce adoption as a business tool have been established in several countries, such as the Institute for Information Society of Wales in the UK (Nazir and Zhu 2018). Developed countries have improved opportunities provided by their governments in comparison to developing countries. Therefore, because e-commerce is an important tool to assist tourism SMEs the government should promote its use.

Chege *et al.* (2019) highlight the Kenyan government has merged ICT and the internet as the engine of socio-economic growth and development, by forming a citizen web portal and customer service centres to streamline e-government services under one roof. It is evident SMEs in underdeveloped economies are trying to improve ICT for business, slow progress in a positive direction. A study in China discovered the quick development of mobile internet and big data technologies, the expansion of the e-commerce sector, an extensive company funding gap, and the lag in government regulatory rules are all major driving factors in rapid growth of new kinds of digital financial inclusion (Yang and Zhang 2022). Therefore, SA government support for ICT is crucial in EC tourism SMEs.

The relationship between ICT adoption and the expansion of SMEs in developing nations, moreover, revealed the importance of government policies for the successful deployment of ICT for both SME development and local economic growth (Okundaye *et al.* 2018). This shows government intervention plays a crucial role in the adoption of ICT in tourism SMEs. It has, furthermore, been contended filling the digital gap obliges more profound investments (Hasbi and Dubus 2020).

Miraz and Habib (2016) advise both industry and government organisations can help to promote and support small business networking and ICT. The use of ICT is essential for the success of any tourism business; hence, government policies play a crucial role in tourism SMEs and tourist destinations. Policy formulation is critical for destination management organisations, particularly in relation to ICT use by the tourism industry at the destination, in order to create a conducive business environment that may aid tourism growth (Mugobi and Mlozi 2021). Therefore, knowledge in ICT is vital for tourism SMEs.

The study of Mukwarami *et al.* (2020) posit the lack of technology and insufficient government support have far less significance, as they were perceived to have less

impact on SMME growth. Findings by Chege *et al.* (2019) in Kenya, also substantiated in the literature, is the merger of ICT and the internet, consolidating and streamlining e-government services. This indicates attempts to adopt ICT to assist in these underdeveloped economies and, of, while the progress is slow it is a positive direction and illustrates in addition, it also shows government is in support of ICT acceptance for SMEs in some developed and underdeveloped countries.

According to Lekhanya (2018), government attitudes toward rural industrialisation and the development of rural infrastructure were noted as areas of concern for rural industrial development; however, there is either insufficient or no particular policy in place to address this. Therefore, government intervention is significant, particularly for tourism SMEs in the EC, which is dominated by rural areas. Technological environments are defined by the availability of cutting-edge technologies, such as firm-level technology absorption, foreign direct investment, technology transfer, Internet usage, fixed broadband subscriptions, and international Internet bandwidth (Das, Kundu and Bhattacharya 2020).

- **South African government on digitalisation**

The SA Department of Communications and Technology (2020) states digital skills are an all-encompassing notion comprising a wide range of hard and soft talents, enabling people to function effectively in the twenty-first century. The current and upcoming generations in SA need to acquire high-order, cognitive, behavioural, and leadership skills, as well as a wealth of experience with "digital learning" and "learning to be digital" from a young age. The department states it is only in areas where significant investments in digital skills are made, over an extended period, when new and better occupations, employment opportunities, and opportunities for entrepreneurship and self-employment will become available. To make the shift to a medium-to-high growth economy, SA must, therefore, improve digital skills at a never-before-seen level for its workforce, particularly for low-skilled workers, who would otherwise bear the brunt of job insecurity (SA Department of Communications and Technology 2020).

3.4.4 Suppliers and competition on ICT adoption

Suppliers are essential business partners that provide the items and services needed for effective operations, encouraging businesses to develop and draw in clients (Anwar

et al. 2023). Therefore, having a thorough awareness of the competition and strong supplier relationships is essential for long-term SME success in the EC tourism sector. According to Beynon *et al.* (2021) and Faisol *et al.* (2022), ICT adoption is viewed as a tool for businesses to compete on a global scale with more efficiency and stronger customer and supplier relationships. Hence, the relationship between customers and suppliers is crucial in tourism SMEs. In addition, it is rapidly acknowledged as a necessity for SMEs to consider ICT as a critical instrument in their operations to gain a competitive advantage in the global market (Sani *et al.* 2020).

Mody *et al.* (2022) highlight the acknowledgement of disruptive explosive innovations, such as the sharing economy, has caused competitive and institutional turbulence in many sectors and industries by introducing a platform logic. This poses a threat to the competition, for example, opposed approaches toward these disruptive influences, such as anti-Airbnb and anti-Uber. Therefore, it is crucial for tourism SMEs to take advantage of ICT, as it is a game changer that needs to be embraced.

Porter (2008, cited in Mulungula *et al.* 2022) indicates that IS adoption is influenced by competitive pressure in a significant way. Other researchers, have drawn attention to the significance of competitive pressure in innovation adoption (Rogers 2010; Kuan and Chau 2001, cited in Mulungula *et al.* 2022). Research underlines how competitive pressure is a significant element influencing ICT adoption. As a result, how information technology deployment affects the competitive environment is highlighted (Mulungula *et al.* 2022). Furthermore, these authors assert rivalry only slightly affects technology adoption in small enterprises. The significance of the influence competition has on technology adoption has been proven, examining the advantages of competitive pressure (Mulungula *et al.* 2022).

In accordance with Barba-Sanchez, Calderón-Milán and Atienza-Sahuquillo (2018) and Beynon *et al.* (2021), while SMEs may better track the nature of competition, set prices more effectively, and differentiate their goods and services from those of rivals to suit specific consumer wants, ICT use may also enable SMEs to strengthen and more efficiently integrate their value chain. Therefore, ICT will enhance productivity within tourism SMEs and provide a competitive advantage.

Several authors maintain, in reference to the structure of the tourist supply system, travel agencies are crucial to integrating a variety of tourism products from suppliers

throughout the supply chain. However, buyer-supplier relationships and the effect of the tourism market reveal several shortcomings in the capacity of Small and Medium-Sized Travel Agencies (SMTAs) to acquire tourism products (Dube and Flowerday 2018; Chang *et al.* 2019; Keskin and Ucal 2021; Mandal and Dubey 2020, cited in Ku 2022). Therefore, tourism is a web network crucial for successful and sustained tourism SME operations.

In order to interact with visitors, e-marketplace systems (EMSs) are built on the SMTA and connect to wholesalers, suppliers, distributors, and service providers via IS (Ku 2022). All these supply chains are thus important in EC tourism SMEs, because a strong supply chain is one where buyers and suppliers are willing to accept the uncertainties and changes in each other's businesses. Several authors such as Nguyen *et al.* (2015), Scholten and Schilder (2015), Handley (2017), and Nguyen and Van Hong Thi (2020, cited in Ku 2022) agree technical capabilities in supply chain flexibility can boost market share, lengthen relationships, and improve market segmentation as well as firm performance

Several authors agree the tourism supply chain is a voluntary and spontaneous cooperation agreement between travel agencies and suppliers that involves mutual exchange, sharing, and joint development, including mutual contributions in terms of capital, technology, or enterprise-specific assets, while pursuing competing interests with partners (Abou-Shouk *et al.* 2018; Dong *et al.* 2019; Yeh and Ku 2019, cited in Ku 2022). Due to the critical part played by these networks, it is vital SMTEs in the EC consider their importance.

Collaboration partners may easily mimic the creation and blending of new tourism products (He, He and Xu 2018; Ku 2022), similarly, SMTAs can adapt EMS collaboration to raise the group out rate, keep visitors, and broaden a line of tourism products. A group outing in the context of tourism could be a guided tour for a group of visitors, such as a city sightseeing or wine-tasting tour, or a wildlife safari organised for multiple participants. These outings usually include planned activities, transportation, and sometimes meals, with an emphasis on shared experiences. Hence, innovation and creativity are important in adapting to the impact new trends have on EC tourism SMEs.

Sundberg *et al.* (2019) established digitalisation is revolutionary to enhance, influence and convert the way businesses and individuals are interacting and searching for

information on each other, in both B2B and business to customer (B2C) contexts. This makes it crucial for owners/managers in EC tourism SMEs to be proactive in ensuring a seamless transformation.

Businesses all over the world have exploited the approach in adopting a competitive advantage and influenced their sustainability (Al Omoush *et al.* 2018). Competitiveness is thus essential to survive in a global context. Ku (2022) advises that interdepartmental businesses need organisational structures in a global business environment to ensure relationships in the supply chain foster supply chain agility. Indeed, the gains of integrating and using ICT are multiple and touch on diverse aspects of intra- and inter-firm business operations and transactions, which are in turn, reflected in firm performance. Therefore, making use of a supply chain will assist tourism SMEs in the EC become more competitive.

EMSs can provide SMTAs competitive benefits due to the complexity of the tourism supply chain, with changes in demand for tourism products frequently complex in the context of changes in competition. Competition tactics must thus be altered in accordance with the competitive climate for SMTAs to potentially gain a competitive advantage Ku (2022). Being competitive is thus crucial for better performance of EC tourism SMEs. Since they may leverage technology to provide them a competitive edge, SMTAs have started using e-marketing systems as an innovative interorganisational system for the tourism supply chain. The firm size, competitive pressure, entrepreneurial innovation, and IT savvy all significantly impact e-business adoption in SMEs (Satar and Alarifi 2022).

Tawfik *et al.* (2022) agree IT adoption is significantly influenced by the level of competition. Companies may feel the need to find a competitive advantage through innovations because of rising market rivalry. Furthermore, competitive pressure reveals the extent to which the company is under pressure from rivals in the market. This motivates more effective use of resources, considering fierce competition is a key component in the acceptance of innovations for tourism SMEs.

The development of digital financial inclusion benefits small and micro enterprises, with Yang and Zhang (2022) highlighting those in private, high-tech industries and competitive marketplaces should assist these enterprises to achieve sustainable growth. The findings indicate utilising ICT-based services enables SMEs to access

outside financial resources, hence boosting their financial inclusion. Therefore, EC tourism SMEs may benefit from any financial inclusion that may happen within to assist.

Ku (2022) refers to contrasting opinions regarding supply chain agility, deemed by some as more impacted by a variety of management strategies and partnerships with suppliers, than tourist relationships (Kurniawan *et al.* 2017; Luo *et al.* 2020; Simeoni and Cassia 2019, cited in Ku 2022). This makes partnerships vital in EC tourism SMEs. In addition, supplier strategies are shown to have a greater impact on supply chain flexibility than partnerships with suppliers.

Travel agencies are key players in integrating a variety of tourism products from suppliers throughout the supply chain. Furthermore, buyer-supplier relationships, as well as the impact on the tourism market, reveal some shortcomings in the SMTA's capacity to acquire tourism products. EMSs are built on the SMTA and connect to wholesalers, suppliers, distributors, and service providers via IS to interact with visitors (Chang *et al.* 2019; Keskin and Ucal 2021, cited in Ku 2022). The supply chain is thus vital in the tourism industry and SMEs should strategise accordingly.

Thathsarani and Jianguo (2022) emphasise accessibility, which is linked to the ideas of physical proximity and affordability, has been observed among the supply-side characteristics. Moreover, access to financial services significantly improves how well business organisations execute their operations.

3.4.5 Infrastructure for adoption of ICT in business

Many studies are cited by Okundaye *et al.* (2018) and Manthey (2024) in confirming the lack of suitable infrastructure, inadequate education, budgetary limits, and political obstacles, as well as societal difficulties, are among the ICT adoption hindrances and impediments noted in developing nations. Therefore, infrastructure is a vital issue for SMEs in the EC, as the province mostly comprises rural areas.

The SA government launched the “infrastructure priorities pipeline for 2024/2025” in March at SIDA 2024, with the aim of driving development in the country. The projects range from storage and communication to transport, electricity and more (Infrastructure SA 2024). Infrastructure generally refers to physical and organisational structures, of a business, region or nation, incorporating facilities, such as roads, power supplies, buildings, ICT and so on.

Nazir and Khan (2022b) additionally state ICT adoption incorporates several variables that significantly impacted SME adoption of ICT comprising the availability of ICT infrastructure, the country's digital preparedness, power outages, and company size and structure, as well as financial restrictions, experience in ICT skills (HR), traditional business practices (sales), and cultural and societal decisions. Therefore, tourism SMEs rely more on many internal and external factors for ICT adoption for the business to survive.

In accordance with Alam *et al.* (2022a), despite some differences, firm-level innovation and performance typically offer solid proof of the significant boost to performance from ICTs (Chege *et al.* 2019; Chen, Jaw and Wu 2016; Yunis, El-Kassar and Tarhini 2017). The ICT impact on the development of internal and external communication has a significant influence on how well SMEs innovate (Cenamor, Parida and Wincent 2019; Neirotti, Raguseo and Paolucci 2018). Hence, it is vital for tourism SMEs to have more knowledge on how the adoption will assist the business. Several studies reportedly agree ICT helps small business increase productivity, efficiency, and performance (Gërguri-Rashiti *et al.* 2017; Arvanitis, Loukis and Diamantopoulou 2016; Škare and Soriano 2021a; Gómez, Vargas and Rodríguez 2016). SMEs in tourism that adopt ICTs will, therefore, gain more for their businesses and improve performance.

Sastararuji *et al.* (2022) and Geissinger *et al.* (2019) maintain the slow pace of internet in distribution is caused by the infrastructural factors that control ICT readiness, which affects e-business effectiveness. Therefore, infrastructural factors are significant where ICT adoption in tourism SMEs is concerned. According to Naeem *et al.* (2022), the infrastructure for mobile banking is inadequate, because of weak bandwidth and power outages.

Jalloh (2022) concludes that low financial resources, a lack of ICT-related support, insufficient ICT security, and a poor Internet connection all significantly impacted ICT adoption. This is echoed in a recent South Africa Broadcasting Corporation (SABC) news report on the Northwest province state of security and infrastructure in tourism (SABC 2024). Hence, there is a need for adequate cost-effective infrastructure for EC rural tourism SMEs, with the accompanying security in place to encourage ICT adoption. The working practices of these rural enterprises may be impacted by slow and unreliable Internet access, such as the online accommodation distribution platform. ICT acceptance, adoption and use is, therefore, shown to be essential for new business in

the tourism and hospitality industries, and its proliferation and disruptive impact on destination economies has created substantial research awareness (Geissinger *et al.* 2019; Sastararuji *et al.* 2022).

- **Unreliability of internet to use information communication systems**

Morris, Morris and Bowen (2022) posit that rural-based SMEs are affected by the digital divide, both in terms of their regular company operations, such as marketing, accounting, or data storage, and in terms of their opportunities to investigate varied businesses. As a result of the digital divide, it is imperative that EC SMEs in tourism be empowered with digital information to enable transformation. The theoretical foundations of the resource-based view highlight that rural SMEs face a competitive disadvantage compared to their urban counterparts, because there is a higher possibility resources will be available to the latter.

According to Kuteesa, Akpuokwe and Udeh (2024), in order to close the digital divide, governments throughout Africa have implemented a number of policies and initiatives in recognition of the critical role ICT plays in socio-economic development. These include national broadband plans to increase internet access, creating rules governing mobile banking to encourage financial inclusion and collaborations with businesses and international organisations to establish ICT infrastructure in underserved areas. Hence, government plays a crucial role in addressing ICT infrastructure in the EC.

The study of Morris *et al.* (2022) further finds rural-based SMEs have a lack of or lower levels of internet connectivity due to the digital divide, which may make it difficult to conduct ordinary business operations or engage in diversification strategies. The lack of infrastructure in rural areas creates difficulties for tourism SME operations in EC rural areas. The digital divide will, however, be overcome primarily through innovation, which covers new developments in technology, as well as creative approaches to financing, policy, and community involvement.

Community networks, public-private partnerships (PPPs), and social enterprise models can offer long-term solutions for improving ICT access (Kuteesa *et al.* 2024). In addition, diversified business ventures are said to present firms with a chance to navigate challenging times, such as the recent coronavirus outbreak. Internet is, nevertheless, not available in all regions, therefore, SMEs face significant network connection difficulty, making it challenging for more business units to adopt mobile payment. All

mobile payment partners encounter challenges in their ability to connect and provide high-quality payment services (Morris *et al.* 2022). Finance, therefore, seems to be a major barrier to sustained SME survival.

Yuwono, Suroso and Novandari (2024) add that leveraging ICT to boost SME competitiveness requires the implementation of organisational strategies, such as the creation of diverse partnerships. SMEs can access a wider range of resources, expertise, and technology with the help of such strategies, emphasising the need for strategies to enable more resources for EC tourism SMEs to adopt ICT. The evidence suggests a lack of ICT application and attentiveness in SMEs and insufficient drive or strategy by SME business-owners also adds to the challenges to technology adoption, along with the skillset required. Should these opportunities not be incorporated by the rural communities, they will be utilised by competitors and clients, which will then challenge the inaccessible (Bowen and Morris 2019).

According to Enaifoghe and Ramsuraj (2023) and Hossin, Azam and Hossain (2023), SMEs are the backbone of many economies, driving innovation, creating job opportunities, and contributing to economic resilience. Therefore, SMEs in EC tourism contribute to job creation that forms part of the country's Sustainable Development Goals (SDGs). The digital revolution, led by ICT, has transformed how businesses operate and interact with their customers. Furthermore, because digitisation has made a significant contribution to personalised marketing, it has altered the nature of entrepreneurship. The digital industrial revolution has made a vast amount of information available, and how this information is used, could impact the business's ability to build trust with its clientele (Yong 2023). Therefore, with drastic changes in technology and changes in customer behaviour, tourism SMEs are compelled to implement such measures.

Tien, Van Trai and Quyet (2023) point out the tourism sector interacts and has relationships with numerous other sectors of the economy, where links are found across disciplines and sectors with significant industries; it even establishes connections with similar industries in other nations or areas. This implies travel agencies need to communicate and collaborate with people in a variety of industries. Therefore, there is a need for changes in SMEs within the tourism sector, with transformation necessary to have ICT so that SMEs in EC can navigate in other sectors and assist their businesses.

- **Digital transformation in SME**

The most significant example of the disruptive developments resulting from ICTs is the advent of "digital platforms", which are transforming phenomena over the entire Information System (IS) landscape (Caputo *et al.* 2022). In addition, user relationships with organisations are evolving due to the facilitation of online consumer communities through digital platforms (Spagnoletti, Resca and Lee 2015). Anything may now be purchased anywhere, with electronic payments necessitating the creation of new standards and payment options. These payments are conducted either over the internet or through telecommunication networks (Mulungula *et al.* 2022).

Several studies are highlighted (Cohen *et al.* 2017; Aydalot and Keeble 2018; Li *et al.* 2018; Delistavrou *et al.* 2019, cited in Chatterjee *et al.* 2022), concurring that various opportunities result from digital technology use for the entrepreneurial process and practices of firms to be developed (Ferreira *et al.* 2022). SMEs might be optimistic that digital transformation would increase their innovation efficiency and competitive advantage as well as their corporate entrepreneurial activities (Chatterjee *et al.* 2022).

Various changes to traditional business procedures are found due to new technologies, such as artificial intelligence (AI), blockchain, the Internet of Things (IoT), and social media (SM) (Ahadi and Kasraie 2020, cited in Chatterjee *et al.* 2022). To adapt to this expanding digital revolution, many businesses are, and have been, required to change their existing business processes and strategies. A behavioural shift is thus critical for SMEs to adapt to changes (Chatterjee *et al.* 2022).

The success of digital technologies in Africa depends on a complex interplay of economic, political, social, and organisational, as well as cultural factors (Mkansi and Landman 2021). Since the end of the last century, digitalisation has driven economic change, causing "ups and downs" across industries. New information technology options have enabled innovators to challenge traditional value chains with disruptive business models. In this digital age, it is evident all business-owners want to use and integrate the newest technologies to outperform rival companies (König *et al.* 2019). To compete in the digital economy, SMEs are expected to focus on the process of digital transformation and digital innovation, as well as to employ updated technology to enhance their entrepreneurial practices and procedures (Chatterjee *et al.* 2022; Tabane 2022).

Researchers show there is limited usage of mobile applications by SMEs to benefit, promote and market upcoming and new businesses. According to Waithaka and Mnkandla (2017) and Wanjau, Macharia and Ayodo (2012), it is reasonable to assume as mobile phone usage grows in Kenya, so too will the use of mobile applications for online shopping. Unfortunately, this is not the case; organisations have largely failed to use these applications at the levels necessary to realise their benefits.

- **SMEs on digitalization**

These business enterprises can be found in both urban and rural areas, as well as in all tourism activity sectors, such as accommodation, attractions, tour services, and tourism niche markets such as adventure, heritage, and eco-tourism, as well as support service sectors. In the second quarter of 2024, 25 000 new jobs were created in the EC, leading to a slight decline in the province's unemployment rate, which dropped by 1.4 percentage points from 42.4 percent in the first quarter to 41 percent (StatsSA 2024, cited in Nkosi 2024)

3.4.6 Defining ICT

Azzam (2019) posits that ICT refers to technologies and tools that can be utilised to gather, store, retrieve, and convey, as well as deploy data. It denotes the tools and structures that can assist people in a company to interact digitally. The Internet has played a significant role in driving social, financial, and technological advancements in the 21st century (Gill *et al.* 2024). As Diareme (2023) explains, all network infrastructure that enables virtual communication, enables telecommunication in remote areas, and enhances access to services, management, and decision-making, is included under the umbrella of ICT.

The adoption of ICT is defined as a generally obtainable framework, clarifying dynamics and how these can affect organizational change. It is a process whereby employees acknowledge and fit a new technology into their common daily duties, without rage or denial in using the new technology (Azzam 2019; Knoop 2019; Raissi and Matoussi 2019; Esather and Amam 2024).

In the perspective of the European Commission-EU (2001, cited in Ejemeyovwi and Osabuohien 2018), ICT is defined to signify a term focused on information storage, refining, diffusion, and management, along with cognition in adopting diverse cases of software and equipment in a digital and non-digital form (Buettner *et al.* 2013). Yorkulov,

Marjona and Zarrina (2022) advise digital solutions are, presently, more frequently associated with ICT than conventional information transmission systems are, but the definition of ICT might evolve over time. Ogundile *et al.* (2019) identify assessment of ICT as a tool applicable to every aspect of human labour and characterise it as such, defining it as computer-based tools and techniques for gathering information.

Kumar *et al.* (2024) found various ICT technologies, including knowledge transfer and cloud computing, may improve organisational sustainability. IT is essential for all businesses, regardless of size, with ICT used for client communication, accounting, manufacturing, and sales. These ICT technologies significantly impact business and environmental sustainability, in addition to improving productivity, which is crucial for business sustainability.

Vidas-Bubanja and Bubanja (2017) draw attention to the critical role ICT plays in helping SMEs in the tourism sector become more competitive and efficient in their operations. Through online booking platforms and digital marketing, ICT assists these businesses to reach a wider audience, expanding their customer base and visibility (Fatiha 2024). According to Ibrahim and Rasheed (2024), better customer relations management (CRM) is made possible by its mechanisms for feedback and individualised communication. ICT tools also save operating expenses, simplify administrative procedures, and offer insightful data analytics for strategic decision-making (Balicka 2023).

Overall, ICT integration in tourism SMEs spurs innovation, raises the quality of service provided, and strengthens their capacity to compete internationally (Lasisi, Odei and Eluwole 2023). Therefore, this an indication that SMEs and ICT play a critical role, and they complement each other, hence, the EC tourism SMEs should embrace these tools to ensure they are competitive and able to keep in touch with customers.

- **ICT adoption in SMEs**

The acceptance of adoption in many literatures is referred to as “technology acceptance” (Ogundile *et al.* 2019). Accordingly, Verdugo-Castro *et al.* (2021) and Pradana *et al.* (2022) agree ICT adoption and usage is a requisite, as it enhances company competitiveness, and policies, as a result, it is one of the top agenda items for governments today in most developing countries.

In the opinion of Al Busaidi, Bhuiyan and Zulkifli (2019), the adoption of ICT in small business includes the acquisition of commercial support that ranges from advice through hardware and software, which supports the development of information and technology. The challenge is that SMEs fail to acknowledge ICT use due to their lack of knowledge, which has further hindered its use. Hence, SMEs face numerous challenges from both internal and external factors. Awan *et al.* (2021) agree SMEs are less likely to benefit from customisation, because they lack the resources and expertise necessary to do so on their own. As a result, SMEs were more likely to not adopt ICT due to a lack of awareness and knowledge.

Abdullah *et al.* (2018) maintain organisations can manage resources more efficiently and improve communication by adopting ICT. E-business and internet can provide SMEs with significant benefits such as reduced transaction costs and increased speed and reliability of transactions. In addition, Alford and Page (2015) articulated the internet has the potential to transform SME marketing in many areas of CRM, including customer relationship marketing, access to novel markets, business to business (B2B) collaborations, and creation of products with customers, as well as improving internet efficiency.

Ogunkola *et al.* (2021) posit ICT is primarily driven by globalisation factors and plays a critical role in an economy's growth and development. ICT is the infrastructure that enables modern computing and communication, people, expertise, rules and procedures, and components. In general, ICT in all devices, networking elements, apps and systems is what enables individuals and organisations to communicate in the digital world when combined. In the view of Agboola *et al.* (2023), ICT covers both the internet-enabled and-disabled spheres, as well as wireless-powered mobile devices. It also includes older technology, such as telephones, radio, and television broadcasting, many still commonly used today alongside cutting-edge ICT, such as AI and robotics (Ahmed *et al.* 2023). As illustrated, there many components in place and developments as the ICT landscape changes, which may impact rural EC tourism SMEs in accepting technology.

- **ICT readiness in SA**

ICT in SA is progressing, with increasing mobile and internet adoption in urban areas. Maumbe, Owei and Alexander (2008) find ICT penetration in SA varies by geography

and race, with urban areas and white households having more access than rural and black households.

Kuteesa *et al.* (2024) emphasise issues such as the persisting digital divide and high data costs, particularly in rural areas, even though efforts are being made to promote digital skills and innovation. Access to ICT is, on the one hand, severely hampered in Africa by higher rates of poverty, lower educational attainment, and inadequate infrastructure. On the other hand, although rural areas in the United States (US) have their share of difficulties, they typically have better access to resources for education and infrastructure. However, in both situations, substantial obstacles remain due to income disparity and access costs (Kuteesa *et al.* 2024). Based on a SA Department of Communication (2013) report, SA is ranked as a world leader in ICT, in areas such as software, mobile software, and electronic banking services.

Sutherland (2020) states the SA government has made some efforts to create an enabling environment in support of a market-oriented business environment; however, there have been challenges in terms of ministry leadership in the past few years. State co-ordination is essential for the sustainability of this increasingly cross-cutting sector. In addition, Sutherland (2020) highlights sector growth has been hampered by a lack of progress in key implementation areas, particularly SA Connect, the SA broadband policy plan.

Shivdasani (2019, cited in Olaitan, Issah and Wayi 2021) suggests SA faces the same developmental challenges as the rest of the continent, including persistent poverty, unemployment, and inequality. SA aims to address development challenges by leveraging emerging 4IR technologies, as well as a 'leader' in adopting 4IR to address its economic decline and current recession (Olaitan *et al.* 2021); this was confirmed in 2018 by President Cyril Ramaphosa, as co-chair of the International Labour Organization (ILO) Global Commission on the Future of Work. The President also established SA's own Presidential Commission on the 4IR.

SA has an advantage being a net importer of ICT products; simultaneously, the country has a low supply of appropriate ICT skills required and serviced by the industry that does not have representation on demographics of the country (Gillwald *et al.* 2018). Therefore, while SA is well-grounded with ICT service providers, factors that impede ICT adoption tourism SME reportedly include "the state of infrastructure and security"

(SABC News 2024). This was highlighted by Professor Slabbert of Northwest University Tourism Management, who said these challenges “hamper the provincial tourism sector from growing as it should”, SABC News, 28 August 2024. In the opinion of Yoo *et al.* (2021), developing countries have a low level of technology progression and a poor record in ICT adoption.

Olaitan *et al.* (2021) agree adopting the 4IR in developing countries may not yield expected gains, due to a lack of necessary resources. Viable resources include adequate digital technologies, IT infrastructure, and digital literacy. Adopting 4IR without adequate resources can exacerbate a country’s economic and development challenges, where its adoption in a country with high digital illiteracy, may only benefit those who are already digitally literate, leading to increased inequality.

Basak, Wotto and Bélanger (2023) emphasise ICT has evolved into a crucial component of SMEs, which are the foundation of a country’s economic growth. The ICT sector in SA is very diverse, comprising Broadcasting, Postal services, Telecommunication, and IT, amid others, signifying both public and private benefits. These segments are strengthened by fledgling yet resilient support sectors in electronic manufacturing, repair, and installations (SA DTPS 2016). Additionally, SA needs to develop its IT infrastructure and ensure energy security. Bankole, Osei-Bryson, and Brown (2014, cited in Olaitan *et al.* 2021) emphasise a sound, efficient telecommunications infrastructure is essential for implementing new technologies and maintaining transparency in the socio-institutional component of the 4IR. The government should prioritise cyber security, data security, and privacy due to the rapid advancement of digital technologies Cunningham (2018, cited in Olaitan *et al.* 2021).

The SA Department of Communications and Technology (2020) advises digital technology can only play a revolutionary role in the economy, when a wide range of digital skills are available in the job market. Digital proficiency is a prerequisite for economic involvement, whereas a deficiency in this area discourages it, therefore, the potential digital technology impact to business and government can either be minimal, extensive, or transformational. Digital technology’s disruptive effects have the potential to cause both short- and long-term job losses, as well as opportunities for work, or new and better occupations. Entrepreneurial and self-employment opportunities will not be viable until significant and ongoing investments are made in digital skills. Therefore,

entrepreneurs should take advantage of the digital disruption, although it has positive and negative effects on the business.

Skare and Soriano (2021a) advise, because of modern IT complexity, technology adoption models are constantly changing, with technology adoption a complex social and developmental process influenced by individual characteristics. Globalisation promotes technology adoption by transferring foreign knowledge and increasing international competition.

SA needs to enhance digital skills for the workforce at an unprecedented level to transition to a medium-to-high growth economy, particularly for low-skilled people who would, otherwise, face the brunt of job insecurity. In the opinion of Kirlidog *et al.* (2018), the evidence for the shortage of ICT skills has been publicised in SA and recognised by the government. As a result, these shortages have been acknowledged as significant, included as urgency areas for skills development in the National Plan for Higher Education. There are, simultaneously, many opportunities in the ICT sector through job creation across micro, small, medium, and large enterprises, which means coordination is of the utmost importance, so that these sectors can find each other (Gillwald, Mothobi and Rademan 2018).

The SA government recognised, to create a sustainable investment environment, it is obliged to develop an enabling policy environment. Achievable through suitable investment policy and regulations, as well as promoting innovation, while building capacity in research and development (SA Department of Communications and Technology 2020). The reliable digital infrastructure that enables organisations to better manage their operating systems and remotely monitor data is the SA government's top priority for its digital industrial policy, because it allows staying competitive in the world market (Gillwald *et al.* 2018). The challenge that remains is high-speed data access, which is a function of dormancy, bandwidth, and cost (SA Department of Communication 2013).

Alford and Page (2015) and Mhizha *et al.* (2015) argue there is limited research undertaken within Africa in terms of assessing the levels of internet and social media adoption as tools for marketing tourism products and services. Therefore, it is crucial this gap be utilised for tourism SMEs to take advantage.

Abdullah *et al.* (2018) and Owoseni and Twinomurinzi (2018) also point out there is not much research available on how SMEs use mobile apps. The adoption of ICT and e-business may, according to these authors, offer a responsive manner for businesses, a more pro-active way in terms of utilising their resources, and ability to communicate faster. However, it should be noted there are challenges in terms of SME ICT adoption; these barriers are ranged from cost, and size, to skilled labour.

Mago and Mago (2015, cited in Smidt and Jokonya 2022) advise the 4IR presents opportunities for small-scale farmers in SA to address challenges and innovate in food manufacturing, growth, marketing, and distribution. Research indicates digital development can enhance the livelihoods of small-scale farmers and reduce poverty. Hence, it is vital for EC tourism SMEs to embrace ICT for the livelihood of their businesses, thereby assisting in job creation.

In terms of ICT adoption during the COVID-19 epidemic, Gqoboka, Anakpo and Mishi (2022) assert the ICT infrastructure of informal firms is inadequate. Although poor infrastructure impedes ICT adoption, large corporations were able to meet their expansion needs, because they possessed the necessary business and management expertise, making educated and timely decisions that will help them succeed.

3.4.7 SME landscape in SA

Olatunji and Houghton (2017, cited in Ramdass, Mbedzi and Mncwango 2024) assert SMEs play a significant role in the SA economy, accounting for 90 percent of all formal businesses. However, their contributions to the country's economic and social development are not optimal. Business size can affect its characteristics, performance, and responses to the environment. Small business is more prone to poor decision-making, increasing the risk of failure. Further to this, smaller businesses are more likely to fail due to poor management or internal causes, with low firm performance and growth leading to suboptimal contributions. (Lukason and Hoffman 2015). This concurs with Mxunyelwa (2024), who adds that most rural small businesses do not survive their first year of operation. The lack of knowledge and experience among small business managers is one of the main issues found.

According to Martin and Staines (2008, cited in Asah, Fatoki and Rungani 2015), new firms often fail due to a lack of managerial experience, skills, and personal qualities, as well as adverse economic conditions, inadequate business plans, and limited

resources. The effect that management abilities, personal values, and motivations have on the performance of SMEs in SA, where business owners' success criteria reflect their orientations toward values. Thus, the performance and management choices made by SME owners may be significantly influenced by their personal values (Asah *et al.* 2015).

The performance of the company may be affected by the decisions and actions made by SME owner- manager, who are guided by certain values. Thus, a strong positive correlation between SME managers' personal values and company performance is hypothesised (Asah *et al.* 2015). Furthermore, these authors emphasise the importance of SME performance in addressing the socio-economic challenges and goals in SA. Promoting the growth of SMEs requires significant attention and effort.

Obokoh *et al.* (2024) highlight digital transformation, a disruptive force reshaping the economic landscape and reinventing organisational operations, drives business transformation across nations. Rassool and Dissanayake (2019, cited in Obokoh *et al.* 2024) maintain SMEs contribute to the global economy and promote innovation, which means these changes are crucial for the business operation and survival in EC tourism SMEs.

Dyantyi (2023) highlights that SMEs in SA face barriers to market access, customer relations, and government support, hindering their success in business. Msomi and Ngcobo (2023) add that businesses require access to funding to support their expansion and recovery, as economies recover from the effects of the pandemic. Therefore, finance is a hindrance to tourism SMEs in ICT adoption, more specifically found to be the case during the pandemic.

With the financial landscape becoming ever more complex, financial literacy is becoming essential to survive in such a setting (Changwesha and Mutezo 2023), requiring tourism SMEs to have a better understanding of their finances. Grants, low-interest loans, and other financial support programmes are just a few of the ways governments and financial institutions can help SMEs gain access to capital. In doing this, it is ensured SMEs are prepared to face the difficult economic environment and support the global economic recovery (Msomi and Ngcobo 2023). Due to the pandemic globally, SMEs have been affected and are in economic recovery.

The terrain of SME policy is intricate, comprising framework conditions, targeted policies with a specific interest, and general policies that impact SMEs. These sectors frequently

cut across levels of government, as well as between departments and government organisations (Enaifoghe 2023). Since there are laws in place, they should also support the SME sector. Saruchera and Mpunzi (2023) advise government support shapes the business landscape and drives economic development. Small farmers, as with SMEs in other industries, face challenges that include market access, funding, unfair competition, and high machinery costs (Seda 2023). EC tourism SMEs may, therefore, be facing the same challenges.

Digital capital can be perceived as either a threat or an opportunity, depending on how it is used; however, its impact on SMEs cannot be ignored. Technological advancements in the pre- and post-digital eras may benefit or harm individuals, with Saruchera and Mpunzi (2023) in agreement. According to Khan and Mihaisi (2023), SMEs play a crucial role in the Circular Economy (CE) by driving innovation, reducing waste, creating economic value, and advocating for sustainability across African countries. SMEs are thus a catalyst, with innovation and sustainability crucial for tourism SMEs to follow suit in the EC. Ekechi *et al.* (2024) find access to finance a significant challenge for SMEs in African economies, as they strive for economic development and prosperity. Access to funding plays a crucial role in the success of these businesses.

This review examines financial mechanisms for small business growth in Africa, analysing traditional and innovative approaches and their impact on SME development (Abisuga-Oyekunle, Patra and Muchie 2020). This has shown finance as a major impediment in SME success (Rungani and Potgieter 2018, cited in Donga and Chimucheka 2024) maintain the EC small business sector has long been criticised for a lack of financial tools, which echoes findings by. The provincial government is creating a development fund to support poverty reduction, socio-economic development, and economic growth as evident from the EC Main Budget Speech 2022 (SA Province of the EC Provincial Treasury 2022).

Despite significant technology improvements, small enterprises continue to be hampered by a lack of technological implementation (due to the nature of the SME business and trade model). In addition, because of the lack of infrastructure, they struggled with insufficient skills, making it crucial for empowerment initiatives in EC tourism SMEs. Without this technology, these small enterprises struggle to compete and expand. Arinaitwe (2006) posits SA is one of the African countries with a developed economy and a solid economic infrastructure, while the ICT sectors provide ICT

infrastructure and services to all other economic sectors. Although internet access is available throughout SA; its dependability is, however, determined by Internet Service Providers (ISPs), connectivity types, and enterprise infrastructure. Broadband is, nevertheless, improving thanks to the adoption of fibre optic, 4G, and 5G technology (Moyo and Loock 2021).

According to Modimogale and Kroeze (2009), the cities in SA have sophisticated ICTs, but small towns and rural areas have relatively outdated infrastructure that restricts access to the internet and web-based applications. This prevents numerous corporate entities from participating in e-commerce and the information economy. E-commerce is more established in cities than in small towns, because of reliable ISPs, financial services, and connectivity with other organizations in many economic sectors. In SA, because of inadequate infrastructure and loadshedding, SMEs in EC rural areas will not thrive as their urban counterparts.

In the opinion of Arinaitwe (2006) and Gqoboka *et al.* (2022), despite significant technology improvements worldwide, small enterprises remain constrained by their lack of technological adoption. These small firms would struggle to compete and expand without this technology; hence, IT skills are vital for the betterment of the business.

Moyo and Loock (2021) highlight the SA economy is heavily reliant on ICT services for data storage and processing, transactions, and communication, which also make it simple to access online markets. This is true for both large and small businesses, but because of the digital divide, businesses, particularly SMEs in small towns and rural regions, struggle in this area as they frequently make use of on-premises facilities and have limited access to ICT infrastructure. SA is preparing for the 4IR, notwithstanding the difficulties faced from Large Business Enterprises (LBEs). This reveals a significant digital gap between SMEs and LBEs (Moyo and Loock 2021). Therefore, LBEs have a role to play in assisting SMEs so that EC tourism SMEs can thrive, surmounting the digital divide in SA.

Ajibade and Mutula (2020) and Mbuyisa and Leonard (2017) concur agile communication techniques are essential for communicating business intelligence to clients and stakeholders. However, businesses must address the issues with IT infrastructure and networking, which continue to be major obstacles to SME use of ICT; in the sense that SMEs cannot afford the high cost of ICT. Due to the number of

impediments faced by tourism SMEs in the EC, which are external issues, small tourism businesses often rely on word-of-mouth and lack access to state-of-the-art technology for marketing.

As found by Mxunyelwa and Vallabh (2017, cited in Mxunyelwa 2024), SMMEs in SA face challenges in developing managerial skills, which can hinder entrepreneurial growth. Small business owners-managers require financial and general management skills to plan, organise, lead, and control the enterprise. However, there are challenges related to the skill levels of SMME managers.

Nguyen, Natoli and Divisekera (2021) aver SMEs can benefit from using technology and innovation, which Nguza-Mduba and Mutambara (2021) concur is evident from the marketing adoption rate among tourism SMEs in African countries having been extremely low. Kergroach (2021) highlights the OECD report that digital technologies significantly impact the structure and functioning of tourism value chains, as well as the industry, and on businesses operating in the tourism sector of all sizes.

One of the main policy challenges in the tourism industry is thus to facilitate and enable digitalisation. Micro to small tourism businesses tend to lag larger firms in digital technology adoption, whereas SMEs who do not make investments in digitalisation will not survive or prosper in the long-term. The convergence of advanced technologies, as well as the increasing social and economic connectivity that is taking place as a result of globalisation, are driving the push to adopt digital technologies (Kergroach 2021).

A study in the EC found micro-to-small tourism firms face different challenges than larger firms, particularly in terms of technology adoption. It was also found service providers face another e-marketing challenge - competing in a rapidly changing environment. The study found, as technology advances, the environment becomes more volatile, impacting business competition (Mgoduka, Kaseeram and Heeralal 2024).

The results of the study in the EC on tourism SMEs are in line with earlier research showing productivity and service innovation in small tourism businesses can be positively impacted by technological innovation, particularly IT capability (Chivandi and Mlilo 2024). Hence, there is a need for ICT adoption by tourism SMEs to operate in all environments, as gaps that have been identified in ICT.

3.5 CONCLUSION

The attitude, internal and external factors have been identified on the literature review was explored on the adoption of ICT. This chapter investigates the transformative impact of ICT on tourism business models and the SME landscape. The literature portray that ICT has become an indispensable tool for fostering growth and improving customer experiences, from online bookings and virtual experiences to data-driven decision-making. The convergence of tourism SMEs, and ICT creates a dynamic ecosystem in which each component reinforces the others. These concepts work together to improve business success, we'll look at how SMEs in the tourism industry use ICT tools to expand their reach, optimize operations, and tailor experiences to meet a wide range of customer demands. In terms of marketing SMEs should use social media to its advantage. Social media is a buzzword; it is critical for entities for marketing any business to gain more clients. Many businesses utilize it to gain more clients; thus this is one of the factors that SMEs must use at all costs to improve their market share. It is a powerful instrument that SMEs must use effectively to reach their target market. Using social media assist the business so that it can reach their clientele. The attitude plays a fundamental role in terms of the owner-manager in adopting ICT. The next section focuses on the research methodology of this study that discusses

CHAPTER FOUR

TOURISM SMES IN THE DIGITAL ECONOMY: GOVERNMENT INTERVENTIONS, ICT ADOPTION, AND SECTORAL CHARACTERISTICS

4.1 INTRODUCTION

The tourism sector is a significant driver of employment creation and is among the fastest-growing industries, particularly benefiting impoverished communities. Evidence indicates that the sector makes a substantial contribution to economic growth, with SMEs playing a pivotal role in driving this growth and contributing to the Gross Domestic Product (GDP).

Globally, tourism has shown remarkable growth. In the 21st century, there has been a notable increase in people travelling for various purposes such as sports, leisure, business, and other reasons. The sector continues to evolve due to its dynamic nature. Shanker (2008, cited in Ansari et al., 2017) notes that although tourism products are primarily physical services, they are largely information-based. Consumer decision-making depends heavily on the information provided, which forms the core of the tourism product.

Tourists' expectations of services are predominantly shaped by the information they receive through social interactions with service providers or through information suppliers themselves. The internet has become a powerful tool for disseminating travel and tourism information. According to Baidal et al. (2017), information and communication technology (ICT) forms an integral part of the digital economy, creating a supportive environment for innovative management approaches within cities.

4.2 DEFINING TOURISM

Cooper and Hall (2011) and Twinomurinzi (2019) attest that tourism is the outline of all businesses that supply goods and services to facilitate leisure, pleasure, and business actions away from the home environment. It comprises people travelling optionally outside their place of permanent accommodation and is established on a complex of infrastructure and physical resources, which provide an advantage to places in which

they are located; that is, tourism is produced where it is consumed. In the opinion of Antunes *et al.* (2023), the definition of tourism has changed over time. A person leaving their usual area for at least 24 hours for leisure or work was traditionally thought to qualify as tourism. The World Tourism Organization (WTO) has more formally defined it as a social, cultural, and economic phenomenon (Antunes *et al.* 2023).

According to Camilleri (2018), the Institute of Tourism issued a definition of "tourism" in 1976 that particularly refers to people's temporary travels to regions other than their usual residences. This definition emphasises the core feature of tourism, which is temporary travel to various sites. Due to its significant impact on the global economy, tourism services are regarded as an important economic activity. This shows, because of its economic importance, tourism is a recognised business sector. There have been numerous attempts to define tourism, demonstrating the numerous meanings and interpretations the term has undergone over the years. The SA Human Science Research Council (HSRC) states this implies there is no single, accepted definition of tourism and it can be interpreted differently, depending on the situation (SA HSRC 2017).

Page (2014) points out the terms "travel" and "tourism" are frequently used synonymously, indicating regular confusion of the two names, resulting in frequent interchangeable use. Although there may be slight distinctions in their meanings, this interchangeability usage suggests travel and tourism are considered interchangeable terms.

Ivanović and Milićević (2009) and Gumbi and Twinomurinzi (2020) posit the definition of tourism is complex as there are several drivers in numerous sectors, and challenging in terms of managing tourism, as it consists of diverse sectors, including travel, business, leisure and hospitality. In addition, the definition is complex with some services important for satisfying customer needs, while others play a peripheral or supportive role. Kilangi (2012) defined tourism as a composite of services and goods geographically distributed across destinations. It also includes accommodation, transport facilities (air, sea, country transport), activities (what tourists do during their stay), and attractions, as well as auxiliary services (banking, telecommunications, hospitals).

4.2.1 The nature of tourism in SA

Tourism is acknowledged as a core economic activity, as it contributes greatly towards the world's economy. It is regarded as a 'success story' of the new SA, because of its strong economic performance, alongside its growth in services. In the last two decades, the SA economy grew due to tourism services (Anwar *et al.* 2013; Booyens and Rogerson 2017; Potter and Frank 2024). In SA, tourism has a critical influence on the government perspective, as there is income generated, which leads to a contribution to GDP.

Globally, the tourism sector contributes significantly to the GDP of any country, the total contribution of travel and tourism to the global GDP overall, is estimated to be 5.8 trillion US dollars (Statista 2024c). The entire amount that travel and tourism contributed to the world economy in 2023 was approximately four percent less than in 2019, the year before the COVID-19 pandemic. Considering the circumstances, in 2023 travel and tourism contributed 9.9 trillion dollars to the world economy. This amount was expected to surpass pre-pandemic levels in 2024, with an estimated value of 11.1 trillion US dollars (Statista 2024c).

The SA tourism sector is regarded as one of the booming sectors of the country, as evident from the StatsSA (2020b) reports regarding the Tourism Direct Gross Domestic Product (TDGDP) for 2016, which was R139 700 million and R123 616 million in 2020. According to the most recent data from 2019, the tourism sector in SA's EC province contributes roughly 7.9 percent to the province's GDP (StatsSA 2020a). Therefore, SMEs in tourism are contributing much nationally and, in the EC, indicating they play a significant role in the economy.

In the opinion of Mokoena and Twinomurinzi (2019), the tourism industry is a major macro-economic provider of many developing countries and tourism is regarded as one of the tools that can be used to access economic, social, and environmental opportunities worldwide. For the full benefits of the tourism sector to be realised, stakeholders within the tourism industry should, therefore, embrace a digitisation method, safeguarding that all relevant service providers hold the required e-skills (Potter and Frank 2024). SMEs in tourism address some of the socio-economic aspects of the EC, which makes it crucial to address these by accepting ICT in their businesses.

4.2.2 Characteristics of the SA tourism sector

Rogerson (2001) and Sixaba and Rogerson (2019) highlight the national policy focus in the early 2000s added black ownership in transforming the tourism economy, enhanced through skills training, as well as infrastructure development. Through the national rural tourism strategy of 2012, regions were identified for the rural tourism economy to nurture and integrate the areas, commonly in the former 'Homelands'. Despite other studies on the execution of the tourism policies, it was identified that participation of countless successful small towns and rural areas was compelled by tourism-led development (Sixaba and Rogerson 2019). Therefore, such initiatives should be implemented to support and assist the EC tourism SMEs, more particularly in rural areas and provide training to develop their ICT skills.

In the opinion of Rogerson (2015), the SA government has regulations in place to transform the sector, as it is dominated by Whites, and they do that through Black Economic Empowerment (BEE). This policy aim is to improve the role previously disadvantaged black entrepreneurs played in the national tourism economy. Nonetheless, although there has been transformation, particularly in tourism, a need remains to develop black entrepreneurs in SA. Booyens and Visser (2010), as well as Koens and Thomas (2016) identify the national government policy reaction to global and local contexts, in trying to enhance economic prosperity and develop economic prosperity and improve destination competitiveness, has been executed to place great emphasis on transformation, particularly SME development. In any society, starting and maintaining a small or medium-sized business is advantageous. This is attributed to its ability to raise living standards for both business- owners and employees (Okouwadela, Tengeh and Iwu 2022).

According to Sixaba and Rogerson (2019), the national government has been pushing transformation in SA's tourism economy; it is a significant drive to redress the wrongs by the apartheid regime. The topic has consistently topped the tourism agenda ever since the year 2000, after a visit to the Tourism Indaba, a major tourism trade event in Durban, SA. On this occasion the tourism minister at the time, Mr Marthinus van Schalkwyk, identified the root of the challenge in the tourism sector was its control by white entrepreneurs.

Although changes have been made to level the playing field since democracy in SA, tourism remains controlled by White entrepreneurs, suggesting the government is not as aggressive in transformation. Adinolfi *et al.* (2018, cited in Sixaba and Rogerson 2019) debate the tourism sector, amidst others, is a vehicle that offers exceptional prospects in support of transformation in SA.

Eze *et al.* (2019b) maintain SMEs have no other option but to embrace emerging ICT in the new, evolving economy, with advanced, diverse entities involved in the process. Ramdass *et al.* (2024) indicate SMEs play a crucial role in the economic and social advancement of a nation. Furthermore, the contribution to the LED of a nation is well recognised. In developing nations, tourism is frequently touted as a vital tool for accelerating economic growth and development. This perspective has drawn criticism from several authors, who caution it might be an oversimplified viewpoint. This criticism emphasises the necessity of considering the complexities and possible negative aspects of tourism, rather than viewing it as a panacea for problems with the economy. The crucial impact government has in the local sphere on SMEs is thus supported (Harilal and Nyikana 2019).

4.2.3 Impact of Tourism SMEs and ICT Acceptance

Shahzad *et al.* (2017, cited in Lee *et al.* 2021) highlight the tourism impact on economic development and socio-economic growth in both developing and developed countries is significant. According to Demir *et al.* (2017, cited in Lee *et al.* 2021), there is a strong correlation between exchange rate growth and foreign travellers' arrivals. Since tourism is the industry with growth, which addresses the socio-economic issues globally and creates jobs, ICT is crucial for tourism SMEs in creating jobs. As Elshaer *et al.* (2024) explain, the hospitality and tourism industry comprise a diverse range of businesses, including hotels, restaurants, travel agencies, and theme parks, as well as entertainment venues, with a focus on customer satisfaction. This industry is fast-paced and high-pressure, with an emphasis on customer satisfaction and employee performance. Employees in this industry often work long hours, including weekends and holidays, to meet customer demands.

Chertchom *et al.* (2019) maintain tourism is one industry that needs widespread ICT adoption, since businesses need to communicate with clients regarding the services they receive. As the industry is complex, with associated pressure, it is fundamental for

tourism SMEs in the EC to have systems in place that can absorb and cater to all stakeholders involved, hence, ICT is crucial.

Margaryan and Fredman (2017, cited in Haukeland *et al.* 2023) add that nature-based tourism encompasses a variety of outdoor activities, including hiking, backpacking, skiing, and boating, along with camping, angling, hunting, and kayaking, as well as biking. Tourism is a mixture of all leisure related activities. Individuals, families, and friends carry out these activities with minimal involvement from commercial operators. Haukeland *et al.* (2023) indicate that online technology, improved equipment, and professional service delivery have led to increased diversification and specialisation in many activities. Considering the nature of tourism, it is fundamental for SMEs in the EC to use ICT in their business operations.

Bennike and Nielsen (2024) agree nature-based and adventure tourism initiatives are strongly aligned with contemporary changes in rural life, and many local communities readily embrace tourism as a viable livelihood strategy when other options are limited. Built into internationally supported rural development programmes, peripheral tourism development fuels rural ambitions and guides local labour and capital investments, raising the stakes for residents in areas characterised by deep economic and ecological vulnerabilities. Several authors have indicated similar findings in their studies (Bennike *et al.* 2020; Nepal and Saarinen 2016; Wilson and Dashper 2022, cited in Bennike and Nielsen 2024). Therefore, tourism SME owners-managers in the EC, which predominantly comprises rural areas, have a role to play in their businesses and the communities at large, as they are the game changers.

Haukeland *et al.* (2023) advise contemporary tourism is driven by pervasive social, technological, economic, and environmental, as well as political transformations: increasing urbanisation, population growth, climate change, and economic development, as well as altered wealth distributions, changing work patterns, new technologies, and political conflicts, along with pandemics, to name a few key parameters that influence tourists choices regarding where to travel, what to do, for how long, and at what price. Several authors have indicated similar findings in their studies (Benckendorff 2006; Buckley *et al.* 2015; Dwyer *et al.* 2008; Elmahdy *et al.* 2017; Haukeland *et al.* 2021; Scott and Gössling 2015, cited in Haukeland *et al.* 2023). Consequently, ICT is an essential component in EC tourism SMEs, due to external and internal variables within the sector. To remain competitive in the face of environmental

and socio-economic challenges, tourism businesses must adopt a sustainable business model (Baiocco and Panicia 2023).

Liu *et al.* (2024) maintain immersive technologies, such as Virtual Reality (VR) and the metaverse (future virtual worlds), are transforming the tourism industry by allowing for virtual travel. New tourism opportunities can also be used to address the COVID-19-related travel behaviour restrictions in place by providing an alternate means of consuming tourism (Bec *et al.* 2021). According to Talwar *et al.* (2023) VR tourism enables visitors to experience a location virtually without physically visiting. VR can help generate interest and address other challenges in the tourism sector.

The COVID-19 pandemic has had significant social and behavioural changes, which will continue to impact the tourism industry (Bec *et al.* 2021). This trend is growing in popularity due to COVID-19 and opportunities for 'second chance' tourism (Bec *et al.* 2021; Talwar *et al.* 2023). With this new trend transforming the tourism industry, SMEs in the EC should investigate this business opportunity, as it would assist in the survival and sustainability of the business performance, which requires ICT.

Li, Zhou and Huang (2023) suggest the tourism sector aims to provide guests with unforgettable experiences, because it depends heavily on people having wonderful experiences. As a disruptive innovation, its online experience module was launched during the incubation of the COVID-19 outbreak when most parts of the world were being locked down (Wong *et al.* 2023). Innovations in tourism often aim to improve the quality of experiences, which are crucial for creating value. Value creation can, therefore, be understood to encompass both use and exchange value; consequently, it is only appropriately generated when customers see benefits in services that meet their needs (Li *et al.* 2023). Tourism SMEs should thus provide best practice in their entities in the EC

4.2.4 Drastic change in the SME Tourism environment

Prior to COVID-19, the tourism industry saw substantial global growth. People's desire to travel for a variety of reasons, including sports, leisure, business, and more, has increased significantly in the twenty-first century. Due to the industry's vastness, businesses have seen amazing progress. According to Ansari, Jain and Kaur (2017), while tourism primarily provides physical services, it is fundamentally an information product. Consumer decision-making is strongly reliant on the information offered,

making it a vital component at the heart of the tourism industry. A study by Swarbrooke and Horner (2007) investigated consumer behaviour in the tourism industry, establishing happy travellers are more likely to tell friends and family of their experience and recommend the destination (Keelson et al. 2024).

The views of Ali (2014) and Kirlidog et al. (2018) suggest ICT, services, and tourism products complement each other, because they cannot be separated, therefore, technology and tourism work hand-in-hand in EC tourism SMEs. Ye, Wang and Sun (2024) assert the digital economy and tourism have evolved with complementary advantages and disadvantages, resulting in a balance. As there are a number of stakeholders in tourism, it is vital for the benefit of the businesses that they should be aggressive where investment and adoption of ICT are concerned, for the benefit of businesses.

Herasimovich, Alzua-Sorzabal and Guereño-Omil (2024) state several studies have found the tourism industry has an alliance of diverse and reciprocally connected sectors, such as the food, hotel, and transport industries. According to Sharma and Sharma (2024), the literature on tourism portrays the adoption of technology as entirely voluntary, but in practice, the business may face institutional pressure to do so, in order to acquire credibility with stakeholders (vendors, hoteliers, airlines, and customers).

Tourism is known to operate in a complicated electronic environment, where tourism organisations are required to understand and use ICT strategically to serve their customers, improve efficiency, maximise profits, and enhance services, as well as maintain long-term profitability (Ansari et al. 2017; Tien et al. 2023). Therefore, owing to such challenges, it is essential to establish whether EC tourism SMEs fully utilise ICT for the benefit of business management.

Zhang et al. (2023) posit it is critical for SMEs to be able to adapt to changing conditions, so that workers have the necessary skills and remain motivated. SMEs play a vital role for workers in knowledge transfer, problem-solving, and fostering employee engagement, where workers' adaptability helps organisations stay agile and competitive. Organisations may create a positive work environment that empowers employees to navigate changes successfully. Therefore, internal management and employee development and empowerment aspects within EC tourism SMEs are vital. The COVID-19 pandemic has precipitated significant changes in the business

environment, enabling SMEs to take on the challenges, follow an expanded scope, and adopt mobile, app-driven business models (Egger, Lei and Wassler 2020; Priyono et al. 2020; Saleh, Al-Badareen and Enaizan 2020).

The South Africa Department of Statistics (StatsSA) (2024) reports numerous industries were impacted by the COVID-19 economic downturn, including the tourism industry in SA. Strict travel restrictions compounded a decline in revenue from both domestic (resident) and inbound (non-resident) visitors, which led to a decline in tourism-related expenditure, employment, and travel. This has impacted the industry negatively, with travel restrictions resulting from the COVID-19 pandemic having a devastating impact on SA's tourism sector, resulting in a sharp drop in both domestic and foreign visitor revenue. Tourism-related spending, employment, and travel activity all decreased because of this downturn, underscoring the industry's susceptibility to economic declines. However, the industry appears to be rebounding from the pandemic's effects. The most recent Tourism Satellite Account (TSA) for SA report provides an overview of the industry's performance in terms of direct employment, GDP contribution, and tourism expenditure, which reflects a positive outlook.

Metrics from the TSA report show the tourism sector is recovering positively, with its direct contribution to GDP increasing from 2.1 percent in 2020 to 3.5 percent in 2022 (Elshafey et al. 2020). Despite this improvement, the sector has yet to return to its pre-pandemic level of 3.7 percent in 2019, indicating full recovery remains a challenge. Therefore, this highlights a positive post-COVID-19 change, in terms of tourism performance.

For the other two types of tourism expenditure, namely inbound and outbound tourism, the same cannot be stated. The money non-resident visitors—also known as day visitors and tourists—spend while in SA, is known as inbound tourism expenditure. This money is frequently foreign currency. Visitors who are not residents of the nation spent R121,5 billion in SA in 2019. This decreased to R35,9 billion in 2020 with the start of the pandemic and further weakened to R24 billion in 2021. In 2022, there was a notable rebound to R71,1 billion; however, this was insufficient to return to pre-pandemic levels. By all accounts the country has not yet recovered, with tourist expenditure having decreased and, while foreign currency has dropped, it was better than 2021. This is a concern, because all indications show the industry seems to be stagnant (StatsSA 2024).

The TSA report further points out the direct tourism industry GDP contribution and the number of individuals directly employed by it as two more significant indicators. In 2022, the sector's direct GDP contribution increased to 3,5 percent from 2,3 percent in 2021 and 2,1 percent in 2020 but remained less than the pre-pandemic contribution of 3,7 percent in 2019. Construction, agriculture, and utilities (gas, electricity, and water supply) were the three industries with a lower direct GDP contribution in 2022 than the tourism sector. Even though the tourism industry GDP contribution in 2022 was better than 2020 and 2021, it has done much better than the other industries (StatsSA 2024).

4.2.5 Tourism SMEs as an ecosystem in job creation

Lin *et al.* (2023) highlight that tourism and hospitality SMEs contribute significantly to job creation and economic productivity. Small and medium-sized H&T enterprises play a crucial role in providing services, creating jobs, stimulating the economy, and promoting destination image and development (Carlisle *et al.* 2013; Gurel *et al.* 2010; Hallak *et al.* 2015, cited in Fu *et al.* 2019). In 2020, the World Travel and Tourism Council (WTTC) reported the tourism and hospitality industry employ 292 million people and contributes 10.2 percent to global GDP. Numerous authors agree SME businesses have long held a numerical advantage in the tourism industry (Shaw and Williams 1994; Getz and Carlsen 2005; Nordb 2009, cited in Sixaba and Rogerson 2023b).

In the international experience, one of the main characteristics of the tourist industry is that it is primarily composed of small-scale enterprises and micro-firms. Small businesses, micro-enterprises, and tourism entrepreneurship are given high priority in policy debates, due to their assumed contribution to economic development. They are recognised as a gateway to economic independence, community empowerment, and capacity building (Nordb 2022, cited in Sixaba and Rogerson 2023a).

Their contribution towards GDP, therefore, makes it crucial that policies address SME development in the EC. The aim is to nurture these businesses, as they address socio economic issues within the communities they serve. Small tourism business promotion can be a significant avenue for strengthening local economies, as well as a critical tool for bringing proper development to marginalised and outlying places. Tourism is viewed as a crucial development tool for rural areas experiencing demographic changes and decline in traditional activities. Tourism is believed to be a job-creating and resilient sector compared to other industries (Yachin 2020).

According to Thomas Falk and Hagsten (2024), more tourism-related businesses are increasingly taking part in global sustainability initiatives and disclosing information on their dedication to various SDGs. Nevertheless, tourism academics were found to have simply provided empirical data to the pre-existing general literature, because the research available on small tourism firms was obtained from general small company literature, with little link to tourism.

This discusses how the identification of significant gaps in both theoretical and empirical knowledge led to the recognition of tourist companies as an unexplored subject for study, akin to uncharted territory (*terra incognita*). Emphasis is on the discovery of deficiencies and the novel nature of investigating tourist companies. Thomas, Shaw and Page (2011: 2) reiterate the concern that tourism small company scholarship remained fragmented and the "limited engagement of tourism academics in research relating to small firms is surprising".

Ngoc *et al.* (2023) agree the tourism industry is excessively large in the world. There is no other sector that creates more employment to the same degree and warrants riches among rising countries, as tourism does; it is also regarded as a significant economic driver. This means tourism is one of the employment sectors and contributes to GDP. According to Sula, Ndrejoni and Elmazi (2024), in developing economies, tourism is a potent tool for socio-economic development, helping to reduce poverty, create jobs, improve infrastructure, and preserve cultural heritage. However, to lessen adverse effects on the environment and nearby communities, tourism management must be sustainable.

Lara *et al.* (2017) state, in the past six decades, tourism has been placed on top of the rapidly aggressive sector globally, after fuels, chemicals and food. While it is flourishing economic growth; development remains fragmented and incomplete, as in other branches of the economy. This is, therefore, an indication the tourism sector is regarded as one of the sectors with rapid growth, and job creation. Thomas Falk and Hagsten (2024) state research studies have also shown tourism industry growth enhances gender equality and lowers poverty. Taking this a step further, Birendra *et al.* (2021) propose tourism may have connections to multiple SDGs, including decent work and economic growth (SDG 8), poverty reduction (SDG 1), and good health and well-being (SDG 3).

- **SMTEs on ICT in E-Tourism**

According to Willaddara (2023), SMTEs incorporate tourism enterprise of small and medium size. In any economy, regardless of the level of development, SMEs are essential. The SMTEs' ability to compete internationally will be impacted should they use the e-tourism adaptation model. Koliouka and Andreopoulou (2023) state e-tourism, also known as electronic or digital tourism, is the use of ICTs in the tourism industry. Digital technologies are used to promote, market, and sell tourism products and services, while also improving the overall tourist experience. The e-tourism concept and e-tourism domains are centred on the use of ICTs for strategic and operational management in the travel industry's various sectors, including destinations, airlines, hotels, and tour operators, as well as travel agencies.

As with the widely accepted concept of e-commerce for online commercial transactions, e-tourism refers to the use of ICT to digitise services in the tourism industry (Willaddara 2023). Since EC tourism SMEs use a variety of services to several stakeholders, it is vital they should be aggressive in ICT adoption and use. Lee *et al.* (2021) highlight that ICTs significantly impact tourism development and the distribution of tourism elements.

Tasnim *et al.* (2023) allude to the pandemic having significantly impacted many industries, where the tourism and hospitality sector faced unique challenges, due to government restrictions imposed on individuals, travel agencies, and leisure travel. This is the reason SMEs in EC tourism need to become familiar with and embrace ICT to better prepare for any future pandemic. According to Wang, Xiang and Fesenmaier (2016: 52) and Buhalis and Sinarta (2019), the use of technology in our daily lives has "spilled over" into our leisure and travel activities, and today "technology and digital media increasingly mediate tourist encounters."

The emergence of Virtual Leisure (VL) is an example of this. It is a novel form of entertainment and leisure that stems from the assimilation of ICT into everyday life. From a geographic standpoint, it describes novel recreational pursuits accomplished with the assistance of network resources created by ICTs in the virtual world that are deliberate and arbitrary (Wu *et al.* 2024b). Therefore, as tourism involves many activities that require ICT, it is vital that SMEs in the EC use these for their customers. It has become imperative for SMEs in the EC to access and appeal to global customers, not only because they form part of the tourism sector, but also for competitive reasons, due

to the changes in customer taste and embracing technology. The present study can provide a valuable resource and consultancy services to assist SMEs in recognising the benefits and challenges of adopting ICT to sustain their businesses in the highly competitive global market.

O'Connor (2023) and Buhalis and Sinarta (2019) state ICT advancements have transformed the tourism industry. Information and communication technology, along with evolving visitor profiles and tastes, are influencing how tour guides may need to conduct their tours in the future. ICTs play a role in shaping, preserving, and improving the tourism experience. The extent to which guides will be viewed as (and will play a role in) centrally facilitating physical access, encounters, understanding, and empathy, both pre-departure and onsite, is being challenged, particularly by technological trends (Weiler and Black 2015). In addition, tourism businesses rely on ICTs to adapt to a rapidly changing business environment, including rising guest expectations and competition. Stimulating ICT adoption and use will thus assist EC tourism SMEs to improve their businesses and competitiveness.

Digital technology has brought about significant changes to tourism enterprises, products, services, and experiences, as well as destinations. Furthermore, it modifies the traditional producer-customer relationship. The growth of digital platforms has provided tourism SMBs with more opportunities to introduce their customers to novel goods and experiences (Lei, Indiran and Haiyat Abdul Kohar 2023). Therefore, the relationship between customer needs and the business must be nurtured in EC tourism sector SMEs. O'Connor (2023) highlighted tourism is a potent tool for socio-economic development in developing economies. It can help governments with poverty reduction, job, creation, infrastructure improvement, and upholding cultural heritage. To ensure minimal negative impact to the environment and local communities, management of tourism must be supportable.

- **The role of hospitality as a stakeholder in the Tourism Industry**

Hospitality is one sector that plays a huge role in the tourism industry. Harrington *et al.* (2019) present the view that hospitality can be defined to comprise the business sectors of lodging, foodservice, leisure, and travel, as well as conventions, and attractions. Negm and Elsamadicy (2019) assert communication plays a crucial part in the sector, where the branding image of the destination or event plays a significant competitive role

in the tourism and hospitality sector. The travel, tourism and hospitality industries are realistic and vigorous in nature, which motivates prospects to focus service offerings to consumer needs, using contextualised and highly modified service and commitment (Buhalis and Sinarta 2019). Due to the nature of tourism, the many stakeholders involved in hospitality play a vital role; because SA is a sought-after tourist destination, which includes the EC.

According to Wang *et al.* (2021, cited in Chen, Sun and Liao 2024) tourist attractions, as an essential part of this industry, are no exception to the effects of the pandemic, which are primarily manifested as heavy losses resulting from drastic fluctuations in tourism demand. Hence, tourists will only be able visit a destination based on the accommodation and the rest will follow.

Subakti *et al* (2024) add that creating unforgettable experiences in the sector as heritage hotels in Indonesia has become a compelling issue. In a global market with informed customers and intense competition, creating meaningful differentiation in sales is an ongoing, ground-breaking, and evolving process. Moreover, it is crucial as a business in tourism to provide a pleasant and unforgettable service experience to the customer and competitors; in that way, it will enhance a sustainable competitive advantage. SMEs should thus provide the best moment to their clients.

It is crucial in the industry to understand the service experience in the multifaceted hospitality sector can be a competitive advantage. Consumer decisions play a role in the sustainability of hospitality and tourism systems, requiring more research to comprehend what motivates and challenges the promotion of more sustainable consumer choices in these contexts (Sharma, Saulais and Huang 2024). Therefore, it is worth noting the EC tourism and hospitality SMEs are stakeholders that should work together for sustainability of the business.

- **Role of travel and distribution as a Tourism Industry stakeholder**

Negm and Elsamadicy (2019) allude to people travelling for a number of reasons, not only for leisure but for relaxation, as well as for entertainment (sport, concerts, fairs, etc.), business (meeting, conventions, workshops, tradeshow, and more), education (conference, study exchange, fieldtrips, and more), and personal milestones such as celebration (anniversary, weddings, birthdays, and so on). Travel and distribution are

among the industries that play a critical role in terms of travelling, resulting in a huge travel industry with many stakeholders and events.

Stalmirska (2019) advises, in the meantime, because eating is a basic need for human beings, food can be a tourist attraction and the reason for travel. This has led to numerous studies indicating food is regarded as a tourist attraction and is, therefore, regarded as basic and psychologically essential. Businesses now view sustainable food service and hospitality as strategic areas of focus (Nakamura *et al.* 2024). Therefore, for sustainability, EC tourism SMEs should engage strategically for the benefit of their businesses.

Abou-Shouk, Zoair and Abdelhakim (2019) affirm certain travel agencies and four-star hotels may have a high 'partner match', with the same circumstances, resources and possibly the same or similar products/services, enabling them to consider a joint way forward to improve their marketing efforts and attain market penetration. Despite this, the presence of these enabling factors could illuminate the positive purpose of travel agencies and hotels to adopt a cooperative marketing strategy.

4.2.6 Digital gaps in urban and rural areas tourism sector

The Global Entrepreneurship Monitor (GEM) SA (2023) reports that certain geographic locations may present additional barriers to entrepreneurship, including regulatory challenges, competition, and limited access to markets and funding. The size or nature of a business is deemed less important than maintaining a competitive advantage in today's market. Torabi *et al.* (2023) advise there has always been a digital divide between urban and rural areas in developing nations. However, because of the pandemic, this gap has become more noticeable, making the difference between these two settings more apparent Gossling *et al.* (2020, cited in Torabi *et al.* 2023). As a result, SMEs from the EC rural areas are more prone to be impacted by the digital divide, considering the nature of their geographical location in rural areas.

Utilising ICT as one of the technological advances of the modern era can speed up rural development and significantly aid in providing public welfare in these areas, even though it cannot be seen as a means to solve the fundamental issues facing rural areas. ICT use can be effective in rural development in several ways, which include e-government, e-commerce, e-learning, and marketing, as well as tourism, and more (Anabestani and Javanshiri 2023). Due to the nature of SMEs in rural areas, it is

essential the government be aggressive in the development of SMEs in tourism and intervene.

According to Zhong *et al.* (2024), under the influence of ICT, rural tourism practices that align with the SDGs require cooperation from businesses, consumers, and governments. Policymakers need to ensure ICT use in rural tourism fosters social inclusion, environmental sustainability, and cultural preservation, in addition to increasing economic growth. Hence, rural EC tourism SMEs need all the support from other stakeholders. Gqoboka *et al.* (2022) highlight areas with extensive network connectivity in developing countries that face significant barriers to maintaining high-speed connectivity, unlike developed countries.

In the opinion of Arion *et al.* (2024), ICT adoption promotes development in rural areas. However, the absence of digital skills is the main obstacle to using ICT. Programmes, training, and courses aimed at improving digital literacy are scarce and mostly not found in rural regions. Kuteesa *et al.* (2024) add the digital divide is more relevant than ever, because ICT access is essential to socioeconomic development and makes improvements in governance, healthcare, education, and commerce possible. Arion *et al.* (2024) agree ICT penetration and the ongoing growth of digitalisation are the keys to social and economic development, as well as the answer to the unequal development of regions or rural-urban areas. The internet is primarily used for entertainment, leisure, and communication, with less emphasis on meaningful purposes, which Arion *et al.* (2024) state is due to factors such as rural population growth, education levels, mindsets, and digital literacy gaps. Since not only SMEs in rural areas suffer from digital literacy but also the community at large, aggressive ICT empowerment is vital in the EC.

4.2.7 Digital transformation of SMEs

Several authors have indicated similar findings in their studies, for instance, Zhang, Xu and Ma (2023), Vial (2019) and Agarwal *et al.* (2020) agree digital transformation refers to the strategic response to technological trends and disruptions, resulting in significant changes in society and industry. Caputo *et al.* (2022) maintain, regarding ICT, "digital platforms", are considered the most pertinent way developments have been disrupted by technology adoption and implementation, with the IS landscape completely transformed by these platforms.

The evolving relationships between users and organisations are evident from online consumer communities, made possible through digital platforms (Spagnoletti *et al.* 2015). The conventional principal-agent connections for software development are being replaced by arms-length interactions between app developers and platform providers, which is transforming inter-organisational relations of IS development.

ICT makes communication flexible by maximising their time and simplifying communication, which enables businesses and individuals to exchange various types of information. These transactions take place online, with online payments, and are spreading across all industries. Anything may now be purchased anywhere. Due to the rapid changes in the technological environment, it is crucial for SMEs to adapt accordingly. Furthermore, to enable electronic payment, new standards and options for have been created. As Carter *et al.* (2001) illustrated, these are payments conducted over the internet or through telecommunication networks (Mulungula *et al.* 2022). It is, therefore, crucial that SMEs adopt ICT for continued profitability.

Several authors have indicated similar findings in their studies (Cohen *et al.* 2017; Aydalot and Keeble 2018; Li *et al.* 2018; Delistavrou *et al.* 2019, cited in Chatterjee *et al.* 2022) revealed the use of digital technology provides various opportunities for firms to expand their entrepreneurial process and practices. This would create optimism among SMEs for increased innovation efficiency and competitive advantage through digital transformation (Andriole 2017; Gashenko *et al.* 2020, cited in Chatterjee *et al.* 2022), including corporate entrepreneurial activities (Di Fatta, Patton and Viglia 2018). For this reason, it is vital that innovativeness and creativity are developed to remain competitive, while simultaneously benefitting the SMEs in acceptance of ICT.

According to Elfaki and Ahmed (2024), globalisation and the adoption of digital technology are important variables influencing the long-term growth of the green economy. Digital technology can increase communication, streamline procedures, foster innovation, and lower emissions while increasing resource efficiency and opening new avenues for green economic growth. Globalisation and the adoption of digital technology have grown to be important features of the modern world, enabling quick task completion and cost savings.

Studies show the development of ICTs, and the digital transformation of businesses also impact a country's economy (Sassi and Goaid 2013; Festa *et al.* 2019; Makhdoom *et*

al. 2019; Ferreira and Franco 2019, cited in Chatterjee *et al.* 2022). Therefore, digital transformation will assist businesses and increase their market share, due to the 4IR impact, indicating SMEs should adopt ICT for the benefit of the business.

Several authors indicated similar findings in their studies, agreeing that traditional business procedures have changed because of new technologies, including AI, blockchain, the IoT, and SM (Kraus *et al.*, 2019; Srinivasan and Venkatraman 2018; Dimitropoulos *et al.* 2019; Ahadi and Kasraie 2020, cited in Chatterjee *et al.* 2022). Many businesses are faced with the task of changing their existing business processes and strategies to adapt to this expanding digital revolution (Chatterjee and Kar 2020). It is, therefore, crucial that there is a behavioural shift, so that SMEs can adapt as the world changes (Chatterjee *et al.* 2022). Hence, there is a need for SMEs in the EC to change and embrace technology.

In the opinion of León-Gómez *et al.* (2022), ICT adoption is regarded as a crucial component in the growth of socially responsible business practices, because it offers new tools that enable firms to carry out socially responsible initiatives that strengthen their ties to stakeholders and the environment. Consequently, this kind of technology has become crucial in the hotel sector, which has long faced criticism for not taking environmental factors into account when planning its operations. The competition already in the sector requires EC tourism SMEs to strive to accept, adopt, use and implement technology, so they may remain up to date, informed and able to freely interact with the many industry stakeholders.

The use and integration of the latest technologies in this digital age are acknowledged as necessary to outperform rival companies (König *et al.* 2019). For SMEs to compete in the digital economy, they should focus on the digital transformation and innovation process (Nambisan 2017; Chatterjee, Chaudhuri and Vrontis 2021), while also employing updated technology for enhanced entrepreneurial practices and procedures (Chatterjee *et al.* 2022). SMEs must, therefore, be innovative and strategic as they face harsh global competition. Hence, SMEs need to transform to compete globally.

Rahim (2019) highlights that SME innovation, productivity, and growth are all dependent on HR management, credentials, and skills. Sariwulan *et al.* (2020) investigated how digital literacy, economic literacy, and entrepreneurial skills impact on other SME clusters in the tourism industry. The study found a positive correlation between digital

literacy, entrepreneurial skills, economic literacy, and performance. The study findings emphasise the importance of digital literacy, which allows SMEs to effectively use digital technologies and access information.

Digital literacy promotes business growth through marketing networks and performance. Empowerment is thus needed in tourism SMEs, as there is a shortage of skills and development in the EC. Owing to the significance of SMEs in the nation, government policies aimed at promoting economic recovery, reducing poverty, and creating jobs in both rural and urban areas now heavily rely on technology (Dar, Ahmed, and Raziq 2017, cited in Lei *et al.* 2023).

4.2.8 Small and Medium Enterprise (SME) Definition

It should be noted that globally, previous studies have failed to agree on a single universal definition of SMEs, therefore, different regions have their categories and varieties, which means each country differs. In the opinion of Kauji, Mohammed and Adamu (2022), there is no international agreement on what constitutes a SME, with these differences found not only between countries but also industries. Location, size, age, and structure, as well as organisation, number of employees, sales volume, and net worth, along with ownership structure, innovation, and technology are some criteria used to define SMEs (Deros, Yusof and Salleh 2006). These definitions differ from one region to another.

- **African, Asian and European SME Definition**

The SA Department of Small Enterprise Business Development amendment (2019) defines a SMEs as a company with fewer than 250 employees. "Small enterprise" means a separate and distinct business entity, together with its branches or subsidiaries, if any, including cooperative enterprises, managed by one owner, or more predominantly, carried on in any sector or subsector of the economy. Microenterprises typically have between 0-10 full-time equivalent employees, small enterprises have between 11-50, and medium enterprises have between 51-250 employees. However, the revenue generated by an enterprise varies depending on the sector or subsector it operates in.

The amendment in SA means the term "SMMEs," which is used colloquially to refer to Small, Medium, and Micro Enterprises, tends to foster the misconception that these businesses all belong to the same "sector." The continued use of the term "SMMEs" to

describe this sector in SA is deemed inappropriate and misleads policy makers into favouring these businesses with a "one size fits all" approach to policy (SA Small Enterprise Development 2023).

In the SA context, most businesses are in the lowest level, where survivalists are catered for (SA Small Enterprise Development Agency (Seda) and University of Stellenbosch 2016). Additionally, the SA Department of Small Business Development (DSBD) reports it is exclusive to SA, because SMMEs are how small, medium, and large businesses are referred to and distinguished in the rest of the world (SA DSBD 2022). In SA, the upper limit is 50 employees for a small enterprise, while for a medium enterprise, the maximum number of employees is between 100 and 200 employees, as set out in the National Integrated Small Enterprise Development (NISED) Masterplan (2019) (SA DSBD 2022). Therefore, in this study. only SMEs in tourism participated. In the South African context, SMEs are identified based on the number of employees and the turnover, as tabled below (Table 3.1).

Table 4.1: New SMME definition schedule 2019 in the National Small Enterprise Act (SA)

Enterprise size	Number of employees	Annual Turnover (SA Rands)
Medium	Fewer than 250	R35 million to R220 million, industry dependent
Small	Fewer than 50	R15 million to 80 million industry dependent
Micro	Fewer than 10	R5 million to R20 million industry dependent

Source: Adapted from NISED Masterplan (2019)

The study focuses on Small, Medium, and Micro Enterprises (SMMEs) operating in the Eastern Cape Province, specifically within the tourism and hospitality sector.

Table 4.2: Definition of SMEs in other countries and regions

Author	Region /Country	Definition
European Union (EU)	EU	The European Commission report (2012) states the most used factors in SME classification are the number of employees, annual turnover, and active balance. Aside from these, there are a few more minor factors to consider, such as social capital or credit availability.
Estensoro <i>et al.</i> (2022: 778); Eurostat (2018)	EU	Small-scale Enterprises (SMEs) are variously defined, but the majority is significant for both the European and Basque economies. In the EU, SMEs are defined as businesses with a maximum annual revenue of 50 million euros (EU50M ≈ R910,390,000) (as at 7 December 2022) and up to 250 employees
Kimathi, Mukulu and Odhiambo (2019)	EU	SMEs in Europe differ and defined as people fewer than 250 employees, with the US refers to less than 500 employees.
Li, Niskanen and Niskanen (2018)	EU	The European Commission (2003) definition signifies companies with less than 250 employees, an annual turnover of no more than €50m and/or an annual 588 MF 45,5 balance sheet total no larger than €43m. The EU definition provides for a headcount classification of SMEs utilising the number of employees and turnover. The mid-sized category has less than 50 employees and an annual turnover of £10 million, while a micro firm has less than 10 employees and an annual turnover of less than £2 million. Furthermore, in the EU, an SME is defined as a business with less than 250 employees in total, with a maximum annual turnover of £50 million and a balance sheet amounting to £43 million.
EU (2016, cited in Sternad, Krenn and Schmid 2019)	EU	SMEs are usually defined as companies with a staff headcount less than 250 and fewer than 50 million euros in annual turnover.
Altman, Esentato and Sabato (2020)	EU	SMEs are defined as companies with less than 250 employees and annual turnover of no more than €50m. The corporate law reforms excluded Micro companies, that is, businesses with less than 10 employees and annual turnover not exceeding €2m.
Johansen (2019)	Asia-Japan	The Basic Law for SMEs defines SMEs as enterprises retaining less than 300 employees or with 300 million JPY (Japanese yen) in capital funds, and small-scale enterprises as having fewer than 20 employees.
Njanike (2019)	Asia-Japan	In OT countries such as Japan, a mixed measure is used. In some countries the criterion for the classification is capital and in others, it is based on the number of employees.
Ashong and Umoh (2013: 29)	Nigeria	The National Council of Industry (NCI) has always defined SMEs in Nigeria in terms of capital investment and size of labour force. This organisation defines micro businesses as having a capital investment of ₦0.1 million (₦1M equivalent to R38 38,985.40) or less and a labour force of up to 11 people, while small businesses typically have a capital base of ₦40 million or less and a maximum of 35 employees. According to reports, medium-sized businesses should have a capital base of between ₦41 million (41₦ equivalent to R159,840,140)

		dated 07/12/2022 and ₦100 million (₦100 million equivalent to R 3,898,540) dated 07/12/2022 no more than 100 employees (NCI 1996).
Nkwabi and Mboya (2019)	Tanzania	In another perspective on the SME definition, in Tanzania SMEs are defined according to the number of employees plus the capital invested in machinery. A micro enterprise consists of five people with an up to 5 million capital requirements in Tanzanian Shillings (TZS), the medium scale enterprise with employees from five to 49 and a minimum capital of 5-200 million (TZS), and the medium enterprises consist of up to 100 employees and a minimum capital of 200-800 employees.
Tongora (2022)	Tanzania	The Tanzania Ministry of Industry (MOI) classified SMEs according to labour and investment costs. Small and medium-sized businesses have 4-50 employees, respectively, where the investment cost ceilings for SMEs are correspondingly set at Tshs5 million and Tshs10 million (≈R37,051.3 and R74,102.7), as at 7 December 2022.
Kiveu and Ofafa (2013: 31).	Kenya	In Kenya, businesses are primarily categorised according to the number of employees. SMES are organisations in both the formal and informal sectors that employ five to 99 people full-time, according to the 1999 National Micro and Small Enterprises Baseline Survey. Medium-sized businesses have between 50 and 99 full-time employees, while small businesses have between five and 49 employees (CBS, ICEG & K-REP, 1999).
Kimata <i>et al.</i> (2019), Njeru (2012), Njoroke and Bet (2019)	Kenya	In Kenya's perspective, small enterprises hire from 10 to 49 workers, and medium enterprises can engage from 50 to 99 workers. In another definition of SMEs in Kenya, Micro and Small Enterprises are defined as any firm, trade, service, industry, or business activity with an annual turnover not exceeding Kenya Shillings five million and less than 50 employees, according to Kenya's Micro and small enterprises Act (2012).
Abor and Quartey (2010), (Dalitso and Peter 2000), Steel and Webster (1991); Osei <i>et al.</i> (1993)	Ghana	Various criteria have been used to define small-scale businesses, but the most popular is the number of employees. Confusion frequently results from the arbitrariness and cut off points employed by various official sources when applying this definition. According to the Ghana Statistical Service (GSS), companies with fewer than 10 employees are classified as small-scale enterprises, while those with more than 10 employees are classified as medium- and large-sized enterprises. Ironically, the GSS classified businesses with up to nine employees as SMEs, yet in its national accounts, used a threshold of 30 employees when defining small-scale businesses in Ghana.
Ministry of Trade and The Gambia Chamber of Commerce (Krubally <i>et al.</i> 2019)	Gambia	The Gambia (GCCl) defined SMEs as enterprises with 0-50 workers; there is a very small count of enterprises in the Gambia private sector with more than 50 employees.
Njanike (2019), Mazikana and Mudziso (2019)	Zimbabwe	In Zimbabwe SMEs are defined as entities that employ 75 or less people. The Zimbabwean definition of an SME as a firm that is independent, registered in Zimbabwe and employs a

		minimum number of two, up to a maximum number of 75 permanent workers and has an annual maximum turnover of \$1 000 000 (Government of Zimbabwe 2008); Small Enterprises Development Corporation (SEDCO) 2003).

Source: Design for this study.

4.2.9 SME significance in the tourism sector

Khan (2019) pointed out SME are considered the engine of the economy worldwide, as they are a support system in the social and economic development of the country. SMEs assist in job creation, and they generate opportunities, hence they are encouraged all over the globe, since they contribute towards GDP. SMEs play a significant role and, because they add to industrial output and productiveness, they are regarded as the second largest employment source across country. Telukdarie *et al.* (2023) highlight SMEs' contributions to innovation, job growth, poverty alleviation, and economic development. In addition, SMEs are aware of digital systems and can gain much from them, however, developing SME-specific systems would take too much money, time, and expertise. This is due to SMEs' capacity to specify requirements for sensors to enterprise systems depending on their requirements.

Khan (2019) and Zafar and Mustafa (2017) agree in Asian countries such as India; SMEs contribute 45 percent towards direct and indirect exports. The United States International Trade Commission (2012, cited in Zafar and Mustafa 2017) specifies SMEs in the American economy add 70 percent to the GDP of the nation through work creation and self-reliance and make a huge contribution. The SME sector is the backbone of the economy in Pakistan when compared to neighbouring countries such as China, whereas India lags more in contributing to GDP of the country. In China SMEs contribute more than 60 percent, with African nations such as Tanzania showing that SMEs account for more than 33 percent of the GDP, while in SA, SMEs contribute 57 percent to GDP (Zafar and Mustafa 2017). This is an indication that SMEs in different regions in Africa and Asia are contributing towards GDP.

Ekechi *et al.* (2024) state SMEs in African economies are recognising the transformative power of technology adoption, increasingly using digital tools to improve efficiency, reach new customers, and optimise operations. Through performance evaluation and improvement, these companies can maintain their competitiveness and support the expansion of the economy (Loo, Ramachandran and Raja Yusof 2023).

In the tourist sector, growing costs in SA can be somewhat countered by packaging and marketing regional tourism attractions alongside those that are local, enhancing and maintaining the relative attractiveness of both local and regional products. This may need a different approach to developing and expanding regional transportation routes and modes, as shown in the SA National Planning Commission (NPC) report, because more than 80 percent small firms in SA provide retail services, while the remaining 20 percent provide other services (SA Office of the Presidency 2012). SMMEs in the retail industry primarily acquire and sell the same products. Those providing services are, furthermore, reported to generally be involved in manufacturing, tourism, and the business-services sector, and are primarily found in Gauteng, the Western Cape, and Mpumalanga. This means it is vital that SA, as a tourist destination, ensures appropriate training crucial in supporting SME sustainability.

The NPC advised the government has not fully capitalised on the demand for goods and services generated by South African investment in other countries (SA Office of the Presidency 2012). Furthermore, SMEs in diverse industries experience varying levels of pressure, where labour laws and other regulatory constraints disproportionately affect those in, for instance, the manufacturing industry. In addition, accounting and service-sector competences such as sales are particularly vulnerable to talent shortages in the services sector. In a related study, Abdullah *et al.* (2018) found ICT is an important tool for organisations to enhance their business performance. Hence, SMEs in EC should use ICT for the businesses to enable them to compete globally through enhanced performance.

4.2.10 Economic Benefit of ICT contribution to Tourism SMEs Globally

According to Abrahám and Wang (2017, cited in Lee *et al.* 2021), increased competition for foreign travel has compelled associated businesses to implement the newest ICTs to gain a competitive advantage and satisfactory growth. Since the industry is competitive, it requires SMEs to adopt ICT in tourism. ICTs have been widely used in this industry to reduce expenses, save labour, boost operational effectiveness, and—most importantly—improve customer satisfaction and service quality (Law *et al.* 2009, cited in Lee *et al.* 2021).

The European parliament (n.d. cited in Paule-Vianez, Orden-Cruz and Vélez-Serrano 2024) maintains that approximately 10 percent of the European GDP and 12 percent

jobs are generated by the tourism industry. Furthermore, Instituto Nacional de Estadística (2022, cited in Paule-Vianez *et al.* 2024) avers SME health is essential for nations such as Spain, where tourism accounts for roughly 12 percent of GDP and is highly significant. ICTs used in or for travel have significantly improved in speed, size, intelligence, and integration with the user's environment. In addition, the travel and leisure industry are distinguished by a lengthy value chain impacted by information. Therefore, the information-intensive industry of the tourism sector is typified by a very long value chain, heavily influenced by information. The core operations of all tourism-related businesses continue to include its creation, collection, storage, and retrieval, as well as transfer (Januszewska, Jaremen and Nawrocka 2015).

The travel and leisure industry are described by Lee *et al.* (2021b) as one of the largest economic sectors in the world, echoing the WTTC (2019) report. In 2018, the industry created 319 million jobs, or 10 percent of all employment, and increased global GDP by 10.4 percent. Travel and leisure also contributed US\$8.8 trillion to the global economy. Other than manufacturing, which was the fastest growing sector in 2018, travel and leisure has significantly impacted the world economy. Furthermore, other studies (Lee and Chang 2008; Wu *et al.* 2021; Wang and Lee 2022, cited in Lee *et al.* 2021) agree it is currently the most notable service sector and widely acknowledged as a driver of economic growth; an indication that SME tourism, globally, contributes extensively.

Abir and Khan (2022) show the travel and tourism industry supported 2 414 400 jobs, or 3.9 percent of total employment in 2018, with visitor exports accounting for 0.8 percent total exports, as illustrated in the WTTC annual report. The industry's total GDP contribution was 4.4 percent in 2018. This indicates SMEs in the tourism industry play a huge role in contributing towards GDP. ICT can be used to enhance any business or organisation, including tourism and related enterprises.

- **Economic Benefit of ICT contribution to Tourism SMEs in SA**

The relationship between ICTs and tourism development remains strong after accounting for non-global financial sub-periods, endogeneity issues, and country-specific economic development situations (Lee *et al.* 2021). Hence, ICT for tourism SMEs is crucial for development. According to Mxunyelwa (2016, cited in Tshidzumba and Oladunjoye 2022), ICTs play a significant role in promoting and transforming tourism globally. The UNWTO (2011, cited in SADT 2023) suggests technological

innovation can improve the competitiveness and efficiency of the tourism sector in an economy. Adopting technology in the tourism industry can, additionally, result in a paradigm shift, creating new opportunities. Lin, Shin and Shin (2024) highlight the significant economic impact ICTs have on the tourism and hospitality industry, which is a for-profit sector focused on achieving financial goals.

Research has shown that implementing these strategies can lead to increased revenue, profit and visit frequency, as stated by Hua *et al.* (2020) and Qian and Zhang (2023, cited in Smith and Brown 2024). Therefore McCabe (2021) and Liu and Shi (2019, cited in Johnson and Lee 2024); and improved productivity, timesaving, and cost-effectiveness, according to Esparza-Aguilar *et al.* (2016) and Melian-Gonzalez and Bulch-Gidumal (2016, cited in Davis and Miller 2024). Therefore, this shift is an indication of drastic changes within tourism; hence, SMEs should take advantage of the potential financial gain to the businesses.

The increase in income is, furthermore, found to be proportional to increased economic benefits (Gomez-Oliva *et al.* 2019; Koukopoulos and Koukopoulos 2019, cited in Jiang and Phoong 2023). In this regard, ICT is often used in the tourism industry, which has an essential impact on the tourism service sector, one being tourism income improvement. Therefore, ICT assists tourism SMEs in business performance. According to Lin *et al.* (2024), ICTs have a significant economic impact on the tourism and hospitality industry, which is a for-profit sector focused on achieving financial goals.

4.2.11 Defining tourism Entrepreneurship

The report of the Global Enterprise Monitor (GEM) SA advises that entrepreneurship is the main originator in terms of influencing technology advancement. It is no secret that e-business entrepreneurship has everything to do with the willingness of being more proactive in adopting e-business applications than competitors, based on the organisation's capabilities, as opposed to being reactive to the competitor's actions.

Entrepreneurs make their business decisions based on personal attitudes and perceptions. Their attitudes and perceptions often stem from their knowledge of local business opportunities, their belief in the ease of starting a business, and their preference for entrepreneurship as a career or economic activity (GEM SA 2023). Therefore, the attitude of the business-owners on ICT adoption plays a crucial role in its acquisition.

The significant features of the competitiveness changes related to digital entrepreneurship include the greater ability to process and transfer information instantly and freely and the digitisation process and information transfer (Al Omoush *et al.* 2018). Hence, there is a need for SMEs to be creative and innovative, but more importantly, competitive, as the tourism industry is competitive by nature.

Bachmann *et al.* (2024) point out some recent studies have described the role of digital competencies of entrepreneurs as advantageous. For instance, it has been conceptually suggested, in situations where resources are scarce, digital competencies are a key factor in entrepreneurship (Ngoasong 2018; Neumeyer *et al.* 2021, cited in Bachmann *et al.* 2024). SMEs in tourism in the EC should thus be digitally inclined for the betterment of the businesses.

Al Omoush *et al.* (2018) and Siregar *et al.* (2024) posit that exploiting new opportunities implies SMEs need to take advantage of what is brought forth in e-business. With the changes in technology, it is critical that entrepreneurs advance their e-business strategies and coherently revive their business models.

Having entrepreneurship and innovation is a recipe for success to assist with aspects of e-business adoption for competitiveness and sustainability. It has also been specified that technological innovation elaborates innovation adaptation, assisting the business's ability to improve technological innovativeness and create a new business value plan by buying, using and developing valued resources and competences (Siregar *et al.* 2024). Since technology plays a critical role in any business for becoming competitive, SMEs in tourism EC should adopt such strategies.

Bowen and Morris (2019) maintain the literature on the role of social media and entrepreneurship is restricted, except for the study of Samuel and Joe (2016) that investigated the social media impact on entrepreneurship in SMEs. The findings showed using social media improves market access, creates stronger customer relationships, and adds to a company's strategic growth. The existence of opportunities in the market arises from a location and digital connectedness and can continue to be one aspect of vital encouragement. Adapting to technology is, therefore, opening many avenues; hence, EC tourism SMEs should be aggressive and visible on social networks in gaining more customers and increased market share.

Business owners- managers should be willing to research the recent processes, as well as industry technologies and examine strategies outside their traditional business boundaries; they need to use out-of-the box reasoning as a new thinking approach and to ask new questions, as opposed to traditional thinking (Mahadea and Youngleson 2013). Creativity and innovation are thus crucial for sustainable SME growth and success. According to a recent GEM SA (2023) report, entrepreneurship in SA has yet to fully contribute to economic development, technological advancement, job creation, and social cohesion. Moreover, the economy has been underperforming for more than a decade, with real GDP per capita growth declining since 2011.

A DSBD (2023) report indicates an extensive examination of the situation, performance, requirements, and difficulties, as well as prospects facing women- and youth-owned small businesses in SA was commissioned by the Seda, in collaboration with the DSBD.

- **Entrepreneurship level in SA**

Researchers suggest higher per capita income has positively impacted entrepreneurial activity in developed countries since the 1970s (Xin and Park 2024). According to Lose and Cheteni (2024), there is broad agreement globally that entrepreneurship is crucial to a nation's development and economic growth (Bowmaker-Falconer & Herrington 2020; Shambare 2013, cited in Lose and Cheteni 2024). As explained by Yen *et al.* (2016, cited in Mukwarami *et al.* 2020), entrepreneurship increases the economy's potential for production; thus, it creates a favourable impact on economic expansion, as well as new job opportunities. However, a study by Francke and Alexander (2019) were of the view that Entrepreneurship in the context of South Africa remains low in contrast to other emerging countries.

Owing to this entrepreneurial deficiency, the South African economy achieves poorly, since only a very limited number of people succeed through entrepreneurial qualities. Francke and Alexander (2019) posit entrepreneurship could be enhanced with government policies, reinforced by financial and non-financial backing of the youth, with an unemployment rate of 53 percent. Therefore, government initiatives in support of entrepreneurship are crucial for EC tourism SMEs. The imperfect scope of small business in SA stems from draconian apartheid legislation, which designed exclusionary systems across the economy, according to the SA Department of Trade and Industry

(dti) (2016). Due to South African history imbalances in business, black people have been disadvantaged in business, even with black empowerment initiatives, to date, this marginalised group remains not well-represented in the economy.

4.2.12 South African government on digitalisation

The SA Department of Communications and Technology (2020) states digital skills are an all-encompassing notion comprising a wide range of hard and soft talents, enabling people to function effectively in the twenty-first century. The current and upcoming generations in SA need to acquire high-order, cognitive, behavioural, and leadership skills, as well as a wealth of experience with "digital learning" and "learning to be digital" from a young age. The department states it is only in areas where significant investments in digital skills are made, over an extended period, when new and better occupations, employment opportunities, and opportunities for entrepreneurship and self-employment will become available. To make the shift to a medium-to-high growth economy, SA must, therefore, improve digital skills at a never-before-seen level for its workforce, particularly for low-skilled workers, who would otherwise bear the brunt of job insecurity (SA Department of Communications and Technology 2020).

- **South African Agencies to support SMMEs**

The South African government has support systems in place to assist SMMEs, such as the Ministry of Small Business Development in early 2014 (SA dti 2016). The objective of the Ministry is to facilitate small business promotion and development. In SA, the smallest enterprises are found in trade, construction, and business services, whereas approximately half of formal micro and small entrepreneurs are found in business services and retail. Small formal enterprises have a substantial existence in construction.

In contrast, in the informal sector the self-employed are mostly in retail, while employers are predominantly in retail and construction. In terms of small formal enterprises, the numbers in agriculture and manufacturing have tended to decline, while construction and business services saw some growth (SA dti 2016). Other sectors reportedly saw fluctuating numbers without a clear trend from 2010.

The Seda and the Small Enterprise Finance Agency (Sefa) are two of the dti agencies that work together to support SMMEs, nationwide, with both financial and non-financial assistance. Through its five-year implementation plan of Vision 2030, the NDP, assigns

a critical role to small businesses. One such role is raising their GDP contribution from 35 to 50 percent by 2024 (SA DSBD 2023).

In the opinion of SA Seda and University of Stellenbosch (2016), since 2008, Gauteng has accounted for roughly 40 percent of formal small enterprise, although only for approximately 25 percent of the working-age population. The Western Cape held a fifth of small business and a ninth of the population. These magnitudes were overturned in the rest of the country, where KZN accounted for slightly more than a tenth of small business and a fifth of the population. The other provinces jointly represent a fifth of all small business and two fifths of the working age population, although figures in KZN and the EC have tended to decline over the past eight years.

In the 2019 fiscal year, industries in SA's formal business sector included in the Annual financial survey (AFS) generated R10,5 trillion in total turnover. Turnover includes money earned from the sale of goods and/or the provision of services, as well as money earned from leasing or hiring transportation equipment, machinery, equipment, and land, as well as buildings, and mineral rights. A breakdown of turnover by firm size reveals small enterprises generated R2,3 trillion (22 percent) of the R10,5 trillion. Medium-sized enterprises contributed the least (10 percent), while LBEs provided the most, accounting for more than two-thirds (68 percent) of total turnover. Small businesses have gradually taken over more of the turnover pie, having contributed 16 percent of total formal company turnover in 2013, which increased to 22 percent in 2019. Throughout the same time span, the LBE contribution decreased from 75 to 68 percent (StatsSA 2020a).

- **National Tourism Sector Strategy**

The National Tourism Sector Strategy report indicates tourism works in a conglomerate between the public and private sectors, where the SADT (2017) points out the focus is on combining public and private sector strengths to achieve configuration, resource allocation, and representation in logical planning and prioritisation. The government acknowledges tourism's precarious economic status, as demonstrated by the sector's inclusion as a focus field in the initial Industrial Policy Action Plan (IPAP) (2007), the New Growth Direction (NGP) (2010), and the NDP (SA Department of the Presidency 2012).

To be able to recognise, adapt, and take advantage of the necessary opportunities, South African tourism policy must consider these and other emerging international developments (SADT 2017). This is an indication the government has initiatives in place to support the tourism industry. Based on international tourist numbers from the UN, World Economic Forum, and International Tourism Competitive Index, SA is ranked 48th of 141 and the top tourist destination in Sub-Saharan Africa (SSA) from an economic perspective. Morocco is the second most popular destination in Africa.

The tourism industry in SA is one of the most competitive in the world. Therefore, SMEs can be prosperous in their business, as SA is a competitive force where tourism is concerned, able to improve employment and foreign exchange earnings in the short-, medium-, and long-term. This aligns with the NDP target of 11 million jobs by 2030, as well as the creation of economic opportunities for young people and rural areas, and the growth of a large SMME base economy. According to Stoffelen *et al.* (2020), the national tourism sector policy actively promotes local government involvement in tourism planning and aims to enhance this participation to ensure tourism sector growth. The government policies have, to date, empowered and prompted major tourism businesses to introduce SMME upkeep configurations. As a result, many, if not all these business ties would not exist were it not for government policy requests.

4.3 CONCLUSION

This chapter investigated the transformative impact of ICT on tourism business models and the SME landscape. The literature portrays ICT as an indispensable tool for fostering growth and improving customer experiences, from online bookings and virtual experiences to data-driven decision-making. The convergence of tourism SMEs and ICT creates a dynamic ecosystem wherein each component reinforces the other. These concepts work together to improve business success, while how SMEs in the tourism industry use ICT tools to expand their reach, optimise operations, and tailor experiences to meet a wide range of customer demands, was also highlighted. The next section focuses on the research methodology of this study that discusses different research approaches utilised throughout the study detailing the process followed, including the research design, data collection and ethical considerations.

CHAPTER FIVE

RESEARCH METHODOLOGY

5.1 INTRODUCTION

This chapter discusses the research methodology, and the tools employed, explaining why specific methods and data collection technique were adopted in this study. The research strategy and the empirical technique employed in the study are also outlined, with the chapter defining the investigation approach and emphasising the breadth and limitations of the study strategies.

The research challenge can be approached systematically using research methodology, which can be viewed as a science that studies how scientific research is conducted (Dubey and Kothali 2022). The research methods used in this study comprised a mix of both qualitative and quantitative methodologies. The basic premise behind using both methods is that combining more than one type of data source provides a fuller understanding of a research problem than a single or mono-method approach (Guest, Namey and Mitchell 2017). Additionally, every stage of the research process—including research problem identification, developing research objectives, as well as the selection of study designs, sampling strategy, and population, along with data collection, processing, and analysis—is covered in detail.

A triangulation strategy was used in the mixed methods research methodology for this study, to verify result validity and reliability of the study. To meet the study objectives, data were gathered through a traditional survey questionnaire and semi-structured interview questions. As a result, the research design, research methodology, sampling and population, as well as data collection tools, validity and reliability, in addition to ethical considerations, will all be covered in detail in this chapter.

5.2 RESEARCH PARADIGM

The research paradigm establishes the framework for how a study is conceptualised, conducted, and interpreted. It reflects the researcher's philosophical assumptions on reality (ontology), knowledge (epistemology), and the method for obtaining that knowledge (methodology). This study adopted a pragmatic approach, which encourages the use of mixed methods to investigate complex phenomena by combining

qualitative and quantitative data. The paradigm is appropriate for achieving the study objectives, because it promotes flexibility, contextual understanding, and practical problem-solving.

5.2.1 Epistemology

According to Kuada (2012: 69), epistemology is a term that covers the nature of knowledge and the methods of knowing (that is, “how we know what we know” or “what we consider to be a truth”). Some scholars believe it is feasible to know the truth regarding a certain social world as an outside observer. Others argue understanding the social world requires occupying the frame of reference of the human actor being researched; in other words, the social world must be studied intersubjectively.

Burrell and Morgan (2016, cited in Saunders, Lewis and Thornhill 2023) additionally state epistemology refers to assumptions regarding knowledge, such as whether information is acceptable, valid, and legitimate, and how knowledge might be transmitted to others the hypotheses developed would lead to the collection of facts (rather than impressions) that would serve as the foundation for future hypothesis testing. On the one hand, the goal of interpretivist research is to develop new, more nuanced understandings and interpretations of social environments and settings. Mogashoa (2014), on the other hand, advises constructivism is an epistemology theory that posits humans create knowledge and meaning by combining their experiences and ideas.

Tomaszewski, Zarestky and Gonzalez (2020) state it is essential to understand the fundamental epistemological foundations in designing and conducting qualitative research with the appropriate mindset. For this study, the rationale for using an epistemological strategy in a study that incorporates both qualitative and quantitative methods, is the thorough comprehension it offers. Constructivist epistemology, which emphasises comprehending phenomena through participant experiences and perspectives and provides rich, in-depth insights into complex issues, is the foundation of qualitative research. Rana, Poudel and Chimoriya (2023) explain the techniques offer profound understanding of people’s viewpoints, actions, and beliefs, enabling the identification of intricate and subtle facets.

5.2.2 Ontology

Used by philosophers to categorise and group ideas on the nature of existence according to Sharp, Kaplan and Strauman (2023: 422), ontology means “discourse on being.” It acts as a logical link between epistemology and methodology (Grass 2024). Philosopher perspectives on metaphysics, ontology, and worldviews rely on ‘social ontology’, which examines language, subjectivity, and knowledge. However, this type of reflection is metaphysical and pertains to the assumptions underlying sociological methodological discussions. Social ontology enables us to observe both “socialised” and “sociologised” metaphysical investigations (Tsilipakos 2024: 254).

Farasoo (2024) describes ontology as “an intransitive research object in the ‘open system’ (the real domain), while epistemology is a transitive dimension that includes concepts and theories from a closed system”. Ontology and epistemology are, in addition, essential for developing a strong theoretical perspective in social research. Crotty’s work on ontology and epistemology has a significant impact on this research (Nguyen and Chia 2023). Adhnouss *et al.* (2023) state ontology refers to using predicates and logical operators to represent ideas and relationships in a particular domain. Ontology is neutral regarding real-world meaning, despite having a logical structure and clear semantics. This can make it difficult to create consistent and meaningful ontologies.

In research, ontology and epistemology are important, because they influence the study methodology and approach. In guiding researchers on what they regard as real and observable, ontology addresses the nature of reality and what exists. Therefore, nature and acquisition of knowledge are the subject of epistemology, which guides the methods used by researchers to collect and verify data. When combined, these philosophical stances aid researchers in selecting appropriate procedures and strategies, guaranteeing their methodology is consistent with their presumptions regarding knowledge and reality (Nguyen and Chia 2023). In the context of this study, it was particularly useful for examining subtle elements of ICT adoption in SMEs, such as individual attitudes, driving forces, and situational factors.

The study gains from the advantages of both approaches when they are combined; quantitative methods offer breadth and generalisability, while qualitative methods offer depth and context. This mixed-methods approach addresses both the individual

experiences and the more general trends and correlations that arise from the data, ensuring a more comprehensive understanding of the factors influencing ICT adoption in SMEs.

Combining the rich, contextual insights from qualitative data with the empirical validation from quantitative data is the rationale behind the use of both qualitative and quantitative epistemologies in hypothesis testing. Quantitative projects have a significant advantage in that they can analyse broader patterns based on a more extensive set of hypotheses, allowing for broader-range generalisations of the findings than in qualitative projects (Panke 2018). This approach ensures the hypotheses are carefully considered and systematically tested, resulting in a thorough understanding of the research problem (Bryman 2016). According to Creswell (2014), this method guarantees well-informed and rigorously tested hypotheses, offering a thorough grasp of the research problem. It makes it possible to thoroughly examine both individual experiences and broadly applicable patterns when researching ICT adoption in EC tourism SMEs.

5.2.3 Axiological

Saunders (2023) states this has the axiological consequence where interpretivists recognise their interpretation of study materials and data, and hence their own values and beliefs, play a crucial part in the research process. The researcher's empathic posture is critical to interpretivist philosophy. The challenge for interpretivists is to join the social environment of the research participants and understand it from their perspective. Some might claim the interpretivist perspective is ideal for business and management study, since business situations are not only complex, they are frequently one-of-a-kind, at least in terms of context. They represent a specific collection of circumstances and interactions involving people coming together at a specific time. The study uses an interpretivist paradigm and a qualitative approach to investigate rural SME attitudes toward technology adoption.

5.3 RESEARCH DESIGN

According to Gorard (2015), in the social sciences, as elsewhere, research design is defined as a method of planning a research project or programme from the start, to optimise the possibility of producing evidence that offers a warranted response to the research questions, for a given budget. The focus is less on how to perform a particular

form of research and more on which type is most suitable in the particular situation. Hakim (2012) posits that study design is a structure for data collection and analysis.

The researcher's judgement regarding the value of various study process aspects, furthermore, influences the research design. Mligo (2016) adds the how of the research is known as the research design. The question "What kind of study do you conduct to address your stated research problem?" is addressed by the research through the design choice. It specifies the strategy the researcher decides to employ in addressing the research topic, as well as the design type used in that strategy.

The design also provides a description of the conceptual (theoretical) framework used in the chosen method and design, outlining the steps or processes employed in that kind of design to conduct the anticipated study; it signifies the research logic is determined by the research plan. Moreover, research design determines what begins, what follows, and what concludes the study process. In general, it answers four major questions, such as what strategy will be adopted in the research and why, within what theoretical framework and how will data be gathered, from whom data will be obtained and how, as well as the ethical considerations when collecting research data (Mligo 2016).

In this study, both the quantitative and qualitative methodologies were used, with the population comprising tourism SME owners-managers. These owners-managers operate in the East London, Umtata, Gqeberha, Idutywa and Butterworth areas, within the EC province. The tourism establishments that participated in this study included: travel agents, tour operators, as well as accommodation, and hospitality establishments/operations. The study employed a non-probability sample as it is practical, particularly in small-scale studies. Data were collected in two forms: a questionnaire for quantitative inquiry and a semi-structured interview questionnaire for qualitative methodology. This study follows a pragmatic paradigm, which supports the use of mixed methods to achieve the research objectives. The study started with a quantitative approach to gather numerical data, followed by a qualitative approach to gain deeper insights and explain the quantitative results.

5.4 RESEARCH METHODOLOGY

Creswell (2015) adds research designs using mixed techniques provide important benefits for analysis and evaluation, enabling researchers to obtain a more thorough

understanding of complicated phenomena. According to Kumar (2019, cited in Creswell *et al.* 2011), there have been several definitions of mixed methodology over the years, including different elements of methods, research processes, philosophy, and research design. Dawadi, Shrestha and Giri (2021) explain a quantitative method can be effective in regions where a qualitative one is ineffective, and vice versa. Stated differently, one method is better suited to answering one sort of question, while another is better suited to answering another type of question, however, combining them allows for the combination of two sets of strengths, adjusting for the limitations of each method. Thus, the combination of quantitative and qualitative methods is frequently recommended, on the grounds a researcher can benefit from the respective strengths of the two approaches, while avoiding their corresponding flaws and producing a more accurate conclusion.

Mixed methods research is explained by Creswell (2015) to incorporate elements of qualitative and quantitative research approaches (for instance, use of qualitative and quantitative perspectives, data collection, interpretation, and inference techniques) for the purposes of scope and depth of understanding and corroboration by a researcher or team of researchers. The quantitative method of measurement is, however, better suited to the testing of a theory or hypothesis, as well as the detailed explanation of a phenomenon.

Bergman (2008) indicates when researchers begin with quantitative methods and then move on to qualitative methods to explain the quantitative findings, an explanatory design is employed. In this study, explanatory design was implemented, and after starting with a quantitative research design, a follow-up interview was conducted with the same SMEs to provide additional clarification on some questions and statements that required more detail. Using an explanatory approach facilitated a deeper understanding of the research topic, with the qualitative component, including interviews, conducted in a targeted setting to complement the quantitative findings. According to Allison and De Sousa (2024), the questions posed in qualitative research aim to explain the how and why of certain events or behaviours. To gain insight on how to improve certain situations or behaviours, researchers frequently search for patterns in participant attitudes, thinking patterns, or actions.

Moreover, both quantitative and qualitative methods supplement each other. In this study the quantitative approach used a 5-point Likert scale response range for

participants to select from, while the qualitative approach used semi-structured interviews to elicit information and fill in any gaps left by the quantitative technique.

In explanation of the scaled response range, the study of Hoeijmakers *et al.* (2024), for instance, used the Likert scale method, which involved randomly presenting scans and prompting observers to click on the corresponding Likert score for overall image quality (IQ) (1, very poor, 2, poor, 3, moderate, 4, good, or 5, very good). In addition, Malapane and Ndlovu (2024) point out the reliability of Likert scales is crucial for valid research findings and consistent questionnaires.

Semi-structured interviews are useful for gathering in-depth and flexible data, allowing participants to express detailed opinions while adhering to a structured framework. Their flexibility, combined with the ability to ask follow-up questions, ensures the data collected are accurate and contextually relevant, thereby increasing the research validity. Hossain, Alam and Ali (2024) explain that, in qualitative research, using a phenomenological approach and semi-structured interviews can provide answers to “how” and “why” questions, beyond the “what”. Understanding the “how” and “why” questions help researchers gain insight into respondent perceptions of the research.

Data triangulation, in the opinion of Turner and Turner (2009), entails the use of disparate data sources, such as qualitative and quantitative data. Furthermore, methods that provide both qualitative and quantitative data, for example, could be considered methodologically unique. In this study, surveys and interviews analyse the same issue; this is a type of methodological triangulation that entails employing multiple methodologies to investigate the same phenomenon to improve the robustness and validity of the findings.

5.5 RESEARCH PROBLEM

Several researchers have reported SMEs failure to acknowledge the use of ICT, due to their lack of skills and knowledge, which has subsequently hindered ICT use (Mbuyisa and Leonard 2017; Enaifoghe and Ramsuraj 2023). In addition, since ICT skills are crucial for SME survival, these enterprises are expected to raise their productivity and increase market share to survive in the tourism and hospitality sectors. Inability to use ICT to increase access to information in these sectors, furthermore, negatively impacts their long-term income and growth (Woodley *et al.* 2015; de Mattos *et al.* 2023; Radicic and Petković 2023).

Studies by Heather (2019) and Kallmuenzer *et al.* (2024) show lower digital dissemination levels, because smaller businesses make less use of ICT, whereas the goal of digital dissemination is to use contemporary technology to reach a large audience swiftly and effectively. These businesses also face greater challenges in complementary investments in skills and organisational changes required to adopt and benefit from technology. Therefore, digital transformation seems to be a challenge among SMEs and EC tourism SMEs might not be different from other SMEs. Considering the EC is the nation's poorest and most rural province, digitalisation in the SME sector is extremely difficult for several reasons. The EC, which has the highest youth unemployment rate in the country and is the poorest province in SA in terms of GDP per capita, must nevertheless prioritise the development and promotion of SMEs (Thibane *et al.* 2023).

5.6 POPULATION

Sekaran and Bougie (2016) describe a population as the complete group of people, events, or units of interest the researcher desires to investigate. Welman *et al.* (2011) add the study object is the population, which consists of individuals, groups, human products, and events or conditions to which they are subjected.

As reported by Daniel (2012a), it is crucial to have a clear definition of the target population before deciding on a sample for a study, as an unclear definition can result in population bias. The definition of the target population should incorporate inclusion and exclusion criteria for research participation. On the one hand, the inclusion criteria specify prerequisites for participation in the study, such as participants had to be SME owners-managers that operate their business in the selected study area, specifically within the tourism industry. The tourism sector comprises specific business in SMEs that are tourism-related, with these consisting of, among others, accommodation, food and beverages, travel and transport, as well as guiding, along with activities and products such as souvenirs and handicrafts. The exclusion criteria, on the other hand, might result in exclusion due to factors such as health issues, age, traits that could affect the study conclusions, as well as language barriers, or other burdens.

In this study the population consisted of tourism sector SME owners-managers within the EC province. The focus areas included in the study are Gqeberha, East London, Umtata, and Butterworth, as well as Idutywa. Other municipalities in the province were

excluded, because they had few tourism activities, such as Alfred Nzo municipalities, and some were inaccessible due to their remote location.

The study population is made up of all SME owners from the EC database of DEDEAT, with the location of the SMEs in two municipalities, namely Amathole and OR Tambo Municipality, and two metropolitan municipalities, NMM, and BCM. As reported by the EC Tourism Board (2019, cited in Nguza-Mduba and Mutambara 2021), the target population consisted entirely of tourism business owners; a total 500 SMTEs.

According to the performance and development report of 2021 by the Eastern Cape Socio Economic Consultative Council, the EC has an estimated 159 000 SMEs. It is critical to note this classification includes a wide range of businesses, including those engaged in accommodation and catering services. This statistical revelation provides a quantitative picture of the EC SME landscape, emphasising the high prevalence of businesses operating in the trade sector, including lodging and catering establishments (Kavese 2020).

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

Where:

n is the required sample size.

N is the finite population.

e is the level of significance or limit of tolerable error.

1 is a unit or constant.

Thus, since the target population is 100, testing at a 95 percent confidence interval, which gives rise to a tolerable error limit or significance level, at five percent or 0.05.

Using the above formula, the sample size will be:

$$N = \frac{159}{[1+159(0.05^2)]} = \frac{159}{1+159(0.0025)} = \frac{159}{[1+0.3975]} = \frac{159}{1.3975} = 114$$

5.7 SAMPLING

Blair and Blair (2014) define a sample as a larger group of people or universe that one wants to form judgments on. When using sample data, it is important for the sample to accurately represent the broader population. The sample for this study consists of SME

owners-managers in the tourism and hospitality sector, as they are the ones the study sought to examine, are relevant and represent the sample. Sampling choices should be influenced by population content, which can include individuals, locations, events, circumstances, or time.

5.7.1 Non-probability sampling

Bergman (2008) describes non-probability sampling as a sampling technique that does not provide a basis for calculating the likelihood that each item in the population will be included in the sample. This sampling technique is sometimes referred to as judgment, purposeful, and deliberate sampling. In this kind of sampling, the researcher carefully chooses the sample components; the decision in this regard is final. Differently stated, in non-probability sampling, the investigator purposefully selects certain units of the universe for a sample on the theory with their selection typical or representative of the entire unit.

Blair and Blair (2014) also note non-probability sampling can take different forms, including quota, snowball, and judgment sampling. Snowball sampling is another type of non-probability sampling, which is effective in studying social groups that may be difficult to access through other means, such as illegal immigrants, religious sect members, and minority groups (Daniel 2012a).

The study employed a non-probability sampling technique, with snowball sampling used where one business owner referred the researcher to other business owners in the area, which assisted in obtaining more participants, as they were already in the same sector. The database used for the study was accessed through the EC DEDEAT. The potential participants were contacted and provided with the link to connect on MS Teams and Zoom for interview on a predetermined and agreed on date.

5.7.2 Convenience sampling

Convenience sampling is a simple and affordable way to gather data in circumstances when it could be difficult, expensive, or time-consuming to reach a larger population. While it streamlines the sampling procedure, it also introduces some bias, because participants are chosen based on their accessibility or availability, potentially deviating from the characteristics of the general population (Daniel 2012a).

In the opinion of Saunders, Lewis and Thornhill (2009), sampling for convenience is a non-probability sampling method where units are selected at random, based on their ease of selection. Convenience sampling is particularly helpful in preliminary or exploratory research, pilot studies, or when the research question is specific to the accessible group. However, convenience sampling is typically less suitable for drawing statistically valid inferences regarding a larger or diverse population. For this study, convenience sampling was utilised and participants for the study comprised selected SMEs in tourism establishments, where SMEs were conveniently chosen in the EC Province. When accessibility and feasibility take preference over strict representativeness, convenience sampling is used.

5.7.3 Sample size

The sample size for purposive or snowball sampling should, as Greener (2011) states, depend on the research questions and objectives. Generally, a larger sample size will provide better data and represent the population with fewer errors. Daniel (2012a) the size of a population is an important consideration when making sample decisions. Before sampling decisions are made, one should be aware of the population size as a bigger sample size and more resources may be needed to examine a large population than a small population.

The study received responses from 114 tourism SMEs in the Eastern Cape, out of a target sample of (n=200). This number is deemed sufficient to allow for meaningful analysis and credible conclusions within the scope of the study. A similar study conducted in the EC in tourism and hospitality with a sample size similar to this study, involving a survey of 79 Black-owned accommodation establishments and semi-structured interviews with tourism entrepreneurs (Sixaba and Rogerson 2023b). Another study in the EC used a quantitative design with 30 business owners (Mxunyelwa *et al.* 2021). The sample size was based on previous studies on ICT surveys in research and studies that have investigated ICT adoption by SMEs, which have employed sample sizes ranging from 103 to 256 (Faisol *et al.* 2022; Salimon *et al.* 2021; Khan *et al.* 2021).

Fincham (2008) suggests researchers should aim for a survey response rate of roughly 60 percent to meet the higher expectations for response rates. This level of response rate is considered sufficient for data analysis, provided the required survey threshold for

statistical operations is met. While the response rate in the study provided is slightly lower than the recommended 60 percent, it is still considered relatively good. It is important to keep in mind the acceptable response rate can vary, depending on the research context and the specific research questions being addressed.

When done correctly, sampling can provide valid, trustworthy, and valuable findings while saving time, money, and effort. However, when a study is poorly conducted, the results may have little scientific or practical significance. Therefore, prior to making sampling decisions, preparations should be made to maximise the possibility that the study findings will be useful (Daniel 2012a).

5.8 PILOT TESTING THE QUESTIONNAIRE

A pilot study is explained by Riley and Love (2000) as an uncomplicated means to examine whether the intended method of a research project is aligned with the research objectives. The pilot study was carried out as a pre-test before doing fieldwork to determine whether the instrument was error-free, as well as validated participant selection prior to travelling into the field, and complied with the ethics applicable to the study. A pilot study was useful in clarifying the effectiveness and relevance of questions in the questionnaire, performing a similar function for the proposed interviews (Stupar-Rutenfrans *et al.* 2024).

The pilot study determined whether the instrument presented any problems and was compatible with the overall study. The instrument was tested using five colleagues to check for any missing information. A pilot study was useful in clarifying the effectiveness and relevance of questions in a questionnaire, performing a similar function for the proposed interviews. It also permitted the researcher to develop a series of questions that maximised opportunities to secure respondent views. Five colleagues from the Entrepreneurial studies department at DUT unfamiliar with the study were used to test the instrument, to determine whether it was comprehensible or missing any relevant details.

5.9 DATA COLLECTION

The study of social phenomena, according to Frey (2018), employs quantitative research methods focused primarily on the collecting and analysis of numerical data. The quantitative approach to research has its roots in positivism. Kirner and Mills (2020) point out a qualitative research process includes the following steps: design, data

collection through participant observation and interviews, data analysis using grounded theory, and the creation of an ethnographic narrative.

This study used two types of data collection, as part of explanatory mixed-methods design. The first phase consisted of distributing a structured questionnaire to participants to collect quantitative data on the adoption of ICT in SMTEs and identify patterns. Semi-structured interviews were conducted in the second phase to elicit more information about the survey results. This progression allowed for a thorough examination of the research problem, beginning with standardised data collection to ensure internal consistency and progressing to qualitative inquiry to enrich and contextualise the findings. Using a semi-structured interview guide ensured consistency across interviews, increased recording efficiency, and facilitated comparability and effective data processing.

5.9.1 Quantitative data collection instrument

The questionnaire, as Ibert *et al.* (2001) explain, is the major primary data collection tool for quantitative research. Dubey and Kothali (2022) indicate primary data are those collected afresh, for the first time, and thus happen to be original in character. Primary data might be gathered through an experiment or a survey (Bergman 2008). According to Malhotra (2011), the most common method of gathering quantitative primary data is through a questionnaire.

Surveys and questionnaires enable the practitioner-researcher to collect a large amount, as well as a wide range of information, in a very short timeframe. The different survey types vary in complexity from simple to intricate. These surveys can be designed with either open-ended questions that prompt participants to provide their own answers or closed-response rating systems that offer predetermined options for individuals to choose from. Additionally, surveys can be a combination of both open-ended and closed-response questions and comments (Mertler 2017).

To meet the study objectives, data were gathered through traditional survey questionnaires and semi-structured interviews. A qualitative research approach was adopted, using semi structured interviews to collect data from eight SMTEs. Participants

were selected through non-probability sampling, beginning with purposive selection and followed by snowball sampling. Data were collected via online platforms such as Microsoft Teams and Zoom. Participant responses were audio-recorded (with consent) and noted in a research notebook to ensure accurate and reliable data capture. A structured interview schedule guided the interviews.

The following is a thorough description of the questionnaire employed, as well as the mixed methods approach combining qualitative and quantitative methodologies, to investigate how SMEs in tourism may use ICT to boost their competitiveness.

- **Questionnaire**

A questionnaire is defined as a research tool composed of a series of questions or items designed to collect information from respondents. Questionnaires can be distributed in a variety of ways, including online, via mail, over the phone, or in-person (Creswell 2015). They are frequently used in both quantitative and qualitative research to collect data on a variety of issues, including attitudes, actions, beliefs, and experiences.

According to Mertler (2017), quantitative data are numerical and include everything that can be counted, computed, tallied, or assessed in any way, including assessments of sentiments, attitudes, interests, or views on a numerical scale. Surveys, questionnaires, checklists, and rating scales, as well as tests, and other more formal forms of measuring equipment are examples of quantitative data collecting measurement instruments. While quantitative data collecting procedures are generally more efficient, because they allow data to be collected from several people at once, the depth of the data obtained through these methods offers less information, in comparison to what may be obtained through qualitative methods.

Bourque and Fielder (2003) suggest self-administered questionnaires should be designed as user-friendly as possible, as they are the most used form of questionnaire. The questionnaire should have a clear and concise architecture for the questions and response categories and avoid the use of open-ended questions. Clear and sufficient instructions must also be provided to responders, and questions should be specialised in their content rather than broad.

This echoes Peterson (2000), who emphasised the importance of constructing a questionnaire that is easy to complete. The questions should be simple to understand, with clear instructions and adequate space for replies, and should offer a professional impression. These principles apply to all forms of questionnaires, whether self-administered or delivered by someone else, but are particularly important where participants are asked to complete the questionnaire by hand. O'Reilly, Ronzoni and Dogra (2013) note that questionnaires, interviews with a plan, and observations are among the distinct types of quantitative data collection tools.

The study utilised quantitative data collection methods by distributing questionnaires to EC tourism SMEs, collecting them once completed by survey administrators. Fieldworkers provided questionnaires to participants for completion, with completed questionnaires then gathered at the business places of participants, where some who had not yet done so, agreed to complete the questionnaire on the spot. To accommodate busy schedules, the fieldworkers also requested to collect the questionnaires at a later time convenient to those who did not have time to complete them prior or on collection. Leman (2015) reveals another method for conducting small-scale surveys of service consumers or workers, is to place questionnaires at a pick-up/drop-off location.

The survey was conducted with the purpose of gathering quantitative data (Stuart *et al.* 2015a) suitable for testing the hypotheses derived from the theoretical framework on technology adoption, which serve as guidance for the study and align with the research objectives established in Chapter One.

- **Questionnaire design**

Leman (2015) characterises the quantitative research process as a series of questions that encompass the process of quantitative data collecting approaches, highlighting, and contrasting various methodologies and potential problems. The author adds quantitative research is widely known and used by the general population, from national census to market research. However, it involves more than merely completing a questionnaire, with significant effort required before and after the questionnaire is sent to respondents. Effective development should result in clear and objective questionnaires, yielding useful results. Various quantitative data gathering methods

exist, each with their own advantages and limitations, often limited by financial constraints.

Couper (1997) highlights the importance of a high-quality introduction in questionnaires, finding a strong empirical link between the introduction and subsequent response rates. While the specific content of the introduction may vary depending on the mode of administration chosen, there are two common features shared by all introductions. First, they aim to encourage potential participants to take part in the research project, and second, they encourage participants to complete the questionnaire. A cover letter was attached explaining the study aim to participants in this study.

This quantitative component of the study was in standardised questionnaire format, divided in three sections: Section A focuses on obtaining participant responses regarding biographical information for statistical purposes using a nominal scale for analysis. Section B presents business information statements eliciting responses regarding ICT acceptance, with responses to these items treated as nominal data. Section C deals with research participant attitudes to adopting ICT through varied response range questions regarding ICT in Business, where interval data were used for the responses. The 5-point Likert scale survey offered a response range where respondents had to indicate their agreement or disagreement with the statements, scaled from 1-5 (Appendix 2).

In keeping with Scott and Mazhindu (2005), when asking respondents a question, it is common to provide a range of alternatives so the response may be indicated on a scale. The Likert scale, so named in honour of its inventor, Rensis Likert, is the most widely used scale. The level of agreement or disagreement with a question is measured using the Likert scale, where the most often used scale is one to five, with responses indicated between (1) strongly disagree, (2) disagree, (3) unsure, (4) agree, and (5) strongly agree.

Malhotra (2011) concurs the Likert scale is one of the most used itemised scales. A Likert scale's endpoints are usually strongly disagree and strongly agree. Responders are asked to check one of five answer categories to indicate their agreement level. Furthermore, each response category on an itemised rating scale is assigned a number or brief explanation. The categories are typically organised in a logical order, and responders must choose the categories that best represent their emotions to whatever

is being assessed. The most used scales in marketing are itemised rating scales, while Malhotra (2011) provides further information on various types of scales, such as semantic differential and Stapel scales.

To meet the study objectives, data were gathered through traditional survey questionnaires to examine ICT adoption by SMEs in the tourism sector of the EC. The total survey questionnaire number distributed was 200, however, only 120 were returned, with six spoiled, resulting in 114 completed questionnaire surveys. The selection of a cross-sectional survey design was deemed appropriate due to the constraints of limited financial resources and a restricted timeframe.

5.9.2 Qualitative data collection instrument

Stuart *et al.* (2015b) suggest qualitative data collection methods focus on gathering comprehensive descriptions of phenomena and rely on asking individuals to talk or write about their experiences. The unit of measurement in qualitative methods is usually words or stories, but there are other methods such as art, puppetry, mime, music, or dance that can be used to collect qualitative data.

Research has shown people tend to provide more positive responses when completing a survey with an interviewer present, either face-to-face or over the phone, possibly because they want to please others in a social situation (Leman 2015).

The qualitative data collection in this study comprised interviews that took place online, as participants indicated their preference for online as opposed to in-person interviews. The online platforms utilised for the interviews were MS Teams and Zoom, with a 10–15-minute duration. Additionally, it was important to consider the time available and the schedules of participants when conducting interviews, where the recommended interview time is confirmed as typically 10-15 minutes for scheduled face-to-face interviews (Greener 2011; Walliman 2021).

- **Semi-structured interviews**

The study's qualitative phase comprised eight semi-structured interviews. The rationale for this decision was to capture essential information from the participants, which were well-represented and selected from SMEs in the tourism sector. Stuart *et al.* (2015a) add that a set of questions is used in structured interviews. By standardising the method, this set list aims to reduce interviewer error. In this study, however, semi-structured

interviews were conducted, nonetheless, the same premise applies, in that a predetermined set of questions will accurately reveal any variances and ensure everyone has the same opportunity to speak on the same matters. This means the interviews were conducted according to a semi-structured interview schedule, with identical questions asked of each participant, which also aided in the collection and analysis of responses.

Malhotra (2011) explains questions can either be structured or unstructured. Unstructured questions, also known as open-ended questions, allow respondents to answer in their own words and are ideal for initial inquiries, as they allow for the expression of broad views and ideas. They can be useful in determining underlying motives, beliefs, and attitudes. However, the drawbacks include recording errors, data coding, and increased analytical complexity. Structured questions, on the other hand, define a set of replies and their format, often using multiple options or a scale, and are more suitable for big surveys where recording, tabulation, and analysis are more complex.

The study initially aimed to interview 10 SME owners-managers; however, participants provided the same information, and that was sufficient to halt the study and move on. When there is enough data to allow for a replication of the study when it is no longer possible to collect any more data and when further coding is not possible, data saturation has occurred (O'Reilly *et al.* 2013; Guest *et al.* 2017). To meet the study objectives, data were gathered through semi-structured interviews.

The study used a mixed methods approach, with semi-structured interviews for the qualitative portion. While the initial intention was to conduct interviews with twelve participants, data saturation was reached after eight interviews. As no new themes emerged beyond this point, the sample was deemed sufficient for the qualitative phase of the study. Eight SMEs were interviewed, and a series of semi-structured interview questions was created to help direct the conversation (Appendix 1).

A request for an in-person meeting was made well in advance of the interview schedule, which in some cases did not happen, because the participants said they were too busy or frequently on the road, or had personal issues that prevented meeting in person, or they felt uncomfortable having the meeting virtually. The interviews were performed online using MS Teams and Zoom, with recoding, in addition to the researcher taking

notes while the interviews were conducted. The researcher asked for permission to interview the subjects beforehand, which was granted.

5.10 ADMINISTRATION OF THE RESEARCH INSTRUMENT

The data were collected over seven months (May 2022 till November 2022). The researcher consulted all relevant stakeholders and requested permission to conduct the research in each area. Emails were initially sent to EC DEDEAT, to request the database of addresses before fieldwork to obtain a comprehensive database of small businesses in the designated areas.

A request was made to the DUT FREC to conduct the research, with an Ethical Clearance Certificate granted. In addition, permission was obtained from the EC DEDEAT to conduct the research. The survey questionnaire was accompanied by a covering letter from DUT that explained the study aim, its importance, and stressed the data were used for the benefit of the small business entrepreneurs, along with the ethical clearance certificate.

Personally administered questionnaires were opted for as distribution method, which was cost-effective. The fieldworkers employed were senior students experienced in fieldwork for EC universities through data collection. Blom (2016) indicates fieldwork, in general, is the collecting of any sort of data on any kind of observational unit, other than a laboratory study and desk or library research. Fieldwork in survey research is the distribution of a questionnaire to a group of target participants, who may reply on behalf of various entities such as individuals, households, or organisations. Initially, conducting fieldwork may seem straightforward, however, many factors require consideration and planning is essential.

The use of field worker assistants enabled dropping off questionnaires at the workplaces of participants who agreed to immediate completion. The fieldworkers were also asked to collect the questionnaires at a later convenient time for those who did not have time to complete them right away. This was done to accommodate busy schedules. The use of questionnaires allowed for the collection of numerical data, which is a common technique in quantitative research (Stuart *et al.* 2015b).

The data collection process encountered challenges as some SMEs were unavailable due to business commitments, while others claimed to be busy. Even after rescheduling appointments, some SMEs still did not make themselves available for participation. In

order to overcome the difficulty in obtaining responses from tourism SME managers and owners, the fieldworkers left the survey with willing participants, retrieving it at a more convenient time. Contact details of the participants were also requested for follow-up on when the survey was ready to be collected. Fieldworkers occasionally had to make additional plans when the survey was not completed by the scheduled collection time. In some instances, the fieldworkers requested the participants to complete the form on the spot to avoid the disappointment of uncollected surveys.

5.10.1 Quantitative questionnaire distribution: data set one

The study utilised a quantitative data collection method by distributing questionnaires in NMM, BCM, OR Tambo Municipality and Amathole, therefore the fieldwork was conducted in stages.

The first phase of fieldwork began in Gqeberha within the NMM. Five students, including one master's and four third-year students, who lived in Gqeberha, were recruited as fieldworkers for the study. They underwent training on how to administer the questionnaire. Data collection took place across various areas, including the town/city, suburbs, and urban and township locations. In total, 75 surveys were distributed and then collected the following week at a mutually convenient time.

The second phase occurred in East London, specifically within the BCM, covering town/city suburbs in the vicinity, as well as townships. Here, three students, one master's and two third-year students, were enlisted. Similar to the Gqeberha phase, 75 surveys were distributed using a drop-off arrangement.

The third phase moved to Umtata within the OR Tambo Municipality and Amathole, focusing on semi-rural areas. Two unemployed professional fieldworkers who were also alumni students living nearby were employed for this phase. Fifty surveys were dropped off for some participants, while others were completed directly at the participants' businesses. For those unavailable initially, surveys were left, and they were subsequently contacted to ensure they had the opportunity to complete them. The fieldworkers received training on how to assist SMEs in completing the questionnaire.

Various types of businesses in the tourism sector were included in the study, namely Travel and Tour operators, Bed and Breakfast (B&B) establishments, Guest Houses, and Travel Agents, as well as businesses involved in Hospitality and Accommodation.

These diverse business types were participants in the research, providing insights into different aspects of the tourism industry.

The study faced limitations in its scope as it aimed to cover tourism SMEs in only four EC municipalities: NMM, BCM, OR Tambo Municipality, and Amathole. Furthermore, the study encountered constraints, primarily related to finances and time. In view of these limitations, data collection for the study spanned a relatively short timeframe of eight months, from May to November. Consequently, the study had to operate within these time and financial constraints, impacting its ability to comprehensively cover all aspects of the research.

The initial plan was to collect 200 surveys from the four areas, but in practice, only 120 surveys were completed. This was due to limited participant availability, time and resource constraints, a high non-response rate, and reaching data saturation.

Due to varying levels of completeness, however, only 114 of these surveys were deemed suitable for data analysis. The distribution per municipality was 50 NMM, 28 OR Tambo, 20 BCM and 16 Amathole. One challenge encountered was that some participants were unable to complete their surveys as arranged and had to do so upon arrival. This unexpected need for on-site completion of surveys contributed to the limitation in the number of surveys collected as initially planned; therefore, lack of engagement from certain participants presented a challenge in achieving the intended sample size.

- **Qualitative: semi-structured interviews data set two**

The primary objective of the data collection process, two from NMM, two from BCM, two from Amathole and two for OR Tambo was to conduct interviews with eight SMEs from all the municipalities, ensuring a balanced representation from various types of businesses. The sample consisted of two SMEs from travel and tour operators in BCM; two SMEs from catering services, private dining, consulting, and guest houses in Nelson Mandela Municipality (NMM); two SMEs from lodges in OR Tambo; and two guest houses in Amathole.

The selection of these SMEs was achieved through random sampling, taking their availability for participation in the study into consideration. All these interviews were done online, as indicated prior. No significant challenges were encountered with participants from the first phase, and they were willing to provide additional information

and clarification during the interviews. However, the main issue encountered was related to network connectivity, particularly in more rural areas. This network challenge may have affected communication and data transmission during the interviews in these locations.

5.11 DATA ANALYSIS

Statistics is the study of the collection of tools and procedures for describing, organising, analysing, interpreting, and presenting data statistically (Ha and Ha 2012). Statistical analysis was performed once the data set was completed, correctness checked, and the variables prepared. According to Bazeley (2018), data analysis is the methodical examination, interpretation, and transformation of raw data into useful insights to answer research questions or hypotheses. It includes organising, cleaning, and processing data to make it more accessible and simpler to work with, as well as using statistical or other analytical tools on the data to uncover patterns, linkages, and trends. Various software tools, such as SPSS, STATA, or R, can be used to analyse data.

The adoption of ICT in the SMEs in tourism improves business performance by increasing efficiency, innovation, and customer service. SMEs that adopt ICT have higher operational effectiveness, which leads to increased productivity, growth, and market competitiveness.

When considering ICT adoption, SMEs must weigh the benefits (for instance, increased market reach, improved communication, and operational efficiency) against the challenges (for example, cost, skill shortages, or infrastructure issues). Recognising the balance between these factors can help guide decision-making and improve adoption outcomes.

Government support helps overcome barriers to ICT adoption by offering financial assistance, training, and resources for technological advancement. When government interventions are strong, SMEs are more likely to successfully adopt ICT, increasing their competitive advantage and growth.

Top management support is essential for promoting ICT adoption in SMEs. Leadership is critical in shaping organisational culture, allocating resources, and making strategic decisions that promote the adoption and integration of information and communication technology into everyday operations. Without strong support from top management, ICT adoption may face internal opposition. In competitive markets, businesses need to

adopt ICT to stay relevant and efficient. Competition drives innovation, and ICT adoption enables SMEs to respond more quickly to market changes. Furthermore, ICT improves supply chain integration by increasing communication and efficiency among suppliers, businesses, and customers.

Effective ICT adoption requires strong relationships with stakeholders such as suppliers, customers, and partners. Engaged stakeholders influence the adoption process by providing feedback, technological support, or market requirements for ICT solutions. Strong stakeholder involvement increases the prospect of ICT being adopted and used effectively.

Attitudes towards ICT within an organisation, including management and employees, impact the successful adoption probability. A positive attitude toward technology fosters an innovative and open culture, making it easier for businesses to adopt and integrate ICT. Adopting ICT with support from top management and stakeholders improves business performance, driving growth and sustainability. SMEs that effectively use ICT can optimise processes, lower costs, increase customer satisfaction, and maintain long-term competitiveness in the tourism industry.

The variables mentioned in this study are ICT adoption, benefits, challenges, and government as well as top management support, along with business performance, competition, supply, and stakeholders, in addition to attitude. All variables are interconnected, with each significantly impacting ICT adoption and success in tourism SMEs.

As stated by Grotenhuis and Matthijssen (2021), SPSS is a prominent statistical data description and analysis tool. Statistics are classified into two types, inferential and descriptive statistics. Inferential statistics generate predictions or claims regarding a population, based on data from a sample that is a subset of that population, whereas descriptive statistics merely describes the data from that population. SPSS as a program is analogous to a quick and powerful calculator with extensive capabilities, allowing us to conduct statistical processes in the fields of descriptive and inferential statistics. The use of statistical analysis software such as SPSS is vital while doing scientific research, as applied in this study's investigation of tourism SME owners-managers, their partiality to ICT adoption and its effect on performance.

Sadriddinovich (2023) maintains several software environments are utilised for this purpose, with SPSS referenced as the “statistical package for psychological sciences”, as opposed to its typical ‘social science’ application, occupying a particular position among them. In terms of commercial statistical products for applied research in the psychological and pedagogical sciences, SPSS leads the market.

Abdulrazaq and Ahmad (2024) show that AMOS offers an intuitive graphical interface for creating, estimating, and evaluating structural equation models. Researchers can specify and test complex theoretical models with both latent and observed variables. AMOS specialises in CFA and path analysis using SEM. CFA assesses and confirms the relationship between observed variables and latent constructs, in addition, it tests hypothesised factor structures and determines how well observed variables align with underlying constructs. The test was done in this study to assess the relationship between the variables and constructs. The variables included ICT adoption level, attitudes towards digital devices, and business performance.

Sakaria, Maat and Mohd Matore (2023) add that SEM allows researchers to model and estimate complex relationships between multiple dependent and independent variables, while also analysing structural relationships among constructs and indicators. SEM is useful for evaluating measurement error, estimating latent variables based on observed variables, and testing model fit.

The study used SPSS and SEM software, such as AMOS, which are widely used in data analysis for various reasons. SPSS is versatile, which allowed the researcher to conduct a wide range of statistical analyses, including descriptive statistics and advanced techniques such as regression and factor analysis, which were tested in this study. SEM software, such as AMOS, is specifically designed for analysing structural equation models, useful for testing complex relationships between variables and investigating theoretical models. The variables were tested to check the relationship and testing, with a model created using SPSS and SEM software, as this allows researchers to explore relationships, test hypotheses, and evaluate model fit to data, providing valuable insights into the underlying mechanisms of their research phenomena.

SEM with AMOS is justified by its ability to examine complex relationships between variables in a structural model. It enabled the simultaneous examination of multiple dependent and independent variables, resulting in insights into causal relationships and

interactions. According to Marcoulides and Yuan (2024) SEM was especially useful for studying latent constructs or theoretical models involving observed and latent variables. AMOS provided a powerful statistical technique for estimating model parameters, evaluating model fit, and testing hypotheses, making it ideal for rigorous data analysis in this study.

The variables that supported the structural model are performance, stakeholders, benefits, and competition, as well as top management and their attitude towards ICT adoption. The independent variables are government support, top management support, competition, and supply chain, along with stakeholders, attitude, challenges, and benefits. The dependent variables are ICT adoption, business performance, growth, sustainability. The independent variables drive ICT adoption, which influences the overall performance, growth, and sustainability of tourism SMEs.

Qualitative data analysis (QDA) is now simpler and produces more expert results. Limna (2023) states that NVivo, a QDA software, has grown in popularity among researchers across disciplines, due to its ability to improve and streamline qualitative research processes. NVivo excels at managing and organising large amounts of qualitative data, including textual and multimedia sources, allowing researchers to explore complex datasets in depth. According to Maher *et al.* (2018), NVivo offers a reliable and tried-and-true analysis approach for the creation of grounded theories. In using NVivo software, it has facilitated organising and managing large amounts of qualitative data, including text, allowing for more complex dataset analyses, while NVivo also includes powerful coding and categorising tools for qualitative data, allowing users to identify patterns, themes, and trends in their data.

The systematic process of analysing raw data in order to gain meaningful insights that answer research questions or hypotheses entails organising, cleaning, and processing data to improve accessibility and analysis (Bazeley 2018). Analytical tools, such as SPSS, are used to uncover patterns, linkages, and trends within data, assisting in the interpretation and transformation of data into useful information. Saunders *et al.* (2009) state that prior to data analysis, audio recordings are typically made of interviews and transcribed using NVivo, a computer tool that aids in QDA. The analysis of qualitative data uses various methods to code, categorise, and assign meaning to data; typically, as words or images (Gliner *et al.* 2017).

5.11.1 Frequency analysis

As explained by Kalaian (2011), a frequency distribution is a tabular representation of a survey data collection used to organise and summarise the information. It is a list of either qualitative or quantitative values that variables in a data collection can take, as well as the number of times each value occurs (frequencies). The frequency distribution is the fundamental building block of statistical analytical tools and the initial step in survey data analysis. It assists researchers in three ways: (a) organising and summarising survey data in a tabular manner, (b) interpreting the data, and (c) detecting outliers (extreme values) in the survey data set. In this study, frequency analysis was performed to interpret the collected data.

5.11.2 Descriptive analysis

In the opinion of Knapp (2018), to better comprehend and describe the features of a data set descriptive statistics, also known as summary statistics, are employed. Descriptive statistics enable quick understanding of a big data set using only a few figures and basic graphs that represent the contents of a variable. A histogram (a form of bar chart) with a normal curve can be used to graphically depict continuous variables. Categorical variables can be summarised using numbers (n) and percentages (%). Categorical variables are graphically represented using a basic bar or pie chart.

As stipulated by Salkind (2010), descriptive statistics are widely used, very basic, often easy to comprehend, and measure and explain the basic properties of a data collection process.

In this study, descriptive analysis was used, because it outlines and presents the main dataset features, providing a concise overview of its central tendencies and variability. This aids in understanding important trends and features in the available data by researchers and decision-makers, facilitating interpretation and communication of complex data patterns.

Descriptive statistics consequently serve as a foundation for data analysis, allowing researchers to organise, simplify, and summarise information. Data collection can be reduced into a sequence of statistics that provide meaningful information regarding the population of interest, even when it comprises hundreds or thousands of individual data points or observations. The descriptive data format was aided by frequency tables, with data normality prior to multiple regression analysis evaluated via descriptive analysis.

The normality P-P plot was done to assess the regression standardised residuals (Pallant 2016).

5.11.3 Inferential statistical analysis

In explaining the goal of inferential statistics, Antonius (2011) states it is to make inferences regarding a complete population, based on information gathered from a sample. Blaikie (2011) identifies inferential analysis is used to estimate whether the features or relations identified in a sample, or differences between samples, may be anticipated to exist in a population or populations from which the sample or samples have been randomly chosen.

Lewis-Beck, Bryman and Futing Liao (2011) and Nishishiba, Jones and Kraner (2017) agree there are, in general, two types of statistics: descriptive and inferential. A collection of techniques for generating inferences regarding the link between sample statistics and population parameters is known as inferential statistics and is used to answer one of two query types. To begin, how probable is it for a particular sample to be chosen from a population with a specified parameter? Second, can a population parameter be estimated from a sample statistic? (Salkind 2010).

The study used inferential statistical techniques, which included multiple linear regression and analysis to make predictions, generalisations, or inferences based on a sample of data on SMEs in the EC Province tourism population.

5.11.4 Correlation coefficient

Shapiro (2011) posits the degree of correlation between any two variables is generally represented by a correlation coefficient, which can range from -1.00 (showing a perfect negative association) to +1.00 (representing a perfect positive relationship) indicating a perfect positive relationship. A positive correlation between two variables indicates when one variable's value rises, the value of the other rises as well. A negative correlation occurs when the value of one variable rises while the value of the second decreases. When a correlation is equal to zero, it indicates when one variable grows or decreases, the other does not change at all.

According to Miller and Brewer (2003), when examining the relationship between two variables at the interval/ratio level of measurement, one variable's values should be

charted against the other. The descriptive data are presented in the form of frequency tables, while the inferential data are presented in the form of tabulations (Gorard 2015).

In this study, correlation coefficients measured the strength and direction of a linear relationship between two variables. Correlation coefficients allowed the researcher to assess the degree to which changes in one variable are associated with changes in another.

5.11.5 Collinearity test

The data were also checked for collinearity or multicollinearity. Pallant (2016) notes collinearity can be diagnosed by checking the tolerance coefficient and variance inflation factor (VIF) values. In this study the tolerance coefficients measured for all the constructs were above the recommended value of 0.10.

5.11.6 Multiple regression analysis

To determine the relationship among the constructs in this study, multiple regression analysis was carried out, providing a significance level of $p < 0.001$ and addressing research objectives one and two.

5.11.7 Confirmatory factor analysis (CFA)

The validity of the conceptual framework or MM was assessed using CFA. This concurs with the assertion by Al-Qeisi (2009) that CFA could be used in assessment of a MM. CFA was thus used to confirm or reject the predetermined variables within a model. In this study, the MM was assessed by inputting all the captured linked variables.

5.11.8 Exploratory factor analysis (EFA)

In this study, EFA was used to distinguish the actual number of variables and associated scale items in the questionnaire. In accordance with the procedures outlined by Pallant (2016), the EFA was also used to validate the survey instrument. This meant 50 items from the measured constructs were subjected to EFA analysis procedures, using the PCA extraction method and varimax rotation as the parameter of measurement. Shrestha (2021) notes before EFA analysis, the data must meet certain conditions such as the Kaiser-Meyer-Olkin (KMO) value exceeding the value of 0.5 and Bartlett's Test of Sphericity being statistically significant.

5.11.9 Structural equation modelling (SEM)

The SEM achieved adequate composite reliability (CR), and convergent and discriminant validity were subjected to SEM, after which the MM was then converted into a path model that shows the relationship between the latent variables. According to Hair *et al.* (2019), SEM allows simultaneous evaluation of multiple related independent and dependent relationships and considers measurement estimates among the constructs. To establish the proposed conceptual framework in this study, the SEM was applied to test the path coefficients. The criteria used for assessing the goodness of fit for the MM were also applied in the structural model.

5.11.10 NVivo

Saunders *et al.* (2009) state audio recordings were made and transcribed prior to data analysis, using NVivo, a computer tool that aids in QDA. In analysing qualitative data various methods are used to code, categorise, and assign meaning to data, typically through words or images (Gliner *et al.* 2017).

Coding begins with selecting the coding unit (Sekaran and Bougie 2016; Dalkin *et al.* 2021). The data coding was done by assigning a number to each participant's responses, with responses stored in a database. The labelled codes given to units of text were thereafter grouped and turned into categories.

The qualitative findings and interpretations were presented, showing the outcomes of interview sessions that underwent deductive coding using NVivo version 12 software. In this process, the transcribed data from the interviews were divided into different, meaningful codes, developed based on the differences, similarities, and meanings that emerged from the transcribed data. This process allowed the researcher to fine-tune data into convenient themes and subthemes.

5.12 RELIABILITY AND VALIDITY

According to Polit and Beck (2017), validity in research refers to the accuracy and truthfulness of the research findings and the degree to which they can be generalised to other populations or situations. Validity can be assessed in different ways, including through internal, external, construct, and statistical conclusion validity. Research needs to be valid and reliable (Fox and Bayat 2008). To check validity there should be a relationship between things. Validity means the measurable represents what it is

supposed to represent. This means it is crucial there should also be reliability, where the test, model, or measurement is consistent, reliable, and supplies the same answer at different times.

Leedy (1993) indicates validity deals with the measuring tool's dependability and efficacy. In the standardised test, validity will raise questions such as what the test measures, whether it measures what it is supposed to measure, as well as how well, how comprehensive, or how accurate does it measure it? There are many types of validity including face, criterion, content, and construct, as well as internal, and external validity. The instrument-measuring tool assists in determining whether one is measuring what is supposed to be measured. Validity deals with the authenticity of the cause-and-effect relationships (internal and external). In addition, the set of questions developed is a measuring tool to assist in tapping the concept set out in measuring and not something else (Sekaran and Bougie 2016).

Once model fit is assessed, Essmui *et al.* (2014) recommended the MM should be tested to verify and validate CR, along with convergent and discriminant validity. This exhibits the dependability of the study's research instrument. For example, a reliability coefficient with Cronbach's alpha of 0.670 indicates an acceptable level of reliability and 0.8 or higher is an excellent level (Ursachi, Horodnic and Zait 2015). In this study the internal reliability of business ICT use showed the coefficient (alpha=0.910), the coefficient for benefits (alpha=0.864), for the challenges (alpha=0.834) and for top management (alpha=0.737). However, Cronbach's alpha measured for the use of tools, influence, competition and use of the internet, and social media for marketing, their internal consistency was all lower than the adopted threshold (alpha<0.670).

5.13 VALIDITY AND CREDIBILITY

Lincoln and Guba (2013) are of the opinion credibility matches the internal validity criteria of positivism and refers to establishing confidence in the findings and interpretations of a research study. Transferability, however, deals with external validity or generalisability, which would be assured by the measures taken to ensure the findings would be applicable in different contexts. In addition to ensuring the findings are transferable between the researcher and those being researched, detailed descriptions are necessary (Fox and Bayat 2008; Lincoln and Guba 2013).

The field workers could communicate in Xhosa and English, therefore, while the language used was English, because Xhosa predominates in the area, participants could easily switch to it whenever they felt uncomfortable. Interviews and questionnaires were the primary data collection methods used in this mixed-methods study, with SME owners-managers surveyed and semi-structured interviews conducted for validity.

A pilot study was done to test for any problems with the instrument and its compatibility with the overall study. The instrument was tested using five colleagues to check for any missing or incomprehensible information. The pilot study clarified the effectiveness and relevance of the survey and interview questions.

5.14 ETHICAL CONSIDERATIONS

Ethical considerations in research refer to the rules and guidelines that regulate the conduct of human-participant research. It entails ensuring research is conducted in an ethical and responsible manner, where participant rights and welfare are maintained throughout the research process (Resnik 2020). This meant adhering to ethical principles by obtaining informed consent from participants, safeguarding not only their confidentiality but also their privacy, precluding injury or manipulation, and conducting research honestly, with integrity. During the data collection process there are, however, several aspects that should be dealt with (Sekaran and Bougie 2016). The complexity of ethics leads to debates among concerned parties, characterised by “more than just a degree of dishonesty” (Riley and Love 2000: 164-187).

Obtaining informed permission is a crucial ethical aspect in research to preserve the rights and wellbeing of participants (World Medical Association 2013), with correct procedures to gain informed permission from participants (Polit and Beck 2017). These procedures included advising research respondents regarding the study, undertaken for purely academic purposes, as well as their anonymity and ability to withdraw at any time during the interview.

An Ethical Clearance Certificate was granted by the DUT FREC to conduct the research, with permission obtained from the DEDEAT in the EC to perform the study. In addition, participants signed informed consent letters to indicate their understanding and willingness to voluntarily participate. Prior to recording, authorisation must first be obtained (Rubin and Rubin 2012), which was achieved both verbally and through written informed consent for the survey and interviews.

Informed consent procedures are a widely accepted ethical requirement in research to safeguard participants from potential injury or infringement of their rights (Ponterotto 2017), while also advising those taking part of their anonymity and that they could withdraw anytime they wanted during the study.

5.14.1 Anonymity and confidentiality

There should, in addition, be confidentiality of the data obtained by the researcher (Lincoln and Guba 2013), therefore, the researcher advised participants verbally and through signed informed consent that the information would be treated as confidential, and participant identities would be protected, maintaining their anonymity.

Researchers should respect the confidentiality of the sources of any evidence or information supplied by the participants in their studies. This is particularly true when there are questions that are sensitive commercially (Remenyi 1998). It is crucial for researchers to not have any hidden agendas and are fully open and honest in dealing with participants in their studies. This means participants should be made aware of why the evidence is required and what exactly will be done with it once the research has been completed.

The researcher should, furthermore, not obtain evidence from informants under duress (Remenyi 1998). Participants were thus advised the study was for research purposes only. All participants remained anonymous. On the surveys, the study aims were clearly stated in an introduction, however, a permission letter was included in the questionnaire's preface, which also informed respondents that participation in the study was entirely optional and private. Participants were advised they could withdraw at any time, should they no longer be willing to participate.

5.15 CONCLUSION

This chapter presented the research methodology employed in this study. The research technique was extensively discussed, showing the research has been created to construct a map of the approach used in this study. A mixed approach was used to get to the heart of the objective's essence. To fulfil the study goal, survey tools for both quantitative and qualitative approaches were used. Former students were used as research assistants with the fieldwork in the EC to collect data from selected tourism SMEs. To provide context, several forms of study were used, including descriptive and exploratory research. Pilot testing was conducted with colleagues from the DUT

Department of Entrepreneurial Studies and Management, who were unfamiliar with the study, to determine whether the instrument was missing any relevant information and easily understood.

The selected study demographic was highlighted, as well as the sample size chosen and justified. The sample technique used was also described, as well as the reasoning for its selection. The data collecting process for both quantitative and qualitative data was investigated to comprehend how these procedures work. The survey questionnaires were distributed among SMEs in the tourism industry employing fieldworkers in the first phase to collect data. In phase two, the researcher conducted a follow-up session with in-depth interviews for clarification on some areas in the first phase. Data analysis for quantitative research, using SPSS software, enabled the researcher to quantify the data obtained from field work, producing results using various SPSS tests. In contrast, for qualitative research, a contextual analysis was conducted, and the data were analysed using NVivo software, where coding was performed.

The researcher had to verify data dependability and authenticity. In addition, the DUT ethics committee provided an ethics certificate in approving the project. Ethical considerations were also made to ensure the prescribed protocol was followed, with both researcher and participants aware of their rights in terms of data collecting before they started. The next chapter will set out the data in interpretation of the findings.

CHAPTER SIX

DATA PRESENTATION AND DISCUSSIONS OF THE FINDINGS

6.1 INTRODUCTION

This chapter presents the quantitative and qualitative results of the study. Besides, the chapter interprets the data gathered on the adoption of ICT in SMEs in the tourism sector. As indicated by the research objectives outlined in chapter one, the findings are presented in a similar logical order.

Quantitative data were analysed using the most recent updated SPSS v28 in the form of descriptive data, aided by frequency tables, while the inferential data are presented in the form of tabulations. In addition, inferential statistical techniques such as multiple linear regression, One-Way ANOVA, one sample-test, and EFA, as well as CFA were employed. The SEM was used to determine the causal paths analysis of the variables within the conceptual framework and was achieved using AMOS v28.

Quantitative surveys were conducted for this study with a total of 114 participants. This sizable sample provided a robust basis for analysing and interpreting the quantitative data collected. In this chapter the focus is also on the presentation and analysis of data collected from interview sessions involving eight participants, selected from various sectors within the tourism and hospitality industry in the EC province. Throughout the chapter, the collected data from both quantitative and qualitative sources are meticulously analysed and extensively discussed. This comprehensive approach allowed for a holistic understanding of the research topic and provided valuable insights into the phenomenon under investigation.

The first section of the chapter discusses the quantitative research instrument and reliability statistics, prior to presenting the study findings and hypotheses. In the second section of this chapter, qualitative findings and interpretations are presented, showing the outcomes of interview sessions that underwent deductive coding using Nvivo version 12 software. In this process, the transcribed data from the interviews were divided into different meaningful codes developed in accordance with the difference, similarities, and meanings that became apparent from the transcribed data. Data were thus fine-tuned through this process into convenient themes and subthemes. During the analysis phase, information gathered from structured interviews was transcribed

verbatim, and pertinent quotes from this data supported the discussion on themes. To ensure confidentiality, the study made a conscious decision not to reveal the identities of the primary participants, thus safeguarding their anonymity.

6.2 RESEARCH INSTRUMENT

The survey questionnaire consisted of three sections, with the breakdown as follows:

Section A – participants' biographical information for statical purposes, with a nominal scale used in analysis.

Section B – perceptions and knowledge regarding ICT acceptance. Responses to these items were treated as nominal data.

Section C –participant attitudes to adopting ICT using multiple choice questions regarding ICT adoption impact on Business, with interval data used for response analysis.

6.3 RELIABILITY STATISTICS

Validity and reliability of precision are two crucial study components. Taking multiple measurements of the subjects allow computation of reliability. Acceptable reliability values have a coefficient of 0.70 or above. The Cronbach's alpha score for each item that made up the questionnaire is displayed in the table below.

All statements in the questionnaire were subjected to a reliability test. The questionnaire was designed and divided into research themes in accordance with the research objectives. The reliability scores for all sections are shown to exceed the recommended Cronbach's alpha value for a newly constructed construct. This indicates a degree of acceptance and consistent scoring among all variables.

Every statement in the questionnaire was subjected to a reliability test, where the research aims and objectives guided the questionnaire design and its division into research themes. The reliability score for each section surpassed the suggested Cronbach's alpha value, as shown in Table 6.1. This shows all these research sections have a level of acceptable, consistent scoring.

6.3.1 Reliability of the study questionnaire

This section details the dependability of the study's research instrument. For example, a reliability coefficient with Cronbach's alpha of 0.670 indicates an acceptable level of

reliability and 0.8 or higher is an excellent level, according to Ursachi *et al.* (2015). The internal reliability of business use of ICT shows the coefficient ($\alpha=0.910$), the coefficient for benefits ($\alpha=0.864$), for the challenges ($\alpha=0.834$) and for top management ($\alpha=0.737$).

The Cronbach's alpha measured for the use of tools, influence, competition and use of the internet, as well as social media for marketing, however, indicated internal consistency was all lower than the adopted threshold ($\alpha<0.670$). This might be attributed to some discrepancies in the scoring patterns for those constructs. The rest have coefficients above the threshold ($\alpha>0.670$). Generally, the overall reliability of the research instrument was above the threshold ($\alpha=0.922$), indicating the instrument was suitable for use in the research study. Table 6.1 below illustrates the statistical data on the reliability of the instrument used.

Table 6.1: Table Reliability scores

Sub-section	N of Items	Cronbach's Alpha
Business on ICT	8	0.910
Use of tools for ICT	6	0.398
Benefits of ICT for the business	6	0.864
Challenges of ICT	4	0.834
Influence the use of ICT	5	0.478
Top management support	5	0.737
Competition and suppliers	6	0.527
Government support	9	0.963
Attitude towards adoption	5	0.898
Stakeholder support	5	0.849
Use of internet, social media for market	7	0.205
Business performance	5	0.900
Total	71	0.922

6.3.2 Exploratory factor analysis (EFA)

In order to distinguish the variable and associated scale item numbers in the questionnaire in this study, EFA was used. In accordance with the procedures outlined by Pallant (2016), EFA was also used to validate the survey instrument, with 50 items from the measured constructs subjected to EFA analysis procedures using the PCA extraction method and varimax rotation as the parameter of measurement. Shrestha (2021) notes the data must meet certain conditions before EFA analysis, such as the

KMO value exceeding the value of 0.5 and Bartlett's Test of Sphericity measurements statistically significant.

As shown in Table 6.2, the generated KMO value was 0.818 which is in the range, exceeding Kaiser's criterion recommended value of 0.6 (Kaiser 1974; Hadi, Abdullah and Sentosa 2016). In addition, Bartlett's Test of Sphericity acquired statistical significance ($p < 0.001$). These results support the factorability of the variables within the correlation matrix (Bartlett 1954).

Table 6.2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.818
Bartlett's Test of Sphericity	Approx. Chi-Square	6341.539
	Df	1485
	Sig.	.000

6.4 QUANTITATIVE FINDINGS

At the beginning of the research, the study anticipated recruiting a total of 200 participants in view of the sample size computations applied in quantitative research. The survey, conducted between May and August 2022, successfully obtained fully completed questionnaires from 114 participants ($N=144$). This denotes a response rate of 57 percent. Fincham (2008) maintains there are now higher expectations for survey response rates and a response rate of approximately 60 percent for most studies should be the goal. This response rate is, nevertheless, deemed sufficient to qualify the study for data analysis, considering the required survey threshold needed to run statistical operations in the study was met.

6.5 DATA SET ONE: SURVEY FINDINGS

6.5.1 Socio-demographic profile of research sample

This sub-section presents the socio-demographic composition of the research participants targeted and recruited for the study, who were all SME owners in the tourism sectors of the EC province. The sample included both males and females drawn from all races.

6.5.2 Participants in the survey

The number of participants (tourism SME owners, n=114) in the survey is shown in Table 6.3 below.

Table 6.3: Survey participants

	Frequency	Percent
Participants	114	100.0

6.5.3 Gender

The data in Table 6.4 show most (61.4 percent) research survey participants were women, with men constituting 38.6 percent. It was interesting to note women were overwhelmingly shown to be the SME owners in this survey, as opposed to men. However, this is not consistent with a study in India by Rakshit *et al.* (2022), who determined the opposite. Furthermore, according to Gosai and Pandya (2019) their study found a higher representation of men in the SME field, compared to women, with a participant range of 43.73 percent female and 56.27 percent male. A study by Cao (2021), in addition, indicated the participants' gender where 69.4 percent were men and 30.6 percent women.

The above further highlights the variation in gender representation across different studies. The statements suggest gender distribution in SME ownership or participation can vary across different surveys and studies, leading to differing results and highlighting the complexity of gender dynamics in the SME field. This study implies women SME owners-managers are more prone to technology adoption compared to men.

Table 6.4: Gender

		Frequency	Percent
Gender	Male	44	38.6
	Female	70	61.4
	Total	114	100.0

6.5.4 Age group

The data in Table 6.5 show a majority participant (57 percent) is 21-40 years old, 35.1 percent are between 41-60 years, seven percent between 61-80 years, while less than one percent (0.9 percent) are below 21 years of age. This contradicts a recent study by Cao (2021) that revealed 69.4 percent participants were between the ages of 21 and 30. Those between the ages of 31 and 40 were 30(27.9 percent). Only five participants were younger than 20 years, and none were older than 50. This implies most participants were youth, reflecting the younger generation is actively involved in the economy, potentially creating jobs, and contributing to economic growth. Additionally, the statement highlights entrepreneurship is not limited to younger individuals, as even those aged 61 and above were still engaged in entrepreneurial activities. This indicates the ongoing entrepreneurial spirit and potential for business creation across different age groups.

Table 6.5: Age

		Frequency	Percent
Age	< 21	1	0.9
	21-40	65	57.0
	41-60	40	35.1
	61-80	8	7.0
	Total	114	100.0

6.5.5 Type of business

For the type of business, 34.2 percent participants indicated they run accommodation businesses, 29.8 percent operated hospitality businesses, 21.1 percent are tour operators, 12.3 percent are travel agents and 2.6 percent operate other forms of businesses (Table 6.6). This reveals the participants' businesses are in the lodging rather than the tourism industry.

Table 6.6: Type of business

		Frequency	Percent
Type of business	Travel Agent	14	12.3
	Accommodation	39	34.2
	Tour operator	24	21.1
	Hospitality	34	29.8
	Others	3	2.6
	Total	114	100.0

6.5.6 Length of time in business

The data in Table 6.7 indicate that most participants (59.6 percent) had operated their business between 6-10 years, 20.2 percent between 1-5 years, 17.5 percent between 11-15 years, with 2.6 percent having operated for 16-20 years. This means these SMEs have endured and survived longer than five years, which is significant as many SMEs do not exist longer than five years.

This current study is similar to that of Srimulyani and Hermanto (2022), which found the largest percentage (56.18 percent) of SMEs had a duration of 1-10 years. The distribution of length in business is as follows: 11-20 years (28.84 percent), 21-30 years (11.24 percent), 31-40 years (1.87 percent), and 41-50 years (1.87 percent). Based on the findings of Nordin, Siti-Nabiha and Noordin (2023), SMEs with an operational duration equal to or less than one year accounted for 11 percent. Approximately 56.1 percent businesses had a duration of two to five years, while 32.9 percent had been in operation for six to 10 years.

These statistics highlight the operational duration or age of SMEs as a factor of interest in the above studies. This is consistent with the study findings, as the fact that more of these enterprises have been in operation for more than 10 years indicates maturity in these businesses. Those above 10 years in existence indicate the participants have been in the business for a longer period and have been successful. Additionally, the smaller percentage (2.6 percent) participants operating their businesses for 16-20 years further supports the notion of businesses having been in operation for a significant

period. These findings align with the idea of businesses demonstrating maturity and potential success through their sustained operation over a longer duration.

Table 6.7: Length of time in business

		Frequency	Percent
Length of business	1-5 years	23	20.2
	6-10 years	68	59.6
	11-15 years	20	17.5
	16-20 years	3	2.6
	Total	114	100.0

6.5.7 Educational qualifications

The data in Table 6.8 present the survey participants' highest educational level. The data reveal approximately 51.8 percent participants hold certificates/diplomas, 23.7 percent have bachelor's degrees, and 10.5 percent attained post-graduate degrees. Furthermore, 11.4 percent have completed secondary school education, 1.8 percent have alternative educational qualifications, and less than one percent (0.9 percent) have no formal education. These findings suggest the vast majority (more than 99 percent) participants had achieved a significant level of education. The study conducted by (Cao 2021) revealed participants' educational background can be simplified as follows: 69.3 percent of the sample had postgraduate degrees, indicating a high level of education. Additionally, 29.6 percent had attended college or university, 0.9 percent had completed high school, and none of the participants had no formal education.

Comparable to findings by Cao (2021), participants' educational background showed participants with postgraduate degrees comprised 69.3 percent of the sample, indicating a high level of education. Furthermore, several studies, including Njuguna *et al.* (2015) and Cant *et al.* (2015), discovered ICT adoption was influenced by the level of education of SME owners-managers, where a college level of education encompassed using ICT tools; therefore, the more SME owners-managers are educated, the more inclined they will be to regularly utilise ICT.

Table 6.8: Educational qualifications

		Frequency	Percent
Education qualifications	No formal education	1	0.9
	Secondary school completed	13	11.4
	Certificate / Diploma	59	51.8
	Bachelor's degree	27	23.7
	Postgraduate (Diploma/ BTech)	12	10.5
	Other	2	1.8
	Total	114	100.0

6.5.8 Business ownership

The data in Table 6.9 show 38.6 percent participants engaged in a form of partnership in their business operations, 30.7 percent were sole proprietors, 24.7 percent have registered as private businesses and 3.5 percent had other forms of business ownership. Approximately 1.8 percent have incorporated companies, while 0.9 percent run non-government organisations (NGOs)/ non-profit organisations (NPOs). It is interesting most participants are cooperating, indicating they are helping the organisations or because they are manageable, a sign they are contributing. Further worth noting is the second largest was ownership, indicating the venture owner-manager may readily modify changes without consulting others and decide how to manage the enterprise.

This concurs with findings by Deros *et al.* (2006), indicating location, size, age, and structure, as well as organisation, number of employees, sales volume, and net worth, in addition to ownership structure, innovation, and technology, are some criteria used to describe SMEs. This defines the business structure in the ownership of the business.

Table 6.9: Business Ownership

		Frequency	Percent
Business Ownership	Sole proprietorship	35	30.7
	Private company	28	24.6
	Partnership	44	38.6
	Incorporated company	2	1.8
	NGO/NPO	1	0.9
	Other	4	3.5
	Total	114	100.0

6.5.9 Position in the SME

From the data in Table 6.10, approximately 36.8 percent participants surveyed indicated they were the managing directors (MDs) of their respective business, 27 percent are Chief Executive Officers (CEOs), 18.4 percent are accommodation managers, and 8.8 percent are restaurant managers. In addition, seven percent are tour managers, and 1.8 percent indicated other positions/roles in their different business. These findings contrast Rakshit *et al.* (2022), whose sample comprised only 4.8 percent participants that were SME owners or CEOs, compared to 57.43 percent marketers and 38.49 percent SME owners or CEOs. This is an accurate depiction of how SMEs deliberately position themselves to support the operations of the establishment.

Table 6.10: Position in the business

		Frequency	Percent
Position in the business	Managing Director	42	36.8
	Chief Executive Officer (CEO)	31	27.2
	Tour Manager	8	7.0
	Accommodations Manager	21	18.4
	Restaurant Manager	10	8.8
	Other	2	1.8
	Total	114	100.0

6.5.10 Total employee number in the business

The total number of employees in the respective business is shown in Table 6.11 reflecting 40.4 percent participants possesses a workforce between 5-10 employees, 30.7 percent between 11-20 employees and 6.1 percent has 21-30 employees. Further to this, 21.9 percent businesses has less than five employees, while 0.9 percent employ 31-40 staff. In the South African context, the upper limit is 50 employees for a small enterprise, while for a medium enterprise, the maximum number of employees is between 100 and 200 employees (National Credit Regulator 2011).

This is counter to a study by Ahmad *et al.* (2022), which defined SMEs as those with less than 300 employees. Approximately 31.3 percent participants represent businesses with fewer than 50 employees, while 59.4 percent participants come from businesses with 51 to 300 workers.

The number of employees, annual turnover, and capital employed are the most widely used quantitative parameters that classify SMEs according to their industry. As mentioned before, each country differs in terms of defining SMEs., where in the South African context 50 employees is the maximum in a small enterprise, with the maximum employee number in a medium enterprise is between 100 and 200 (SA 2022). It should be noted in this study there are few employees employed by these establishments, which is a concern as they also seem to have become stagnant, showing little or no growth.

Table 6.11: Number of employees

		Frequency	Percent
Number of employees	<5 employees	25	21.9
	5-10 employees	46	40.4
	11-20 employees	35	30.7
	21-30 employees	7	6.1
	31-40 employees	1	0.9
	Total	114	100.0

6.5.11 Annual Revenue Estimates

The data in Table 6.12 detail the surveyed respondents' annual company revenue estimates in 2021. The majority participants (72.8 percent) indicated an annual revenue of less than one million rands, 24.6 percent between one and five million rands, while less than one percent (0.9 percent) each make R5.1-10 million rands, R10.1-20 million rands and above R20.1 million rands, respectively. This is an indication most businesses are low and middle-revenue generation establishments, however, 73 percent fall in the of micro enterprises category based on turnover, supported by the interview, showing the participants generate less than R7 million per annum.

The study findings by Gono *et al.* (2016) are echoed by Hlaing (2022) regarding the imbalance and discrimination in salaries and that low capital receipts characterise the micro-enterprise sector. According to the National Small Business Act (NSBA), Act 102 of 1996 as amended, a SME is defined as a firm with fewer than 200 workers, an annual turnover of less than R64 million (\$3,733,803), and a total gross asset worth of less than R19 million (\$1,108,473) (DSBD 2024). Furthermore, a SME in the construction business is defined by the NSBA, also referred to as the Small Enterprise Act, as a

company with less than 200 workers, an annual revenue of less than R26 million (\$1,516,858), and a total gross asset worth of less than R5 million (\$291,703) (Rambaruth, Adam and Krishna 2022).

Table 6.12: Annual revenue estimates

		Frequency	Percent
Annual revenue	< R1M	83	72.8
	R1M - 5M	28	24.6
	R5.1M-10M	1	0.9
	R10.1M-20M	1	0.9
	R20.1M and above	1	0.9
	Total	114	100.0

6.5.12 Budget percentage spent on ICT

The data in Table 6.13 show the percentage of total budget spent on ICT. Approximately 37.7 percent of the participating businesses spent between 15-20 percent of their revenue on ICT, 23.7 percent spent between 5-10 percent, while 13.2 percent budgeted 15-20 percent of their revenue. In addition, 24.6 percent spent less than five percent, while only one spent 20-25 percent of budget on ICT. This shows a good number of the participants have medium budgetary allocation towards ICT. However, Xin and VincentKow (2022) state SMEs dedicate less than 10 percent of their budgets to ICT, with only two percent dedicating between 10 and 20 percent of their budgets to ICT investment and only eight percent of businesses committing more than 40 percent of their budgets to ICT.

This is in agreement with Kano, Choi and subhan Riza (2022). in terms of budget, considering the benefits to a low-budget approach, such as reasonable pricing and wide reach, this is the ideal solution to manage the low budget and limited promotional space SMEs are now dealing with. Choosing social media as a new means of promotion for SMEs was the appropriate move. This could be related to SMEs operating on a limited budget. The findings agree with Okundaye *et al.* (2018) that ICT adoption obstacles and challenges in developing nations include insufficient appropriate infrastructure, unsatisfactory education, budgetary restrictions, and political as well as societal difficulties.

Table 6.13: Total Budget spent on ICT

		Frequency	Percent
Budget on ICT	<5%	28	24.6
	5-10%	27	23.7
	10-15%	43	37.7
	15-20%	15	13.2
	20-25%	1	0.9
	Total	114	100.0

6.5.13 ICT use by employees

Table 6.14 shows the percentage of employees that can use ICT services. Approximately 27.2 percent participants revealed that less than 10 percent of their employees can use ICT services, 23.7 percent indicated that between 21-30 percent can use the services, and 21.1 percent indicated between 31-40 percent in their workforce can use ICT services. Only two participants surveyed revealed more than 51 percent of their employees can use ICT services. This is not a good indication of ICT usage among employees of tourism sectors in the EC province.

This is in line with Cant *et al.* (2015), whose study indicated the majority participants lacked ICT knowledge, hence, needed outside assistance, which emphasises the shortage of skills in the labour force (Gono *et al.* 2016). More technological tool training is required for personnel working in SMEs to achieve better outcomes. This implies a need for greater investment in ICT training and skill development within the labour force of the tourism sectors in the EC province, to enhance technology adoption and productivity.

Table 6.14: ICT use by employees

		Frequency	Percent
ICT usage by employees	<10%	31	27.2
	11-20%	12	10.5
	21-30%	27	23.7
	31-40%	24	21.1
	41-50%	18	15.8
	>51%	2	1.8
	Total	114	100.0

6.5.14 Office location

The data in Table 6.15 show 43.9 percent businesses are located in Gqeberha, 24.6 percent in Umtata and 17.5 percent have offices situated in East London. In addition, a further 9.6 percent of the companies are in Idutywa, while 4.4 percent operate in Butterworth. These areas are remote and too rural and may affect ICT adoption in such areas due to infrastructure and network challenges, as well as the digital divide.

Table 6.15: Office location

		Frequency	Percent
Office Location	East London	20	17.5
	Butterworth	5	4.4
	Umtata	28	24.6
	Gqeberha	50	43.9
	Idutywa	11	9.6
	Total	114	100.0

6.6 VARIABLES THAT IMPACT ICT ACCEPTANCE

The following are the variables that affect SME ICT adoption. The internal and external factors that affect the variables are displayed in tables 6.16-6.63 below.

6.6.1 Business Information

This section presents the business information of the research participants in sub-sections. These include use of ICT, number of computers, computer literacy level, and top management, as well as middle management, and lower management computer skills.

6.6.2 ICT use

Table 6.16 below shows 98.2 percent participants use ICT for the businesses included in the study area of tourism for their operations, while 1.8 percent do not. This shows a vast majority businesses in the study area on tourism utilises ICT for operations. This is in line with the study of Maryama and Suhong (2022) which found the usage of ICT technologies, such as PCs with various built in managerial tools and procedures, provides essential professional skills and administrative advantages to SME owners-managers and their employees to improve business growth (Nyakuma *et al.* 2016).

The high percentage (98.2 percent) participants using ICT in the study area, therefore, implies the adoption of ICT technologies is perceived as beneficial and advantageous for tourism-related businesses. It indicates recognition of the potential ICT offers in enhancing business operations, improving productivity, and gaining a competitive edge in the market. The findings support the notion that ICT plays a crucial role in facilitating efficient business management and providing valuable tools for decision-making and administrative processes within SMEs.

Table 6.16: ICT Use

		Frequency	Percent
Use of ICT	No	2	1.8
	Yes	112	98.2
	Total	114	100.0

6.6.3 Number of computers

The number of computers available for use is indicated in Table 6.17, illustrating approximately 53.5 percent participating tourism SMEs indicated between 1-5 computers, 29.8 percent between 6-10 computers and 16.7 percent possess 11-20 computers for operating the business. This shows the businesses have a moderate number of computers available for their operations.

Table 6.17: Number of computers

		Frequency	Percent
Number of computers	1-5	61	53.5
	6-10	34	29.8
	11-20	19	16.7
	Total	114	100.0

6.6.4 Computer literacy level

On the computer literacy level indicated in Table 6.18, 43.0 percent have intermediate computing and application skills, 19.3 percent are with advanced computing and application skills and 17.5 percent have basic computing and applications skills. Furthermore, seven percent possess proficient computing, applications, and

programming skills, 3.5 percent with fundamental skills and 9.6 percent possess no computer literacy. This indicates 90.4 percent participants is computer literate.

Table 6.18: Computer literacy level

		Frequency	Percent
Computer literacy level	None	11	9.6
	Fundamental Skills	4	3.5
	Basic Computing and applications	20	17.5
	Intermediate Computing and application	49	43.0
	Advanced Computing and application	22	19.3
	Proficient Computing, applications, and programming	8	7.0
	Total	114	100.0

6.6.5 Top management computer skills

Table 6.19 below reveals the computer skills of the top management. Approximately 43.0 percent top management possess intermediate computing and application skills, while 32.5 percent have advanced computing and application skills. In addition, 8.8 percent top management has basic computing and application skills. Furthermore, 4.4 percent participants have proficient computing, applications, and programming skills, while 1.8 percent has fundamental computer skills. Additionally, 9.6 percent participants reported having no computer skills at all. This indicates a vast majority top management possesses some related computer skills.

This is in-line with Rozak *et al.* (2021), where SMEs that have digital skills are also competent in e-commerce, using digital tools, such as social media. This implies a significant portion of top management has acquired computer skills, which can be beneficial for their roles and responsibilities. Having computer skills indicates their ability to effectively navigate and employ technology in their work, such as using software applications, managing data, and potentially even programming. This can contribute to increased efficiency, productivity, and decision-making within the businesses, while it also denotes a level of adaptability and readiness to embrace technological advancements in the business environment.

The significance of most top management possessing computer skills implies SMEs are well-equipped in terms of ICT. This suggests these enterprises are more likely to adopt

and use ICT tools and resources to enhance their efficiency, productivity, and competitiveness in the market. Having a technologically competent TMT can contribute to the successful integration and utilisation of ICT within SMEs, enabling them to leverage technology for growth and development.

Table 6.19 Top management computer skills

		Frequenc y	Percent
Top management computer skills	None	11	9.6
	Fundamental Skills	2	1.8
	Basic computing and applications	10	8.8
	Intermediate computing and applications	49	43.0
	Advanced computing and application	37	32.5
	Proficient computing, applications, and Programming	5	4.4
	Total	114	100.0

6.6.6 Middle management computer skills

Table 6.20 presents the computer skills of middle management. The data indicate 43.9 percent middle management has intermediate computing and application skills, while 26.3 percent possesses advanced computing and application skills. Furthermore, 11.4 percent has basic computing and application skills. Additionally, 2.6 percent middle management has proficient computing, applications, and programming skills, while 4.4 percent has fundamental skills. further to this, 11.4 percent middle management reported having no computer skills.

Table 6.20: Middle management computer skills

		Frequency	Percent
Middle management computer skills	None	13	11.4
	Fundamental skills	5	4.4
	Basic computing and applications	13	11.4
	Intermediate computing and applications	50	43.9
	Advanced computing and applications	30	26.3
	Proficient computing, applications and Programming	3	2.6
	Total	114	100.0

6.6.7 Lower management computer skills

Table 6.21 depicts the computer skills of lower management. The data reveal 8.8 percent lower management has intermediate computing and application skills, while 1.8 percent possesses advanced computing and application skills. Additionally, 54.4 percent has basic computing and application skills. Furthermore, 0.9 percent lower management possesses proficient computing, applications, and programming skills, while 28.1 percent has fundamental skills. In addition, 6.1 percent lower management reported having no computer skills. The findings suggest a significant majority lower management possesses basic computing skills, while a smaller percentage has intermediate or advanced skills. It is worth noting a small proportion has proficient computing and programming skills.

A notable portion of lower management, nevertheless, still lacks computer skills altogether. The data presented indicate a need for training and development of technical skills, particularly within lower management. As the lower managers are involved in dealing with operational issues on a day-to-day basis, having adequate computer skills becomes essential for efficient and effective performance. Investing in training and development programmes can enable lower management to leverage technology, improve productivity, and streamline operational processes. By bridging this skills gap, tourism SMEs can empower their lower management to make informed decisions,

leverage technology-driven solutions, and contribute to overall business growth and success.

The difficulties listed include the lack of infrastructure, as well as funding, the cost of implementation, insufficient awareness, and inconsistent governmental policies, along with insufficient skills and training, inadequate power supply, widespread corruption, a poor educational level, and insufficient knowledge, and so on.

Table 6.21 Lower management computer skills

		Frequency	Percent
Lower management computer skills	None	7	6.1
	Fundamental Skills	32	28.1
	Basic Computing and applications	62	54.4
	Intermediate computing and applications	10	8.8
	Advanced computing and applications	2	1.8
	Proficient computing, Applications and Programming	1	0.9
	Total	114	100.0

6.6.8 Responsibility of ICT technical services

As shown in Table 6.22, 31.6 percent participants indicated MDs are responsible for ICT technical services, 20.2 percent show that IT/Computer manager is responsible, 36.0 percent opined that outsourced IT personnel bear the responsibility while 1.8 percent suggested that a management committee is responsible. Only 7.9 percent indicated that employees are responsible for ICT technical services while 0.9 percent each indicates that the CEO, restaurant manager and other personnel respectively are responsible for IT services in their companies.

The findings are in-line with Gono *et al.* (2016), suggesting the effective use of ICT that technological incompatibilities can hinder make it difficult for firms to benefit from adopted ICT. Furthermore, the findings agree with those of Nguyen *et al.* (2015), who

advise due to the lack of SME IT expertise and skills (Izushi 2005, cited in Nguyen *et al.* 2015), professional consultants are frequently sought to assist with IT adoption (Fuller 1996; Shin 2006, cited in Nguyen *et al.* 2015). It has been suggested advice from professional consultants or IT vendors can be useful for small business management or owners, particularly when they do lack the experience or understanding of IT themselves.

Table 6.22 Responsibility of ICT technical services

		Frequency	Percent
Responsibility for ICT services	Managing director	36	31.6
	IT/Computer manager	23	20.2
	Employees	9	7.9
	Outsourced IT personnel	41	36.0
	Other	1	0.9
	Restaurant manager	1	0.9
	Management Committee	2	1.8
	Chief executive officer	1	0.9
	Total	114	100.0

6.6.9 Influence to use ICT

As shown in Table 6.23, most participants (52.6 percent) show the MD has the highest influence on the kind of ICT to be used in the company, 10.5 percent showed the management committee is influential, 23.7 percent indicated an outsourced company influences the choice of ICT, while 4.4 percent shifts the influence on the computer manager. Furthermore, 3.5 percent indicated the MD and management committee have the influence, 1.8 percent showed the finance Manager and outsourced personnel are influential, while 0.9 percent each indicate the finance/account manager, finance Manager, the CEO and other influences impact the choice of ICT in their organisations. This is supported by Chege *et al.* (2019), who found e-business adoption is branded by the manipulation of entrepreneurial opportunities, based on the value added for the business, in consideration of the long-term values and sustainability significance (Al Omoush *et al.* 2018).

Table 6.23: Influences on ICT usage

		Frequency	Percent
Influence on ICT usage	Managing Director	60	52.6
	Management Committee	12	10.5
	Computer Manager	5	4.4
	Finance/Account manager	1	0.9
	Outsourced company	27	23.7
	Other	1	0.9
	Chief Executive Officer	1	0.9
	Managing Director and Management Committee	4	3.5
	Finance Manager and Outsourced personnel	2	1.8
	Finance Manager	1	0.9
	Total	114	100.0

6.6.10 Hiring of in-house employees for IT server

When asked whether the surveyed participants' IT servers are insourced, most (76.3 percent) answered no, while only 23.7 percent answered yes (Table 6.24). This implies most companies outsource their IT servers. This may offer advantages, with accompanying considerations such as data security, vendor selection, and maintaining effective communication and collaboration with the service provider. The successful acceptance of an innovation is facilitated by top management backing, ICT skills of the personnel, and organisational innovation orientation (Wang 2018).

Table 6.24 Insourcing of IT

		Frequency	Percent
Insourced	No	87	76.3
	Yes	27	23.7
	Total	114	100.0

- **Outsourcing of IT server**

In terms of answering whether the IT server is outsourced by the SME, 17.5 percent participants disagreed their IT is outsourced, while 82.5 percent indicated it is outsourced (Table 6.25). This also reaffirmed the IT server used by the SMEs in the

tourism sector is outsourced. This is in line with previous research by Nguyen *et al.* (2015) that reflects, because of the general deficiency in IT expertise and skills by SMEs, firms often engage professional consultants to assist with IT adoption. It has been suggested SME owners-managers could benefit from advice provided by professional consultants or IT vendors, particularly when their IT experience or understanding is lacking.

Table 6.25: Outsourcing of IT server

		Frequency	Percent
Outsourcing of IT	No	20	17.5
	Yes	94	82.5
	Total	114	100.0

- **Understanding the use of computer knowledge**

Table 6.26 shows how the participants acquired an understanding of their computer knowledge, with 30.7 percent indicating they learned from own experience, 39.5 percent learned through attendance of short courses, 18.4 percent possess a certificate in computer technology and 5.3 percent have a diploma in computer technology. Whereas 4.4 percent held a degree in computer technology, 0.9 percent each were either self-taught or learnt through other mediums. This is an indication of the need to empower tourism SMEs with ICT skills.

Gono *et al.* (2016) suggest ineffective ICT use result from technological incompatibilities hindering firms from deriving benefits in adopting ICT. By implication, firms may lack the necessary technical skills and capabilities and acquire ICT systems unsuited to their business practices. Support from government agencies, sector institutions, or consultants in addressing these challenges may benefit SMEs, in addition to finding the right advice, outside expert assistance, and the right software for effective ICT use.

Table 6.26: Understanding of computer knowledge

		Frequency	Percent
Understanding of computer knowledge	Learned by experience	35	30.7
	Attended short course	45	39.5
	I have a certificate in computer technology	21	18.4
	I have a diploma in computer technology	6	5.3
	I have a degree in computer technology	5	4.4
	Others	1	0.9
	Self-taught	1	0.9
	Total	114	100.0

6.6.11 Effect of ICT on business operations

As shown in Table 6.27 below, approximately 88.6 percent participants show business ICT always affects business activities, 3.5 percent indicate it sometimes does, 6.1 percent show this is often the case, while 1.8 percent indicated it rarely affects their business activities. This is an indication that ICT has a huge effect on tourism business activities in the study area.

The findings are similar to that of Nyakuma *et al.* (2016), indicating one significant benefit of ICT tools in SMEs business operations is the boost they provide to business operations effectiveness in SME corporate activities.

Table 6.27 Effects of ICT on business operations

		Frequency	Percent
Effects of ICT on business operations	Often	7	6.1
	Always	101	88.6
	Sometimes	4	3.5
	Rarely	2	1.8
	Total	114	100.0

6.6.12 Smartphone as a business tool

The use of smartphones as a business tool is shown in Table 6.28. The data show 44.7 percent participants use a smartphone sometimes, 28.9 percent noted they always use

a smartphone, 10.5 percent often use it, and 14.0 percent rarely use a smartphone as a business tool. In addition, only 1.8 percent participants never use it as a business tool in the study area. This implies smart phones are gaining popularity as a tool for SME business operations.

The findings are in line with Cao (2021) that SMEs now have a competitive advantage over larger companies on a global scale thanks to the newest "anywhere-anytime" capabilities of using smartphones and tablets, which comes at serious risk to the security of the SME customer and enterprise information, as well as employee personal information.

Table 6.28 Smartphone as a business tool

		Frequency	Percent
Smartphones as a business tool	Often	12	10.5
	Always	33	28.9
	Sometimes	51	44.7
	Rarely	16	14.0
	Never	2	1.8
	Total	114	100.0

6.6.13 Mobile applications as a business tool

The use of mobile applications as a business tool is shown in Table 6.29. The data show 38.6 percent participants use mobile applications sometimes, 21.9 percent note they always use mobile applications, 9.6 percent often use them, and 26.3 percent rarely use smartphones as a business tool. In addition, only 3.5 percent participants never use it as a business tool in the study area. This suggests these participants do not frequently use mobile applications. This concurs with findings by Matarazzo *et al.* (2021) regarding social media and mobile application use having drastically altered the implementing of corporate brand communication strategies, in addition to fostering collaboration, involvement, and interaction (Lamberton and Rose 2012).

Table 6.29: Mobile applications as a business tool

		Frequency	Percent
Mobile application as a business tool	Often	11	9.6
	Always	25	21.9
	Sometimes	44	38.6
	Rarely	30	26.3
	Never	4	3.5
	Total	114	100.0

6.6.14 Tablets as a business tool

The use of tablets as a business tool is shown in Table 6.30. The descriptive data show 33.3 percent participants sometimes use tablets, 14.0 percent always use tablets, seven percent often use them, and 30.7 percent rarely use a tablet as a business tool, while 14.9 percent participants never use it as a business tool. This finding echoes Kamau *et al.* (2023), who explain mobile applications, also called "apps," are an application software type designed to operate on mobile devices such as smartphones and tablets. Apps are not intended for use on desktop or laptop computers, but rather on smartphones and tablets as these are small, wireless computing devices.

Table 6.30: Tablet as a business tool

		Frequency	Percent
Tablet as a business tool	Often	8	7.0
	Always	16	14.0
	Sometimes	38	33.3
	Rarely	35	30.7
	Never	17	14.9
	Total	114	100.0

6.6.15 Laptops as a business tool

The use of laptops as a business tool is shown in Table 6.31. The descriptive data show most (79.8 percent) participants always use laptops, 5.3 percent indicated they use laptops sometimes, 3.5 percent often use them, and 9.6 percent rarely use laptops as a business tool. while 1.8 percent participants never use it as a business tool in the study area.

Table 6.31: Laptop as a business tool

		Frequency	Percent
Laptop as a business tool	Often	4	3.5
	Always	91	79.8
	Sometimes	6	5.3
	Rarely	11	9.6
	Never	2	1.8
	Total	114	100.0

6.7 ANALYSIS BASED ON EMPIRICAL FINDINGS

This section reports on participants' level of agreement on statements measuring ICT in business. One-sample test was conducted to examine potential differences in participant response options, which ranged from 'strongly disagree', 'disagree', to 'neither agree nor disagree', 'agree', and 'strongly agree'. To facilitate analysis, it is common practice to create a dichotomous variable by grouping 'agree' and 'disagree' responses together. This approach involves producing a new variable that represents a binary conclusion, indicating whether participants agree or disagree with the statement/question (Ursachi *et al.* 2015). The results were first presented in percentages and further analysed based on the mean level of agreement or disagreement. These are detailed in the subsections below.

6.8 INTERNAL FACTORS THAT INFLUENCE SME OWNER-MANAGER ATTITUDES TO ADOPT ICT

6.8.1 ICT Business use

This section details the scoring pattern of the participants on the statements measuring use of ICT (actual use of ICT). As shown in Table 6.32, there was significant agreement by most participants on their ICT use, as it fits well with the way their company does business (93.9 percent), they use ICT that fits well with their company's business values and culture (84.2 percent), and they use tourism and hospitality software for the ICT system because it fits well with their business (82.4 percent). There was significant agreement by most participants that they use ICT, as it fits well with the organisations' existing distribution channel (84.2 percent), they use ICT, because it fits well with the way their management would like to operate (85 percent), and they use ICT, since it is easy for our employees (87.8 percent). In addition, there was significant agreement by

most participants that they use ICT; because it is easy for our business partners (88.6 percent), and it is clear and understandable to our business partners (86 percent).

Overall, the mean value suggests participants agreed more with the different statements than they disagreed. The first statement, “I use ICT as it fits well with the way our company does business” has the highest mean (M=1.38, SD=0.757) of all other statements, indicating ICT use is of great assistance in doing business.

Table 6.32: Participants’ ICT use

Focus Area Statement	Business on ICT (n = 114)					Mean	Std.	P-value
	SA	A	N	D	SD			
I use ICT as it fits well with the way our company does business	72.8%	21.1%	3.5%	0.9%	1.8%	1.38	0.757	0.000***
I use ICT that fits well with our company’s business values and culture	49.1%	35.1%	6.1%	0.9%	8.8%	1.85	1.169	0.000***
I use tourism and hospitality software for the ICT system as it fits well with my business	59.6%	22.8%	3.5%	1.8%	12.3%	1.84	1.341	0.000***
I use ICT, as it fits well with the organisations’ existing distribution channel	57.9%	26.3%	11.4%	2.6%	1.8%	1.64	0.913	0.000***
I use ICT, as it fits well with the way our management would like to operate	59.6%	25.4%	10.5%	3.5%	0.9%	1.61	0.879	0.000***
I use ICT; it is easy for our employees	66.7%	21.1%	7.9%	1.8%	2.6%	1.53	0.914	0.000***
I use ICT; it is easy for our business partners	65.8%	22.8%	1.8%	1.8%	7.9%	1.63	1.154	0.000***
I use ICT; it is clear and understandable to our business partners	63.2%	22.8%	4.4%	0.9%	8.8%	1.69	1.191	0.000***
P*** <1% Likert scale= Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)								

6.8.2 Component matrix: Internal factors that influence ICT adoption

These components are additional statistical analysis on the above-mentioned figures from Table 6.33. A component test was performed on the statement regarding whether ICT use is easy for the employees, and the strongly positive significance of 0.912 was determined. A strong positive significance of 0.870 was further found for the statement whether using ICT is easy for business partners. The second group component has a strong positive score of 0.812, indicating ICT use aligns with management's preferred operating style. A figure of 0.798 is reflected in the statement regarding whether ICT is used because it fits well with the organisation's existing distribution channels. In addition, the statement whether to use tourism and hospitality software for the ICT system, because it is appropriate for the business, received a strongly positive significance of 0.772. Regarding the statement whether ICT use aligns well with the company's business values and culture, a strong positive significance of 0.754 was found. The first statement—do respondents use ICT because it aligns well with our company's business practices? reflected a strong significance of 0.706.

Table 6.33: Extraction Method: PCA on Business on ICT (BCT)

		Component 1	Component 10
BCT1	I use ICT as it fits well with the way our company does business	0.706	
BCT2	I use ICT that fits well with our company's business values and culture	0.754	
BCT3	I use tourism and hospitality software for the ICT system as it fits well with my business	0.772	
BCT4	I use ICT, as it fits well with the organisations' existing distribution channels	0.798	
BCT5	I use ICT, as it fits well with the way our management would like to operate		0.812
BCT6	I use ICT; it is easy for our employees	0.912	
BCT7	I use ICT; it is easy for our business partners	0.870	

Rotated Component Matrix

6.8.3 ICT adoption Challenges

This section details the scoring pattern of the participants on the statements measuring the challenges of ICT adoption. As shown in Table 6.34 below, most participants disagreed with the statements: ICT software is expensive and will not benefit the business (48.3 percent), ICT hardware is expensive and will not assist the business (69.3 percent), ICT will bring more problems than solutions (85.9 percent) and ICT will

make other companies in competition to steal their ideas (87.7). It can, therefore, be said the proportion participants that disagreed was significantly higher when compared to those who agreed ($p < 0.001$).

The mean values measured indicate participants significantly “disagreed” with the statements, which shows ICT benefits supersede the challenges. The last statement, “I think ICT will make other companies in competition steal my ideas” has the highest mean value ($M = 4.39$, $SD = 1.078$), implying participants do not consider other businesses in competition stealing their ideas as a challenge to using ICT.

Table 6.34: Challenges of ICT

Focus Area statement	Challenges of ICT (n = 114)					Mean	Std.	P-value
	SA	A	N	D	SD			
I think ICT software is expensive and will not benefit the business	5.3%	4.4%	42.1%	40.4%	7.9%	3.41	0.900	0.000***
I think ICT hardware is expensive and will not assist the business	3.5%	5.3%	21.9%	55.3%	14.0%	3.71	0.900	0.000***
I think ICT will bring more problems than solutions	3.5%	5.3%	5.3%	33.3%	52.6%	4.26	1.022	0.000***
I think ICT will make other companies in competition to steal my ideas	5.3%	3.5%	3.5%	21.9%	65.8%	4.39	1.078	0.000***
P*** <1% Likert scale= Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)								

These component figures are an additional statistical analysis of the figures from Table 6.35. A component test was conducted to determine whether ICT software is expensive and will not benefit the business, with a strong positive significance of 0.748. Respondents who believe ICT hardware is expensive and will not help their business received an average score of 0.834. On the variable that ICT will bring more problems than solutions, the test yielded a positive significance of 0.801, indicating participants are confident ICT will bring more challenges than solutions to tourism SMEs. The other variables, on whether ICT will cause other companies in competition to steal ideas, were established as 0.691. As a result, the above-mentioned barriers were shown to significantly impact the attitudes of entrepreneurs in tourism SMEs toward ICT adoption.

Table 6.35: Extraction Method: PCA on Challenges of ICT (CICT)

		Component 6
CICT1	ICT software is expensive and will not benefit the business	0.748
CICT2	ICT hardware is expensive and will not assist the business	0.834
CICT3	ICT will bring more problems than solutions	0.801
CICT4	ICT will make other companies in competition to steal my ideas	0.691

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 10 iterations.

6.8.4 Top management support (TMS)

This section details the scoring pattern of the participants on the statements measuring TMS. As shown in Table 6.36, there was significant agreement by most participants that they have allocated resources to top management for ICT (76.3 percent), participants have encouraged management to discuss with employees to support ICT (75.4 percent), participants have made management aware of ICT adoption benefits to the company (86.9 percent). There was also significant agreement by most participants of having encouraged management to support ICT use (87.7 percent), and participants have encouraged management to encourage employees to use ICT (84.2 percent). These findings are consistent with previous studies that have shown TMS for ICT is critical for successful ICT implementation in organisations (Sadiq *et al.* 2022).

On average, the mean value suggests the proportion of participants that agreed was higher when compared to those in disagreement. The penultimate statement, “I have encouraged management to support the use of ICT” has the lowest mean value (M=1.54, SD=0.811), this suggests the TMS for this statement was relatively higher than for the other statements.

Table 6.36: Participant agreement levels on TMS

Focus Area statement	Top Management Support (n = 114)					Mean	Std.	P-value
	SA	A	N	D	SD			
I have allocated resources to the top management for ICT	36.8%.	39.5%	15.8%	7.9%	0.0%	1.95	0.920	0.000***
I have encouraged management to discuss with employees to support ICT	28.9%	46.5%	19.3%	5.3%	0.0%	2.01	0.836	0.000***
I have made the management to be aware of the benefits of ICT to the company	58.8%	28.1%	10.5%	2.6%	0.0%	1.57	0.787	0.000***
I have encouraged the management to support the use of ICT	62.3%.	25.4%	9.6%	1.8%	0.9%	1.54	0.811	0.000***
I have encouraged the management to encourage employees to use ICT	55.3%	28.9%	6.1%	4.4%	5.3%	1.75	1.102	0.000***
P*** <1% Likert scale= Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)								

These components are an addition to the statistical analysis presented in Table 6.37. A component test was conducted to assess TMS and SME owner-manager attitudes toward adopting ICT in tourism. The respondents are divided into three categories, based on whether a strong positive significant of 0.845 is shown on the statement regarding management encouraging employees to use ICT. A figure of 0.653 is reflected for respondents who stated they made management aware of the benefits of ICT for the company. On the variables regarding the encouragement of management to support ICT use, a significant 0.602 indicates respondents believe top management in tourism SMEs play a critical role in support of ICT.

Table 6.37: Extraction Method: PCA on TMS

		Comp 2	Comp 3	Comp 4
TMS1	Allocated resources to the top management for ICT	0.523		
TMS2	Encouraged management to discuss with employees to support ICT	0.529		
TMS3	Made the management to be aware of the benefits of ICT to the company		0.653	
TMS4	Encouraged the management to support the use of ICT		0.602	
TMS5	Encouraged the management to encourage employees to use ICT			0.845

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

6.8.5 Business benefits

This section details the scoring patterns of participants on the statements measuring ICT benefits for the business. As shown in Table 6.38, there was significant agreement by most participants that ICT can support business performance (92.9 percent), that ICT will assist their business to get more clients (85.9 percent), and track business performance through ICT (96.5 percent), where half (50 percent) the participants agreed (strongly agree=20.2 percent; agree=29.8 percent). The proportion of participants that agreed was significantly higher when compared to those in disagreement regarding having the experience their customers demand with e-commerce services offered for payment ($p < 0.001$).

There was significant agreement by most of the participants that ICT would assist them to have control of the business daily (95.6 percent), ICT would help the business with suppliers (94.7 percent), and participants agreed ICT would assist as a business tool for control measures (93.5 percent). Overall, the mean value suggests participants agreed on ICT benefits for the business. The third statement has the highest mean value ($M = 1.20$, $SD = 0.483$), alluding to ICT assisting to track business performance.

Table 6.38: Participant levels of agreement on ICT benefits for the business

Focus Area Statement	Benefits of ICT for the business (n = 114)					Mean	Std.	P-value
	SA	A	N	D	SD			
I think ICT will assist my business performance	78.9%	14.0%	7.0%	0.0%	0.0%	1.28	0.588	0.000***
I think ICT will assist my business to get more clients	59.6%	26.3%	14.0%	0.0%	0.0%	1.54	0.730	0.000***
I think ICT will assist to track the business performance	83.3%	13.2%	3.5%	0.0%	0.0%	1.20	0.483	0.000***
I think ICT will assist me to have control of the business daily.	84.2%	11.4%	3.5%	0.9%	0.0%	1.21	0.540	0.000***
I think ICT will assist in the business with the suppliers	84.2%	10.5%	5.3%	0.0%	0.0%	1.21	0.523	0.000***
I think ICT will assist as a business tool for control measures	83.3%	10.5%	6.1%	0.0%	0.0%	1.23	0.549	0.000***
P*** <1% Likert scale= Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)								

These components provide additional statistical analysis of the figures mentioned (Table 6.39). A component test was conducted to assess the attitudes of SME owners-managers toward ICT adoption in tourism. The respondents answered to one component category, with a strong positive significant value of 0.896 shown on the statement regarding whether adopting ICT will increase profit margins. In addition, a strong positive significance of 0.897 was found in the statement whether using ICT will result in more clients. A figure of 0.855 was also reflected for respondents who indicated tourism SMEs benefit from ICT adoption in tourism will assist as a business tool for control measures.

The respondents also strongly believe ICT benefits will help the business with suppliers, as indicated by the other variables, which have a strong significance of 0.838. The results of the component test indicate a positive significance of 0.810 and 0.709 for the variables pertaining to whether ICT will help track and assist with business performance, respectively, with SMEs in the tourism industry that will profit from ICT adoption. The other factors on whether ICT will help the owner-manager to manage the business daily reflect as 0.836.

Table 6.39: Extraction Method: PCA on Benefits of ICT (BIB)

		Comp 2	Comp 4	Comp 11
BIB1	ICT will assist my business performance		.709	
BIB2	ICT will assist my business to get more clients			.547
BIB3	ICT will assist to track the business performance		.810	
BIB4	ICT will assist me to have control of the business daily.		.836	
BIB5	ICT will assist in the business with the suppliers		.838	
BIB6	ICT will assist as a business tool for control measure		.855	
BIB7	Using ICT will get more clientele	.897		
BIB8	Using ICT will increase profit margins	.896		

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 10 iterations.

6.8.6 Business performance

This section details the scoring pattern of the participants on the statements measuring business performance. As shown in Table 6.40, there was significant agreement by most participants that they have strategies in place to evaluate: ICT performance for their business (78.9 percent), ICT for marketing using social media (65.8 percent), and employee performance using ICT (86.8 percent). There was further significant agreement by most participants that highlighted the statement “I have strategies in place to evaluate the use of ICT in my suppliers” (86.9 percent), and “I use my company’s website for online booking and payments” (78.1 percent).

On average, the mean values measured suggest participants agreed more than they disagreed with all the statements highlighted in Table 6.40. The participants all have strategies to implement and evaluate ICT in their tourism business. However, the third statement, “I have strategies in place to evaluate my employees’ performance using ICT” is adjudged as the best for business performance (M=1.61, SD=0.937).

Table 6.40: Participants' level of agreement on business performance

Focus Area Statement	Business performance (n = 114)					Mean	Std.	P-value
	SA	A	N	D	SD			
I have strategies in place to evaluate ICT performance for my business	61.4%.	17.5%	15.8%	1.8%	3.5%	1.68	1.033	0.000***
I have strategies in place to evaluate ICT for marketing using social media	21.1%	44.7%	22.8%	3.5%	7.9%	2.32	1.093	0.000***
I have strategies in place to evaluate my employees' performance using ICT	60.5%	26.3%	7.9%	2.6%	2.6%	1.61	0.937	0.000***
I have strategies in place to evaluate the use of ICT in my suppliers	62.3%.	24.6%	7.0%	2.6%	3.5%	1.61	0.983	0.000***
I use my company's website for online booking and payments	64.9%	13.2%	14.0%	7.0%	0.9%	1.66	1.020	0.000***
P*** <1% Likert scale= Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)								

These elements are a further statical analysis of the figures indicated (Table 6.41). The statement regarding attitude toward the performance of ICT in tourism SMEs was tested as a component. One component category received responses from the respondents, and the score of 0.839 indicates ICT-based strategies are in place to assess employee performance. The other variable, which had a strong positive significance of 0.825, was related to the methods tourism SME owners/managers use to assess how their suppliers use ICT. A positive significance of 0.787 is indicated for the statement, "Strategies in place to evaluate ICT performance for my business." Another variable displayed is whether strategies are in place to assess ICT for marketing through social media (0.721).

Table 6.41: Extraction Method: PCA Business Performance (BP)

		Component 5
BP1	Strategies in place to evaluate ICT performance for my business	.787
BP2	Strategies in place to evaluate ICT for marketing using social media	.721
BP3	Strategies in place to evaluate my employees' performance using ICT	.839
BP4	Strategies in place to evaluate the use of ICT in my suppliers	.825
BP5	Use my company's website for online booking and payments	.570

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 10 iterations.

6.8.7 Factors influencing ICT use

This section details the scoring pattern of the participants on the statements measuring the factors influencing ICT use. As shown in Table 6.42, there was significant agreement by most participants that using ICT will: attract more clientele (68.4 percent), increase profit margins (95.7 percent), enhance the relationship with existing customers (98.3 percent), and assist in attracting customers locally in SA (96.5 percent), in addition to ICT assisting to attract customers globally (91.3 percent).

On average, the statements in Table 6.42 suggest agreement, considering the mean values are below the threshold of 2.5. The statement "I think using ICT will enhance the relationship with the existing customers" has the lowest mean value ($M=1.23$, $SD=0.580$), implying it is the most agreed influencer in the use of ICT in tourism in the study area.

Table 6.42: Participant agreement levels on factors influencing ICT use

Focus Area Statement	Influence on the use of ICT (n = 114)					Mean	Std.	P-value
	SA	A	N	D	SD			
I think using ICT will get more clientele	44.7%.	23.7%	25.4%	0.9%	5.3%	1.98	1.105	0.000***
I think using ICT will increase profit margins	74.6%	21.1%	1.8%	1.8%	0.9%	1.33	0.687	0.000***
I think using ICT will enhance the relationship with the existing customers	81.6%	16.7%	0.0%	0.9%	0.9%	1.23	0.580	0.000***
I think ICT will assist to get customers locally in South Africa	78.1%.	18.4%	1.8%	0.9%	0.9%	1.28	0.631	0.000***
I think ICT will assist to get customers globally	78.1%.	13.2%	4.4%	2.6%	1.8%	1.37	0.834	0.000***
P*** <1% Likert scale= Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)								

The findings and reviewed literature have justified the gaps also indicated by the empirical findings that are, furthermore, supported in the theoretical framework for this study.

Both the literature and the findings highlight the ICT tools utilised by SMEs are convenient, portable, and simple to use, serving as essential devices for their enterprises to efficiently conduct and manage their business. The relationship between ICT adoption and its five factors—perceived benefits, perceived cost, ICT knowledge, and external pressure, as well as government support—is relevant to this study. This implies SMEs benefit from ICT use by increasing the profitability of their operations, making it an important aspect of the research. The study objectives explored the internal factors that influence SME owners/manager attitudes to adopt ICT in the tourism sector. The relevance is its investigation of these factors, which deal with the SME owner/manager attitude and behaviour pattern in adopting ICT for the business. According to Jena (2023), the TPB theory of Ajzen (1991) focuses on attitudes and norms, where the perceived behavioural mechanism is almost a precise behaviour, forming a function to envisage individual behaviour, particularly for behaviours that must be premeditated and planned.

6.9 EXTERNAL FACTORS LIKELY TO INFLUENCE SME OWNER-MANAGER ATTITUDES

6.9.1 Government support

In this section the scoring pattern of the participants on the statements measuring government support is detailed. As shown in Table 6.43, most (64 percent) participants agreed (strongly agree= 44.7 percent; agree=19.3 percent) they know the government offers grants and loans for adoption to enable the environment to support SMEs in the adoption of ICT services, while 8.8 percent were neutral, and 24.3 percent disagreed (disagree=19.3 percent; strongly disagree=5.3 percent). The proportion of those in agreement was significantly higher when compared to those in disagreement ($p<0.001$). Similarly, there was significant agreement by most participants that they know the government is in support of ICT adoption for SMEs (66.6 percent), and know the government has initiatives and programmes in place in support of ICT adoption for SMEs (60.5 percent).

Nevertheless, the participants expressed mixed views that they know the government provides SMEs with low-cost software for ICT. while 39.5 percent participants agreed (strongly agree=27.2 percent; agree=12.3 percent), example, 32.5 percent were, however, neutral, and 28.1 percent disagreed (disagree=22.8 percent; strongly disagree=5.3 percent). The proportion of those (60.6 percent) that were neutral and or disagreed was higher than those who agreed. This implies most participants are not aware or rightly disagreed the government provides SMEs with low-cost software for ICT. However, the participants (59.7 percent) who agreed (strongly agree=47.4 percent; agree=12.3 percent) they know the government is providing ICT infrastructure to support SMEs were significantly higher when compared to those (28 percent) in disagreement (disagree=21.9 percent; strongly disagree=6.1 percent).

This is supported by a significant number of participants in agreement that the National department of Tourism (NDT) assists with the resources for ICT (63.5 percent), they know the DSBD assists through Seda to support SMEs in ICT (60.5 percent), the EC Economic development, environmental affairs, and tourism department assist with ICT resources at a provincial level (60.5 percent), and the municipality in my area in the EC assists with ICT resources at a local level (56.1 percent).

On average, the results indicate the first statement, "Government support for SMEs through grants and loans," received the highest mean value ($M=2.21$, $SD=1.334$). This suggests participants viewed this form of government support as the most significant for businesses. The findings are consistent with those of Gillwald *et al.* (2018), which indicate the SA government has made some efforts to create an enabling environment in support of a market-oriented business environment; however, it has been troubled by the changes in terms of ministry leadership in the past few years. State coordination is essential for the sustainability of this increasingly cross-cutting sector.

The sector growth has been hampered by a lack of progress in key implementation areas, particularly SA Connect, the country's broadband policy plan. SA has an advantage as it is a net importer of ICT products and, at the same time, has a low supply of appropriate ICT skills required and serviced by the industry that does not have demographic representation in the country.

The study found the assistance that stands out is government support, with 59.7 percent respondents that agreed they know the government is providing ICT infrastructure to support SMEs significantly higher when compared to the 28 percent in disagreement. The findings concur with previous research of Maryama and Suhong (2022), who show ICT adoption and utilisation also depend on physical infrastructure availability, legal and regulatory frameworks that are enabling, acceptable research and development, and long-term policies. Maryama and Suhong (2022) strongly believe when government policies are not well provided for or implemented, it can jeopardise the performance and progress of the majority Nigerian SMEs.

The NPC report shows the SA government intends to provide comprehensive support on numerous fronts to SMEs. Examples include better cooperation between relevant departments, advancing finance organisations, and initiating incubators in both the public and private spheres. This will include recognition of job equity, BEE, the environment, and developing skills, as well as local content, small-businesses, and community social responsibility, in addition to a range of location-specific imperatives, such as mining area development strategies, due to legislation (SA Department of the Presidency 2012).

As difficult as the content situation may be, it is in both large and small companies' long-term interests to build more room for people to be working. It should also be noted

disparities increase the cost of doing business, distort the market structure, and restrict advancement opportunities, as well as straining trust and putting pressure on businesses (SA Department of the Presidency 2012).

The National Tourism Sector Policy is explained by Stoffelen *et al.* (2020), to actively promote local government involvement and aims to enhance this in tourism planning for growth. Government policies have, to date, empowered and prompted major tourism businesses to introduce SMME upkeep configurations. As a result, many, if not all these business ties would not exist were it not for government policy requests.

SME ICT adoption comprises acquiring commercial support from hardware and software advice that aids IT development (Al Busaidi *et al.* 2019).

Table 6.43: Participants' level of agreement on government support

Focus Area Question	Government support (n = 114)					Mean	Std.	P-value
	SA	A	N	D	SD			
I know the government offers grants and loans for adoption to enable the environment to support SMEs in the adoption of ICT services	44.7%.	19.3%	8.8%	19.3%	5.3%	2.21	1.334	0.000***
I know the government is in support of the adoption of ICT for SMEs	41.2%	25.4%	8.8%	19.3%	5.3%	2.22	1.309	0.000***
I know the government has initiatives and programmes in place in support of the adoption of ICT for SMEs	37.7%	22.8%	14.9%	19.3%	5.3%	2.32	1.299	0.000***
I know the government provides SMEs with low-cost software for ICT	27.2%.	12.3%	32.5%	22.8%	5.3%	2.67	1.246	0.000***
I know the government is providing ICT infrastructure to support SMEs	47.4%	12.3%	12.3%	21.9%	6.1%	2.27	1.403	0.000***
The National department of	46.5%	16.7%	10.5%	18.4%	7.9%	2.25	1.405	0.000***

Tourism assists with resources for ICT								
I know the Department of Small Business and Development assists through Seda (Small Enterprise Development Agency) to support SMEs on ICT	39.5%	22.8%	11.4%	14.9%	11.4%	2.36	1.421	0.000***
I know the Eastern Cape Economic development, environmental affairs, and tourism department assists with ICT resources at a provincial level	34.2%	26.3%	12.3%	16.7%	10.5%	2.43	1.382	0.000***
I know the municipality in my area in the Eastern Cape assists with resources for ICT at a local level.	36.8%	19.3%	18.4%	14.9%	10.5%	2.43	1.389	0.000***
P*** <1% Likert scale= Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)								

6.9.2 Component matrix: external factors that influence ICT adoption

Table 6.44 illustrate results from further statical analysis. A component test was performed on the claim SME owners'/managers' attitudes toward ICT adoption in tourism are influenced by external factors. The respondents agreed the government provides provincial assistance with ICT resources through the EC Department of Tourism, Environmental Affairs, and Economic Development; a positive significance of 0.746 is demonstrated. It is thus suggested government is in favour of SMEs adopting ICT, as evidenced by the strong significant 0.755 to the statement whether grants and loans are available for adoption to create an environment that supports SMEs in the adoption of ICT services.

Another variable on the statement is 0.718, which indicates the government has initiatives and programmes in place to support ICT adoption by SMEs. A further 0.718 was indicated for the statement regarding the government providing ICT infrastructure

to help SMEs. A strong positive significance of 0.719 was also established for the statement whether the DSBD, through Seda, assists SMEs with ICT. The above-mentioned variables demonstrated a high level of significance for government support in tourism SMEs.

Table 6.44: Extraction Method: Principal Component Analysis External factors: Government support (GS)

		Comp 1
GS1	Government offers grants and loans for adoption to enable the environment to support SMEs in the adoption of ICT services	.755
GS2	Government is in support of the adoption of ICT for SMEs	.754
GS3	Government has initiatives and programs in place in support of the adoption of ICT for SMEs	.718
GS4	Government provides SMEs with low-cost software for ICT	.640
GS5	Government is providing ICT infrastructure to support SMEs	.718
GS6	National department of Tourism assists with the resources for ICT	.731
GS7	Department of Small and Development assist through Seda (Small Enterprise Development Agency) to support SMEs on ICT	.719
GS8	Eastern Cape Economic development, environmental affairs, and tourism department assist with ICT resources at a provincial level	.746
GS9	Municipality in my area in Eastern Cape assists with the resources for ICT at a local level	.594

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

6.9.3 Competition and suppliers

This section details the scoring pattern of the participants on the statements measuring competition and suppliers as shown in Table 6.45. Furthermore, there was significant agreement by most participants that they are aware of ICT opportunities to gain competitive advantages (91.2 percent), they know ICT is important to keep up with the competition in the market (94.7 percent), they comprehend their company participates quickly to adopt and adapt ICT to eliminate competition (92.1 percent), and they know IT service providers/suppliers provide information and resources on ICT adoption (91.2 percent).

On average, the mean values in Table 6.45 show participants agreed more with the third, fourth, fifth, and sixth statements, compared to the first and second statements. The statement, "I know that ICT is important to keep up with the competition in the

market” has the lowest mean value (M=1.37, SD=0.613), implying participants considered the importance of ICT in dealing with competition inherent in the industry, as well as attending better to suppliers the most significant competition and suppliers’ statement.

Table 6.45: Participants’ level of agreement on competition and suppliers

Focus Area Question	Competition (n = 114)					Mean	Std.	P-value
	SA	A	N	D	SD			
I have experienced that our customers demand E-commerce services being offered to them for payments	20.2%.	29.8%	18.4%	20.2%	11.4%	2.73	1.305	0.000***
I know of ICT opportunities to gain competitive advantages	67.5%	23.7%	3.5%	5.3%	0.0%	1.46	0.800	0.000***
I know that ICT is important to keep up with the competition in the market	69.3%.	25.4%	4.4%	0.9%	0.0%	1.37	0.613	0.000***
I know that our company responds quickly to ICT to eliminate competition	70.2%	21.9%	6.1%	1.8%	0.0%	1.39	0.636	0.000***
I know that IT service providers /suppliers provide information and resources on ICT adoption	61.4%	29.8%	7.0%	1.8%	0.0%	1.49	0.707	0.000***
P*** <1% Likert scale= Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)								

The components were drawn from additional statical analysis of the figures discussed for Table 6.46. A component test was conducted on the statement regarding the external factors that influence the attitudes of tourism SME owners/managers to adopt ICT and a strong positive significance of 0.840 was determined on the experience that customers demand e-commerce services being offered to them for payment. Furthermore, a strongly positive significance of 0.905 was indicated for the statement that suppliers

demand ICT services offered to them, while a figure of 0.715 is reflected for the statement on ICT use creating opportunities to gain competitive advantages.

Table 6.46: Extraction Method: Principal Component Analysis External factors: Competition and Suppliers (CS)

		Comp 8	Comp 9
CS1	Experienced that our customers demand E-commerce services being offered to them for payment		.840
CS2	Experienced that our suppliers demand ICT services offered to them		.905
CS3	ICT opportunities to gain competitive advantages	.715	
CS4	ICT is important to keep up with the competition in the market	.592	
CS5	Our company responds quickly to ICT to eliminate competition	.651	
CS6	IT service providers /suppliers provide information and resources on ICT adoption		

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

6.9.4 Stakeholder support

This section details the scoring pattern of the participants on the statements measuring stakeholder support for ICT. As shown in Table 6.47, there was significant agreement by most participants they know other stakeholders in the tourism, hospitality, and travel industry are in support of ICT adoption in the business (87.8 percent), the statement “I know that private businesses have initiatives and programs in place in support of the adoption of ICT for SMEs” (84.2 percent), and “I know that other stakeholders are providing infrastructure for ICT adoption” (80.7 percent). Equally, more than half (56.1 percent) agreed (strongly agree=18.4 percent; agree=37.7 percent) they have experienced their suppliers’ demand for ICT services offered to them, while 16.7 were neutral, and 27.5 percent disagreed (disagree=16.7 percent; strongly disagree=10.5 percent).

There was also significant agreement by most participants with the statement “I know that the business community provides technical support for ICT to SMEs” (75.5 percent), and “I know that IT companies promote ICT adoption by offering free training sessions

to SMEs” (69.3 percent). On average, the mean values measured suggest the participants agreed more than they disagreed with all the statements highlighted in Table 6.47. The first statement, “I know that other stakeholders in the tourism, hospitality, and travel industry are in support of the adoption of ICT business” has the lowest mean value (M=1.65, SD=0.902), implying participants considered support of major stakeholders in the tourism industry does not significantly impact ICT adoption by tourism SMEs.

Table 6.47: Participants’ level of agreement on stakeholder support

Focus Area Statement	Stakeholder support (n = 114)					Mean	Std.	P-value
	SA	A	N	D	SD			
I know that other stakeholders in the tourism, hospitality, and travel industry are in support of the adoption of ICT business	55.3%	32.5%	5.3%	6.1%	0.9%	1.65	0.902	0.000***
I have experienced that our suppliers demand ICT services offered to them	18.4%	37.7%	16.7%	16.7%	10.5%	2.63	1.257	0.000***
I know that private businesses have initiatives and programs in place in support of the adoption of ICT for SMEs	47.4%	36.8%	8.8%	5.3%	1.8%	1.77	0.941	0.000***
I know that other stakeholders are providing infrastructure for the adoption of ICT	51.8%	28.9%	9.6%	7.0%	2.6%	1.80	1.049	0.000***
I know that the business community provides technical support for the ICT to SMEs	39.5%	36.0%	14.9%	7.9%	1.8%	1.96	1.013	0.000***
I know that IT companies promote ICT adoption by offering free training sessions to SMEs	45.6%	23.7%	13.2%	7.9%	9.6%	2.12	1.331	0.000***
P*** <1% Likert scale= Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)								

The components are derived from a more in-depth statical analysis of the figures detailed above in Table 6.48. A component test was conducted to determine the external factors that influence SME owner-manager attitudes toward adopting ICT. Responses were focused on stakeholder support. The statement indicates private businesses have initiatives and programmes in place to support ICT adoption for SMEs, with a strong positive significance of 0.808. In addition, the business community provides technical support for ICT to SMEs resulted in a figure of 0.789. The other variables, which indicate whether other stakeholders in the tourism, hospitality, and travel industries support the adoption of ICT business, show a positive 0.717. Another variable is whether other stakeholders in the tourism, hospitality, and travel industry support the adoption of ICT business, with a positive 0.714.

Table 6.48: Extraction Method: Principal Component Analysis External Factors
External factors: Stakeholders (SSI)

		Component 1
SS1	Other stakeholders in the tourism, hospitality, and travel industry are in support of the adoption of ICT business	.717
SS2	Private businesses have initiatives and programs in place in support of the adoption of ICT for SMEs	.808
SS3	Other stakeholders are providing infrastructure for the adoption of ICT	.714
SS4	Business community provides technical support for the ICT to SMEs	.789
SS5	IT companies promote ICT adoption by offering free training sessions to SMEs	.647

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

6.9.5 Attitude towards ICT adoption

This section details the scoring pattern of the participants on the statements measuring attitudes towards ICT adoption. As shown in Table 6.49, there was significant agreement by most participants that they know ICT adoption will enhance communication with customers (90.3 percent), ICT adoption will enhance communication with suppliers (94.7 percent), and ICT adoption will enhance communication with other stakeholders in tourism (93.8 percent). There was also significant agreement by most participants that ICT adoption will have to enhance communication with government (86.8 percent), and ICT adoption will enhance communication to reach other markets (93 percent).

On average, the mean values measured suggest the participants agreed more than they disagreed with all the statements highlighted in Table 6.49. The second statement has a higher mean value (M=1.29, SD=0.648), implying ICT has a significant impact in boosting communication in the tourism sector of the study area.

Table 6.49: Participant agreement level on attitudes towards ICT adoption

Focus Area Statement	Attitudes of ICT (n = 114)					Mean	Std.	P-value
	SA	A	N	D	SD			
I know that the adoption of ICT will enhance communication with my customers	76.3%	14.0%	5.3%	4.4%	0.0%	1.38	0.780	0.000***
I know that the ICT will enhance communication with my suppliers	78.9%	15.8%	2.6%	2.6%	0.0%	1.29	0.648	0.000***
I know that the adoption of ICT will enhance communication better with other stakeholders in the tourism	76.3%	17.5%	2.6%	3.5%	0.0%	1.33	0.700	0.000***
I know that the adoption of ICT will have to enhance communication with the government	72.8%	14.0%	7.0%	6.1%	0.0%	1.46	0.874	0.000***
I know that the adoption of ICT will enhance communication to reach other markets	77.2%	15.8%	4.4%	2.6%	0.0%	1.32	0.685	0.000***
P*** <1% Likert scale= Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)								

The components are derived from additional statistical analysis of the discussed figures (Table 6.50). A component test was conducted on owner-manager attitudes toward adopting ICT in tourism SMEs. The responses indicated a significant value of 0.876 for whether ICT will improve communication with other tourism stakeholders. Another test revealed a strong significance level of 0.865 for the statement “ICT will improve communication with my suppliers”. On the statement of whether ICT will improve communication to reach other markets, a positive significance of 0.737 was found. For the first variable, a value of 0.740 was reflected for the statement “attitude toward ICT adoption will improve communication with my customers”. The other variable on the

statement “ICT will need to improve communication with the government” has a positive significant value of 0.731. Furthermore, the component test reveals attitude plays an important role in ICT adoption by tourism SMEs.

Component matrix: the attitudes of owner-managers to adopt ICT in the tourism in EC

Table 6.50: Extraction Method: Principal Component Analysis External Factors Attitude on ICT adoption

		Component 3
ATT1	Adoption of ICT will enhance communication with my customers	.740
ATT2	ICT will enhance communication with my suppliers	.865
ATT3	ICT will enhance communication better with other stakeholders in the tourism	.876
ATT4	ICT will have to enhance communication with the government	.731
ATT5	ICT will enhance communication to reach other markets	.737

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

- **Use of internet and social media for marketing**

This section details the scoring pattern of the participants on the statements measuring the use of internet and social media for marketing. As shown in Table 6.51, 42.1 percent participants agreed (strongly agree=22.8 percent; agree=19.3 percent) they use a digital subscriber line (DSL) for their business, while 5.3 percent were neutral, and 52.6 percent in disagreement (disagree=15.8 percent; strongly disagree=36.8 percent). On the one hand, the proportion of participants in disagreement was significantly higher when compared with those in agreement ($p < 0.001$). It thus implies most participants do not use DSL for their business. On the other hand, participants who agreed they use fibre internet service for their business (72 percent) were significantly more when compared to those (21.9 percent) in disagreement ($p < 0.001$). This could be attributed to fibre internet service is what is currently mostly employed by service providers in SA.

Furthermore, there was significant agreement by most participants that they made use of WhatsApp (66.7 percent), and Facebook to market their business (77.2 percent). This may be connected to the popularity of WhatsApp and Facebook, particularly among older SA citizens. However, the proportion of participants (56.1 percent) that disagreed (disagree=10.5 percent; strongly disagree=45.6 percent) using Twitter to market their

business was significantly higher when compared with those (37.7 percent) in agreement (strongly agree=25.4 percent; agree=12.3 percent).

It was noted close to half the participants (49.1 percent) agreed (strongly agree=34.2 percent; agree=14.9 percent) they use Instagram to market their business, compared to 43.9 percent who disagreed (disagree=8.8 percent; strongly disagree=35.1 percent). This indicates the use of Instagram for marketing purposes by participants is contentious, when one takes cognisance of the seven percent that indicated neutral. Nevertheless, there was significant agreement (strongly agree=56.1 percent; agree=14 percent) by most (70.1 percent) participants that they use other social media to market their business. On average, the statement “I use Facebook to market my business” has the lowest mean value (M=1.99, SD=1.472), implying participants utilise Facebook the most to sell their services and market their values to the populace.

Table 6.51: Participant agreement level on internet and social media use for marketing

Focus Area Question	Use of the internet, and social media for the market (n = 114)					Mean	Std.	P-value
	SA	A	N	D	SD			
I use Digital Subscriber Line (DSL) for my business.	22.8%.	19.3%	5.3%	15.8%	36.8%	3.25	1.643	0.000***
I use the Fiber internet service for my business.	55.3%	16.7%	6.1%	15.8%	6.1%	2.01	1.347	0.000***
I use WhatsApp to market my business	45.6%	21.1%	7.0%	3.5%	22.8%	2.37	1.614	0.000***
I use Facebook to market my business	57.9%.	19.3%	4.4%	2.6%	15.8%	1.99	1.472	0.000***
I use Twitter to market my business	25.4%	12.3%	6.1%	10.5%	45.6%	3.39	1.717	0.000***
I use Instagram to market my business	34.2%	14.9%	7.0%	8.8%	35.1%	2.96	1.742	0.000***
I use other social media	56.1%	14.0%	9.6%	3.5%	16.7%	2.11	1.519	0.000***

to market my business								
P*** <1% Likert scale= Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)								

- **Use of a tool for ICT**

This section details the scoring pattern of the participants on the statements measuring the use of a tool for ICT. The agree and disagree response options were consolidated into a single category, referred to as the 'agreement' group, to simplify the analysis. As shown in Table 6.52, 48.3 percent participants agreed (strongly agree 31.6 percent; agree=16.7 percent= 48.3 percent) they use their mobile smartphone for ICT with their client, while 45.6 percent were neutral, and 6.2 percent disagreed (disagree=5.3 percent; strongly disagree=0.9 percent). The proportion of participants (51.8 percent) that was neutral and or disagreed was higher than those who agreed. Similarly, most (46.5 percent) participants indicated neutral to the use of a tablet to communicate with their client, while 42.1 percent agreed (strongly agree=15.8 percent; agree=26.3 percent), and 11.4 percent disagreed (disagree=7.9 percent; strongly disagree=3.5 percent). This is concerning, particularly when accounting for those who indicated neutral. It thus implies some participants were unsure whether they use their mobile smartphones or tablets for ICT with clients.

Nevertheless, there was significant agreement by most participants that they use a laptop to communicate with their clients (85.1 percent). There was also significant agreement by most participants on the use of a desk computer for ICT (80.7 percent) and advertise their business products on the company website (64.9 percent). By implication, the business provides software/ equipment to communicate with clients. This is supported by those (57.3 percent) who disagreed (disagree=5.3 percent; strongly disagree=52.6 percent) they use their own tourism and hospitality app for their business, which was higher than those (33.4 percent) who agreed (strongly agree=20.2 percent; agree=13.2 percent).

Overall, the mean value suggests a mixed scoring pattern with respect to participants' level of agreement and or disagreement. For example, most agreed with the third statement "I use the laptop to communicate with my clients", which has the highest mean value (M=1.55, SD=0.893), while most disagreed with the statement "I use my

own tourism and hospitality app for my business” (M=3.57, SD=1.672). This may be attributed to the hospitality app provided only being installed in the personal ICT tool provided by the tourism company.

Table 6.52: Participant agreement level on the use of a tool for ICT

Focus Area Statement	Use of tool for ICT (n = 114)					Mean	Std.	P-value
	SA	A	N	D	SD			
I use my mobile smartphone for ICT with my clients	31.6%	16.7%	45.6%	5.3%	0.9%	2.27	0.998	0.000***
I use my tablet to communicate with my clients	15.8%	26.3%	46.5%	7.9%	3.5%	2.57	0.968	0.000***
I use the laptop to communicate with my clients	64.9%	20.2%	11.4%	1.8%	1.8%	1.55	0.893	0.000***
I use my desk computer for ICT	67.5%	13.2%	2.6%	3.5%	13.2%	1.82	1.418	0.000***
I advertise the products of my business on the company website	50.9%	14.0%	4.4%	2.6%	28.1%	2.43	1.740	0.000***
I use my own tourism and hospitality app for my business.	20.2%	13.2%	8.8%	5.3%	52.6%	3.57	1.672	0.000***
P*** <1% Likert scale= Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)								

6.10 ADDRESSING RESEARCH OBJECTIVES AND HYPOTHESES TESTING

This section addresses the research objectives as outlined in Chapter One and restated below:

To explore the internal factors that influence the attitudes of SME owners/managers to adopt ICT in EC tourism.

To investigate external factors likely to influence SME owner-manager attitudes to adopting ICT in the EC tourism sector.

To understand whether attitudes towards ICT adoption moderate relationships between EC tourism SME owners’/managers’ ICT use and factors potentially influencing their attitudes.

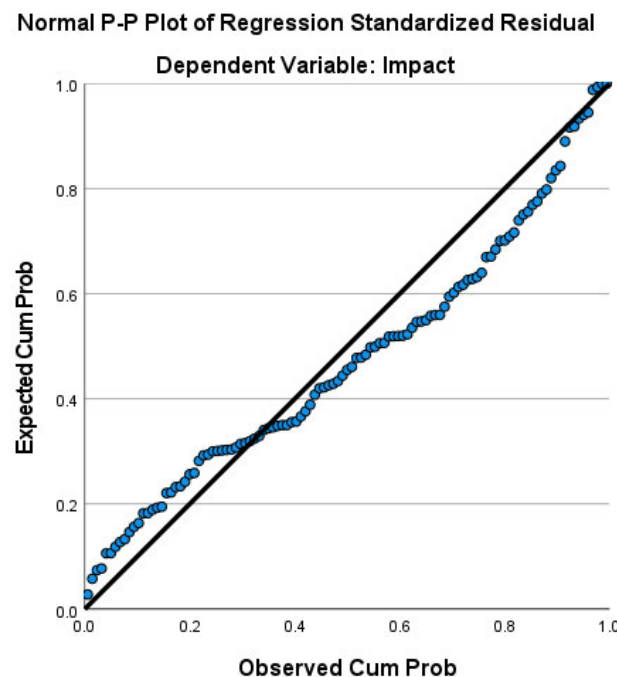
To determine SME owner-manager intentions to adopt ICT in the tourism and hospitality sectors in the EC.

To design a framework that will assist in improving ICT adoption by tourism SMEs in the EC.

6.10.1 Normality Test

The normality of the data prior to multiple regression analysis was evaluated via descriptive analysis. As suggested by Al-Qeisi (2009), the yielded output showed the requisite normality level, that is, +1 to -1, therefore negating the need for transformation. The normality P-P plot was done to assess the regression standardised residuals (Pallant 2016). As shown in Figure 6.1, the P-P plot revealed sufficient normality, with standardised predicted values and standardised residuals forming a straight line. This implies no major deviations from normality.

Figure 6.1: Normal P-P Plot of Regression Standardised Residual



6.10.2 Collinearity Test

The data were also checked for collinearity or multicollinearity. Pallant (2016) notes collinearity can be diagnosed by checking the tolerance coefficient and variance inflation

factor (VIF) values. The rule of thumb indicates when the tolerance coefficient is less than 0.10 it signifies collinearity; similarly, when the VIF value is above 10.0, it would indicate multicollinearity.

The descriptive data in Table 6.53 provide the yielded collinearity statistics of the sample. The tolerance coefficients measured for all the constructs were above the recommended 0.10 value. Equally, the VIF values measured show all constructs were below 10.0, implying the multicollinearity assumption was not violated. With the plausibility test completed, the hypotheses formulated in Chapter Five of the study were then subjected to inferential tests, which include multiple regression analysis, EFA, CFA and SEM.

Table 6.53 Variance inflated factor and tolerance coefficients of the independent variables

	Collinearity Statistics a	
	Tolerance	VIF
(Constant)		
Benefits	.566	1.768
Challenges	.825	1.213
Top management	.562	1.780
Competition	.851	1.175
Government	.245	4.090
Stakeholders	.442	2.261
Performance	.684	1.462
a Dependent variable: Attitude		

6.11 MULTIPLE REGRESSION ANALYSIS

According to Sekaran and Bougie (2016), standardised multiple regression analysis is used to define the inter relationship among the items within two or more sub-constructs of a model. In this study, multiple regression analysis was carried out, with a significance level of $p < 0.001$, to determine the relationship among the constructs and to address research objectives one and two.

6.11.1 Variables tested on internal factors

The variable tested objectives are based on the study research objectives of this study. The following are the external factors that influence the SME owner-manager attitude to adopt ICT in tourism.

6.11.2 Internal factors that influence attitudes of SME owners/managers to adopt ICT in tourism

The independent and dependent variables have been abbreviated to make it easier for the reader throughout the document. The internal factors (TMS), Benefits in Business (BIB), Challenges in ICT (CICT), Business Performance (BP) tested were the independent variables, while the Attitudes (ATT) toward ICT adoption were the dependent variable. The yielded results are presented as follow:

- **The statical measurement on management support for the tourism industry**

H₁: The impact of Top Management Support (TMS) on Attitudes (ATT) towards ICT adoption will be positive.

As shown in Table 6.54, TMS accounts for 19.4 percent ($R^2 = .194$) variance in ATT, $F(1, 122) = 26.737$, $p < 0.001$, which indicates TMS is a positive significant predictor of ATT ($\beta = .441$, $p < 0.001$). This means, as TMS increases (agreement that top management provides support on ICT adoption), ATT (agreement on positive attitudes towards ICT adoption) increases.

Table 6.54: Relationship between TMS and attitudes towards ICT adoption

Hypothesis	DV	IV	R ²	F	df1; df2	p-value	B (regression coefficient)	T	p-value
H1	ATT	TMS	.194	26.737	1; 111	.000	.441	5.171	.000

- **Statical measurement on Tourism industry stakeholders**

H₂: The impact of stakeholders (SH) on Attitudes (ATT) towards ICT adoption will be positive.

As shown in Table 6.55, SH accounts for 11.6 percent ($R^2 = .116$) variance in ATT, $F(1, 122) = 14.716$, $p < 0.001$, which indicates SH is a positive significant predictor of ATT (β

= .341, $p < 0.001$). This means, as SH (agreement that stakeholders provide support on ICT adoption) increases, ATT (agreement on positive attitudes towards ICT adoption) increases.

Table 6.55: Relationship between stakeholders and attitudes towards ICT adoption

Hypothesis	DV	IV	R ²	F	df1; df2	p-value	B (regression coefficient)	T	p-value
H2	ATT	SH	.116	14.716	1; 112	.001	.341	3.836	.001

6.11.3 Variables tested on external factors

The variable tested objectives are based on the study research objectives. The following are the external factors that influence the attitude of the tourism SME owner-manager to adopt ICT.

6.11.4 External factors that influence attitudes of tourism SME owners/managers to adopt ICT

The external factors tested comprised Government support (GS), Competition and Suppliers (CS), Stakeholders (SH) as independent variables, while the attitudes (ATT) towards the adoption of ICT made up the dependent variable.

- **Statical measurement on government support in Tourism industry**

H₆: The impact of Government Support (GS) on Attitudes (ATT) towards ICT adoption will be positive.

As shown in Table 6.56, GS accounts for 8.8 percent ($R^2 = .088$) variance in ATT, $F(1, 122) = 10.834$, $P = 0.001$, which indicates GS is a positive significant predictor of ATT ($\beta = .297$, $P = 0.001$). This means, as GS (agreement there is government support for ICT adoption) increases, ATT (agreement on positive attitudes towards ICT adoption) increases.

Table 6.56: Relationship between government support and attitudes towards ICT adoption

Hypothesis	DV	IV	R2	F	df1; df2	p-value	B (regression coefficient)	t	p-value
H6	ATT	GS	.088	10.834	1; 112	.001	.297	3.291	.001

- **Statical measurement on competition and suppliers in Tourism industry**

H₇: The impact of Competition and Suppliers (CS) on Attitudes (ATT) towards ICT adoption will be positive.

As shown in Table 6.57, CS accounts for 13.4 percent ($R^2 = .134$) variance in ATT, $F(1, 122) = 17.397$, $P=0.001$), which indicates CS is a positive significant predictor of ATT ($\beta = .367$, $P=0.001$). This means, as CS (agreement on competition and suppliers) increases, ATT (agreement on positive attitudes towards ICT adoption) increases.

Table 6.57: Relationship between competition and suppliers and attitudes towards ICT adoption

Hypothesis	DV	IV	R2	F	df1; df2	p-value	B (regression coefficient)	t	p-value
H7	AT	CS	.134	17.397	1; 112	.001	.367	4.171	.001

- **The statical measurement done on benefits in Tourism industry**

H₃: The impact of benefits in business (BIB) of ICT for business on Attitudes (ATT) towards ICT adoption will be positive.

As shown in Table 6.58, BIB accounts for 13.5 percent ($R^2 = .116$) variance in ATT, $F(1, 122) = 17.486$, $p<0.001$), which indicates BIB is a positive significant predictor of ATT ($\beta = .367$, $p<0.001$). This means, as BIB (agreement that there are benefits of ICT for business) increases, ATT (agreement on positive attitudes towards ICT adoption) increases.

Table 6.58: Relationship between benefits in business of ICT adoption and attitudes towards ICT adoption

Hypothesis	DV	IV	R2	F	df1; df2	p- value	B (regression coefficient)	t	p- value
H3	ATT	BIB	.135	17.486	1; 112	.001	.367	4.182	.001

- **Statical measurement on business performance in Tourism industry**

H₅: The impact of business performance (BP) on Attitudes (ATT) towards ICT adoption will be positive.

As shown in Table 6.59, BP accounts for 13 percent ($R^2 = .130$) variance in ATT, $F(1, 122) = 16.799$, $P=0.001$), which indicates BP is a positive significant predictor of ATT ($\beta = .361$, $P=0.001$). This means, as BP (agreement on the positive increase of business performance) increases, ATT (agreement on positive attitudes towards ICT adoption) increases.

Table 6.59: Relationship between business performance and attitudes towards ICT adoption

Hypothesis	DV	IV	R2	F	df1; df2	p- value	B (regression coefficient)	t	p- value
H5	ATT	BP	.130	16.799	1; 112	.001	.361	4.099	.001

As shown in Table 6.60, the correlation matrix revealed all the factors or variables had a coefficient of 0.5 and above. The assessment of factor loadings of the varimax rotation matrix revealed a pattern of correlation of 11 components or factors, explaining 77.9 percent total variance. The factor with cross-loading was dropped, while some items were loaded together. For example, the items measuring both stakeholders and government support loaded together. Thus, government support was dropped, as it did not fit the model.

Table 6.60: Factor coefficients

Rotated Component Matrixa											
	Component										
	1	2	3	4	5	6	7	8	9	10	11
BCT1											
BCT2		.706									
BCT3		.754									
BCT4		.772									
BCT5		.798									
BCT6										.812	
BCT7		.912									
BCT8		.870									
BIB1				.709							
BIB2											.547
BIB3				.810							

BIB3				.836							
BIB5				.838							
BIB6				.855							
BIB7		.897									
BIB8		.896									
CICT1						.748					
CICT2						.834					
CICT3						.801					
CICT4						.691					
TMS1		.523									
TMS2		.529									
TMS3							.653				
TMS4							.602				
TMS5											.845

CS1									.840		
CS2									.905		
CS3								.715			
CS4								.592			
CS5								.651			
CS6											
GS1	.75 5										
GS2	.75 4										
GS3	.71 8										
GS4	.64 0										
GS5	.71 8										

GS6	.73 1										
GS7	.71 9										
GS8	.74 6										
GS9	.59 4										
IT1			.740								
IT2			.865								
IT3			.876								
IT4			.731								
IT5			.737								
SS1	.71 7										
SS2	.80 8										

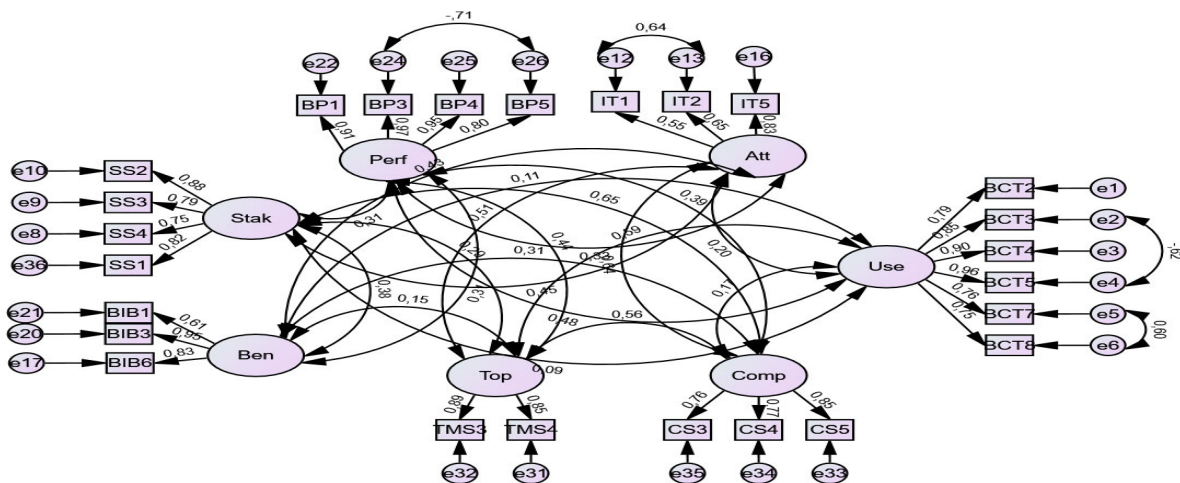
SS3	.71 4										
SS4	.78 9										
SS5	.64 7										
BP1					.787						
BP2					.721						
BP3					.839						
BP4					.825						
BP5					.570						
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.											
a. Rotation converged in 10 iterations.											

6.12 CONFIRMATORY FACTOR ANALYSIS (CFA)

In this study, CFA was used to test conceptual framework (MM) validity. This is in line with Al-Qeisi (2009) in asserting CFA can be used in MM assessment. The CFA was thus used to confirm or reject the predetermined variables within a model.

The MM was assessed in this study by inputting all linked variables (Figure 6.2). The MM generated using CFA depicts the measured variables in rectangular figures, with labels that correspond to the various variables' statements as coded in the questionnaire, while the latent variables are depicted in oval figures. Double-headed connectors denote covariance between scales or constructs. Single-headed connectors denote a causal path between a scale and an indicator.

Figure 6.2: Refined Measurement



Note: $\chi^2 = 406.738$, $df = 205$, $p < .001$, $\chi^2 / df = 1.627$, CFI = 0.929, IFI = 0.931, ITL=0.915, RMSEA = 0.074

The procedure of MM assessment first requires the use of CFA to obtain an idea of model fit and second, adjusting improve the fit. Should the model fit meet the required standards, reliability and validity measures are calculated on the constructs of the MM. In this case, improvements to the generated MM were achieved by dropping some items in the measured constructs. The following subsections detail the considerations taken when carrying out model assessment in CFA, to include model fit measures, reliability and validity.

6.12.1 Model Fit Indices

In accordance with the recommendation by Stephanie (2017) to use multiple fitness criteria due to model fit indices due to the perceived weakness of a single index, the overall fit of the MM was assessed by multiple fit criteria. The first criterion was the normed chi-square (cmindf); an absolute fit index obtained by dividing χ^2 by df. It is recommended for a cmindf to be acceptable; the value should be greater than 1 but less than 5. The second criterion applied in the study was Bollen's incremental fit index, denoted as IFI with a recommended value ≥ 0.9 or 0.95 (Hu and Bentler 2009). The third was the TLI, for which Hair *et al.* (2019) recommended a cut-off value of ≥ 0.9 . The fourth fit index used is the CFI; Alalwan *et al.* (2018) recommended the acceptable value to be ≥ 0.9 . The final fit index is the RMSEA, recommended at between 0.05 and 0.08 (Mimouni-Chaabane and Volle 2010). The model fit indices are as follows: chi-square = 406.738, df = 205, $p < .001$, $\chi^2 / df = 1.627$, CFI = 0.929, IFI = 0.931, ITL=0.915, RMSEA = 0.074 (Table 6.61). The results indicate all measured parameters fall within the recommended values, implying the MM has an acceptable fit.

Table 6.61: Model fitness indices for the MM

Fit Indices	Fit values	Criteria
χ^2 / df (p-value)	1.627(<.001)	<5
IFI	0.931	>.9
ITL	0.915	>.9
CFI	0.929	>.95
RMSEA	0.074	<.08

6.12.2 Reliability and validity

Essmui *et al.* (2014) advised once the model fit is assessed, the MM should be subjected to tests regarding CR, convergent validity, and discriminant validity. The data in Table 6.62 show the tested CR, average variance extracted (AVE), and maximum shared square variance (MSV). In addition, Essmui *et al.* (2014) reveal both CR and AVE are used to determine the MM convergent validity. As a basic standard, the factor coefficients should be greater than 0.50 for each measure, to show the acceptable existence of common points of convergence, whilst it is recommended the generated coefficient be greater than 0.50 to indicate satisfactory convergence of variables (Hair *et al.* 2010).

By contrast, the discriminant validity of the MM was measured using MSV. The generated MSV values should typically be lower than the AVE value for each construct, to have the recommended discriminant validity (Hair *et al.* 2010). In this study, the measured latent variables have AVE values in the range of 0.520-0.661, which is above the threshold of 0.5. This suggests all latent variables have an acceptable level of convergent validity. Since the value of the AVE for each construct is greater than the MSV values, it can be stated the latent variables have adequate discriminant validity.

Table 6.62: Validity and reliability of the research constructs

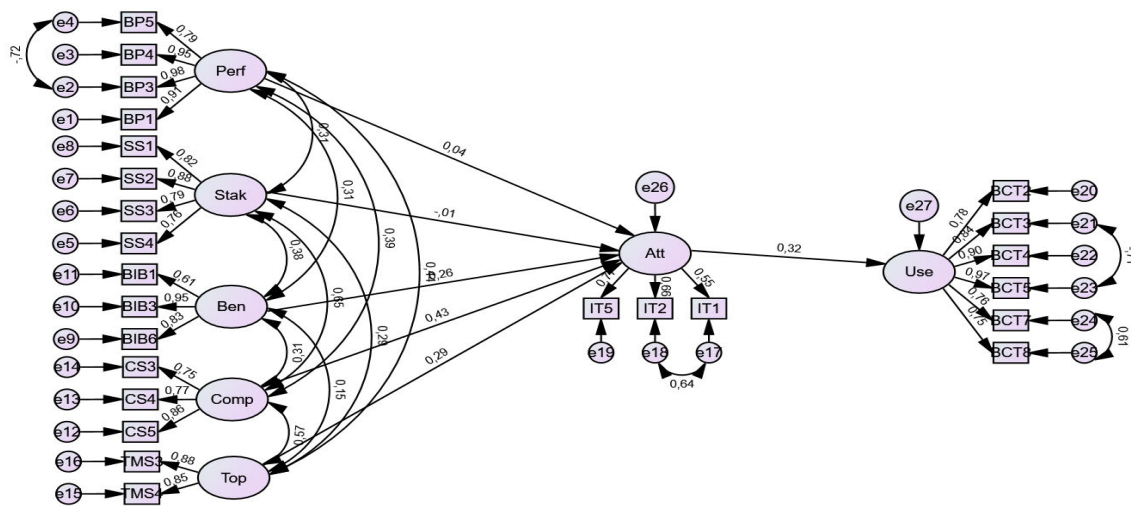
	CR	AVE	MSV	MaxR(H)	Comp	Perf	Top	Ben	Stak
Comp	0.805	0.520	0.419	0.853	0.721				
Perf	0.888	0.661	0.194	0.974	0.391	0.813			
Top	0.744	0.530	0.320	0.862	0.566	0.440	0.728		
Ben	0.781	0.509	0.147	0.928	0.307	0.307	0.155	0.713	
Stak	0.816	0.529	0.419	0.894	0.647	0.312	0.286	0.383	0.727

6.13 STRUCTURAL EQUATION MODELLING (SEM)

The MM achieved adequate CR, and convergent and discriminant validity were subjected to SEM. The MM was then converted into a path model that shows the relationship between the latent variables. According to Hair *et al.* (2019), SEM allows simultaneous evaluation of multiple related independent and dependent relationships and considers measurement estimates among the constructs. To establish the proposed conceptual framework, SEM was applied to test the path coefficients. The criteria used for assessing

the goodness of fit for the MM were also applied in the structural model (Figure 6.3) below. The goodness-of-fitness indices are as follows: chi-square = 456.270; df = 255; $p < 0.001$, $\text{cmindf} = 1.789$; CFI = 0.909; IFI = 0.911; TLI = 0.893; RMSEA = 0.08, which suggest the MM possesses acceptable fit.

Figure 6.3: SEM



that states: the impact of stakeholder support on attitudes toward ICT adoption will be positive.

The path from the benefits of ICT for business (Ben) to attitude towards ICT adoption (ATT) was also significant ($\beta = 0.257$; $P = 0.023$), which implies the perceived ICT benefits to the business positively influence the adoption by tourism sectors. The decision rule, therefore, is to accept hypothesis 3 (H3) that states: the impact of benefits of ICT on business and attitudes towards ICT adoption will be positive.

However, the path from business performance (Perf) to attitude towards ICT adoption (ATT) was not significant ($\beta = 0.037$; $P = 0.730$), implying that business performance has no influence on ICT adoption in the tourism sector. The decision rule rejects hypothesis 5 (H5) that states: the impact of business performance on attitudes toward ICT adoption will be positive.

In contrast, the path from competition and suppliers (Comp) to attitude towards ICT adoption (ATT) was significant ($\beta = 0.432$; $P > 0.021$). This implies competition and suppliers positively influence ICT adoption in the tourism sector. Therefore, the decision rule accepts hypothesis 7 (H7) that states: the impact of competition and suppliers and attitudes towards ICT adoption will be positive.

Similarly, the path from the attitude towards ICT adoption to the actual use of ICT (Use) was significant ($\beta = 0.319$; $p = 0.007$). It indicates participants' positive attitudes towards ICT directly influence their actual use of ICT in the tourism sector. The decision rule, thereby, is to accept hypothesis 8 (H8) that states: the impact of attitudes towards ICT adoption and actual use behaviour will be positive. Hypotheses H4 and H6 do not appear on the regression coefficient, because they do not fit the conceptual framework of this investigation.

Overall, the path from competition and suppliers and attitudes towards ICT adoption exhibits the strongest, most direct, and most positive relationship between the latent variables, with a factor loading or correlation index of $\beta = .432$, rendering the path the most prominent in the structural framework. It is worth stressing the SEM model did not include challenges and government support.

Table 6.63: Standardised regression coefficient of the SEM model

Hypothesized path				Standard coefficient B	Critical ratio	P	Results
H1	ATT	<---	Top	.292	2.043	.041	Supported
H2	ATT	<---	Stak	-.015	-.105	.917	Not supported
H3	ATT	<---	Ben	.257	2.279	.023	Supported
H4	ATT	<---	Chall	-	-	-	Not supported
H5	ATT	<---	Perf	.037	.345	.730	Not supported
H6	ATT	<---	Govern	-	-	-	Not supported
H7	ATT	<---	Comp	.432	2.300	.021	Supported
H8	Use	<---	ATT	.319	2.689	.007	Supported

6.14 QUALITATIVE FINDINGS

This section presents the qualitative results and discusses the data from semi-structured interview sessions with eight participants, drawn from different sectors in the tourism and hospitality industry in the EC province. The participants included two Tour operators, one from catering services, two Guest houses, two Lodges with conference facilities, and a B&B.

6.14.1 SECTION B: DATA SET TWO: SEMI-STRUCTURED INTERVIEW

The data captured from semi-structured interview sessions were deductively coded with the aid of software (NVivo version 12). In this process, the transcribed data from the semi-structured interviews were divided into different meaningful codes. The codes were developed based on the differences, similarities, and meanings emerging from the transcribed data. Data were differentiated into convenient themes and subthemes. Structured interview information was transcribed verbatim, with pertinent quotes used to support the discussion on themes. To protect their anonymity, the study does not disclose the identities of the main participants.

6.15 GENERAL INFORMATION

Table 6.64 presents the general information regarding the eight participants interviewed on ICT adoption in SMEs in the tourism sector of the EC province. The data indicate most participants are in the accommodation business (lodge, B&B, and guest house). Other businesses include tour operators, catering services, private dinner services, and consulting. Furthermore, participants' companies are in the lodging industry rather than the tourism industry, with participants' ages ranging from 34 to 56 years, and the length of operating their business from three to 19 years. The years in business indicate their resiliency in terms of business in both genders, with the longest almost 20 years. The age profile implies there is a greater level of maturity in commercial acumen between the ages of 30 and 50. Most participants are women, suggesting there are more women in the tourism business than men and more women are occupying leadership positions in their companies. The business ownership includes sole proprietorship, private ownership, and close corporation.

Participants stated they are in partnerships with family members, including their mothers, fathers, sisters, and cousins. Ownership is divided among them, and in some cases, there are those who have shares of ownership that vary, such as some with 50: 50 percent ownership, while others indicated 90: 10, or 40: 40: 10 percent share/ownership. This shows when a firm introduced a strong family dedication, this contributes to the success of the firm. The highest education level of the participants includes B-Tech, National Diploma, Postgraduate, and Honours. This implies that they have the necessary credentials and are not illiterate in terms of education. All participants hold the position of MD in their company and the total number of employees in each company ranges from 0-2, with most employees employed on a contract basis, which may be attributed to inability to afford employing staff on a permanent basis.

Thus, some businesses have all employees on contract basis and only use them when needed.

Participant 3: Tour operator *“Unable to afford to have permanent basis, have employees all of them on contract basis, use them when needed”*.

Covid-19 pandemic could also have contributed to lack of employees.

Participant 2: Tour operator *“mentioned that Covid-19 contributed to the loss of the contract employees and thus perform all task alone”*.

Participant 2: Tour operator *“Since COVID 19, I might have soon. Before COVID used to have 3 employees on contract basis. When needed I outsource. For now, I’m working by myself. I do everything, manager, owner, driver, tour guides everything”*.

The minimal worker turnover in these establishments, attributed in part by COVID-19, is the common element in the responses. This depicts volatility in these SMEs and highlights the potential reluctance of these companies to invest in and train their workforce in ICT. It also demonstrates that staff reductions brought on by COVID-19 have occurred, based on the finding from the response.

Participant 2: Tour operator mentioned that COVID-19 contributed to the loss of contract employees and thus performs all task alone. Due to financial constraints, these businesses were unable to hire more staff and had to manage everything themselves or hire one person on a contract basis, as evidenced by the employees laid off because of COVID-19. The evidence suggests, based on the response during the difficult time, companies downsized.

These findings are in line with Abhari *et al.* (2022) stating employers were willing to maintain staff employment however, bonuses or overtime pay were not included creating challenges for smaller businesses, with employees fearing retrenchment. This indicates most enterprises struggled with sustainability and were obliged to reduce their workforces by 70 to 90 percent. Shwedehe *et al.* (2022) add, during the recent worldwide economic downturn induced by COVID-19, SMEs in the hotel and tourism industries downsized. As a result of the COVID-19 induced economic slowdown, downsizing was widely used by large and small organisations. During the peak of COVID-19, many employees were freed of their positions, since their skills were no longer required due to business innovation, technological adoptions, or the firm’s need to sustain its cash streams.

Table 6.64: General information of the informant

Participants	Type of business	Gender	Age	Length of operating in the business	Business ownership	Highest education level	Current position in company	Total number of employees in company
1	Tour operator	Male	34 years	7 years	Sole proprietorship 100%	B-Tech Tourism Management	Managing director	2 (Contract basis 1 permanent and 1 Freelance)
2	Tour operator	Male	49 years	19 years	Sole proprietorship 100%	National Diploma Travel and Tourism	Managing director	0 (No employees (since COVID 19)
3	Catering services, private dinner, and consulting	Female	37 years	8 years	Private ownerships 50%: 50%	Diploma Public Management plus Diploma Culinary Arts	Managing director	4 (4 contract basis)
4	Accommodation, Guest house	Female	48 years	6 years	Partnership	Postgraduate	Managing director	3 (All on contract basis)
5	Accommodation, Lodge and Conference	Female	45 years	10 years	Close corporation 90%: 10%	Bachelor of Arts	Managing director	27 (22 Permanent, 5 on contract)
6	Guest House	Female	54 years	12 years	Close corporation 40:40:20	Postgraduate Diploma Financial planning	Managing director	10 (7 Permanent and 3 on Contract)
7	Accommodation, Lodge	Female	56 years	11 years	Close corporation	BCom Honours	Managing director	6 (4 Permanent, 2 contract)
8	B &B	Female	54 years	3 years	Close corporation 50%:50%	Diploma Education	Managing director	2 (Contract basis)

6.16 INTERNAL FACTORS THAT INFLUENCE THE ATTITUDE OF OWNERS/ MANAGERS TO ADOPT ICT

6.16.1 Theme 1: COVID-19 impact on tourism and hospitality business revenue

COVID-19 has had a devastating impact on many businesses. With the closing of the international borders and airspace during the Coronavirus outbreak and the resulting pandemic lock down measures, the tourism and hospitality suffered great financial losses. However, there is limited evidence on the extent of such losses in the tourism and

hospitality industry in the EC province. Thus, it became essential to explore from the company's annual revenue estimation for 2021.

From their response, revenue is shown to range from R9 000 to R7million per annum, with most business having a revenue of R400 000 to R7 million per annum. However, the year 2021 was affected by COVID-19 and some businesses reported a decline in revenue, with numerous companies seeing a decrease in customers. The participants in the accommodation and hospitality industry reported lower revenue compared to other businesses in the tourism sector, while the tour operator and catering service industries reported higher revenue. The data provided by the participants provides insight into the financial performance of tourism and hospitality businesses in the EC province under challenging conditions. Below are some responses from participants regarding their financial positions.

Participant 1, Tour operator: *"R100 -150 k per annum"*

Participant 2, Tour operator: *"R800,000 per annum"*

Participant 3, Catering services, private dinner, and consulting: *"R400-500 per annum, was bad, not as normal year due to COVID business was not doing much like previous years"*.

Participant 4, Accommodation: *"R500 00 per annum, did not do much money in as there were no customers as we deal with contractors due to economic situation in the country like COVID affected all of us"*.

Participant 5, Accommodation: *"R7 million per annum, terrible year, COVID, business travellers stop coming"*.

Participant 6, Guest house: *"R1.6 million per annum"*

Participant 7, Lodge: *"R 847 000 per annum"*

Participant 8, B&B: *"R9 000 per annum"*

The effect on financial performance differs depending on the participant. The economic ramifications of the COVID-19 pandemic posed challenges for specific enterprises in 2021, particularly in the realm of lodging services, as demonstrated by Participants 4 and 5, who

saw a significant drop in clientele, among business travellers in particular. The Guest House (Participant 6) and Lodge (Participant 7), however, reported consistently strong annual financial performance. In contrast, the participant associated with the B&B (Participant 8), had a significantly lower annual income. Notably, a recurring theme in all these establishments appears to be financial distress. Regardless of their business typology (tourism, catering, or lodging), each participant faced challenges that reverberated through their financial performance, as evidenced by the statements presented.

Based on the response from participant 5 on the question of revenue, the results portray R7 million per annum. This reveals the business falls under microbusiness, as the revenue falls under R5 million. However, on defining SMEs in SA, Participant 5 falls under medium enterprises, as they have more than 20 employees; although the rest have less than 27 employees, where 22 are permanently employed, and five on a contract basis, other participants have less than 10 employees, which means they fall under micro enterprises, since they have from 0-10 employees.

The SA Department of Small Enterprise Business Development amendment (2019) defines a SME as a company with fewer than 250 employees. "Small enterprise" means a separate and distinct business entity, together with its branches or subsidiaries, if any, including cooperative enterprises, managed by one owner, or more predominantly carried on in any sector or subsector of the economy. Microenterprises typically have between 0-10 full-time equivalent employees, small enterprises have between 11-50, and medium enterprises have between 51-250 employees. However, the revenue generated by an enterprise varies depending on the sector or subsector it operates in.

This implies the negative consequences manifest because of the current economic environment, in which the COVID-19 pandemic plays a critical role as a significant disruptor. The findings are in line with Rastegar, Seyfi and Shahi (2023), who show, tourism SMEs are particularly vulnerable to crises, specifically in developing nations, suffering from financial difficulties and pressure on the owners' and operators' mental health and wellbeing. Downsizing is a corporate restructuring tactic used when the economy is struggling and there is financial difficulty (Shwedeh *et al.* 2022).

6.16.2 Theme 2: ICT adoption in small businesses in the tourism industry

- **Subtheme 1: ICT adoption among employees in tourism and hospitality businesses**

To gauge the extent of ICT adoption in the tourism hospitality enterprises, the participants were asked the following question “What percentage of employees in your company can use ICT services?” From their responses, it was uncovered the percentage of employees in the companies able to use ICT services varies and ranges from 0-100 percent, with some companies having no employees who can use ICT services, while all employees of others can use ICT services, but are not necessarily experts.

Participant 1, Tour operator: *“All but not experts but use ICT 100%”*

Participant 2, Tour operator: *“Do not have any employees, managing alone”*.

Participant 3, Catering service private dinner, and consulting: *“Assistant manager”*.

Participant 4, Accommodation: *“None”*

Participant 5, Accommodation: *“None”*

Participant 6, Guest house: *“1 Manager”*

Participant 7, Lodge: *“2 employees”*

Participant 8, B&B: *“None”*

The evidence indicates these specifics shed light on the organisational structure and technology focus of these companies. In other instances, the lack of personnel may be indicative of modest operations or company concepts. Several methods to technology adoption within the industry are indicated by the varied ICT utilisation, with technology use and employee numbers among players in the tourism and hospitality business fluctuating. The findings reveal in these businesses there are no employees with strong ICT abilities.

The findings coincide with Chua *et al.* (2022) who determined this results in difficulties for SME personnel who are not technologically skilled (Pradana *et al.* 2022; Maryama and Suhong 2022) in the use of ICT technologies. Examples include PCs with various

managerial tools and built-in procedures that provide essential professional skills and administrative advantages to SMEs and their employees to boost business (Nyakuma *et al.* 2016).

According to Jena (2023), the TPB theory of Ajzen (1991) is oriented on attitudes and norms, where the perceived behavioural mechanism is almost a precise behaviour, forming a function to envisage individual behaviour, particularly for behaviours that must be premeditated and planned. The study objectives explored the internal factors that influence SME owner/manager attitudes to adopt ICT in the tourism sector. The relevance is it explores these factors that deal with SME owner/manager attitudes and behaviour patterns in adopting ICT for the business.

- **Subtheme 2: total budget spent on ICT for the year 2021 by tourism and hospitality industry**

In view of the low number of tourism and hospitality business employees able to use ICT, it was critical to know the total budget spent on ICT for the year 2021. The answers from the participants show a range of budget spent, from no budget *allocation* to R60 000. Some participants reported not having a budget due to the impact of COVID, while others spent a minimal amount such as R24 000 or R1 000. The amount spent on ICT appears to vary greatly depending on the type and size of the business, as well as the level of ICT use required, such as data and camera usage, while others have allocated more for social media and email.

Participant 1, Tour operator: *“No budget allocation, only as and when needed”*.

Participant 2, Tour operator: *“R35 000”*

Participant 3, catering services, private dinner, and consulting: *“R30 000 (mostly use social media, use the usual email and WhatsApp, we were not using much of social media”*

Participant 4, Accommodation: *“R24 000-I use minimum, WIFI for data, Camera that I use, no programs that”*.

Participant 5, Accommodation: *“R60 000”*

Participant 6, Guest house: *“R21 600”*

Participant 7, Lodge: “*No budget due to COVID*”

Participant 8, B&B: “*R1000*”

The evidence on the budget spent on ICT from the responses suggests zero budget allocation for ICT. This implies the need for financial assistance in ICT, possibly linked to the mention of no employees with ICT skills. These findings coincide with various studies (Okundaye *et al.* 2018) that found ICT adoption by SME leaders becomes difficult without access to financial resources to counterbalance the expense of quickly changing technology.

According to Okundaye *et al.* (2018), several challenges are encountered internally by SMEs, with these comprising features of the organisation, characteristics of the owner-manager, cost in adopting and implementing ICT, and ROI. Furthermore, many small businesses find the purchasing costs prohibitive for software and computers, in addition to encountering problems in the recruitment of trained ICT personnel, upskilling existing employees, and other ICT use related expenses.

Some businesses reported not having a budget, which may indicate a lack of awareness, on the one hand of the importance of ICT in their operations. On the other hand, businesses that allocated a higher budget may have recognised the value of investing in ICT to improve their competitiveness and meet the changing needs of customers. The variation in budget allocation may also reflect the different types and sizes of businesses, as well as the level of ICT use required. For instance, businesses that require more data and camera use may need to allocate more budget for ICT infrastructure, while those that focus on social media and email marketing may allocate more for software and training. The impact of COVID-19 may have also affected budget allocation, with some businesses having to cut back on ICT spending due to financial constraints.

The implications of these findings are significant for top managers and industry stakeholders. It highlights the need for targeted strategies and interventions to increase awareness and promote the adoption of ICT among tourism and hospitality businesses, particularly those with limited budget allocations. Top-management assistance (TMS) should take the form of adequate financial and technical support, the hiring of qualified

personnel and pertinent training provided for current staff members, as well as the search for qualified vendors, and allotment of sufficient resources for implementation.

- **Subtheme 3: computer courses taken by top management in the tourism and hospitality industry**

Considering the low budgetary allocation to ICT by some businesses, it was critical to know whether anyone from top management had attended any computer course. The following question was asked to stimulate response from the participants “What is the name of a computer course that your top management have?” The survey revealed the top management of the participating industries has undergone a range of computer courses, such as basic, end user, and advanced computer, as well as short course in formal reservation, and graphic design. Some participants have acquired skills through self-study or by attending short courses to enhance their capabilities.

Participant 1, Tour operator: *“End user computer”*

Participant 2, Tour operator: *“Yes, did while was studying, End user computer managers, Self-taught, attend short course to equip myself like graphic design course to design pamphlets”.*

Participant 3, Catering private dinner, and consulting: *“Did while was studying, have Basic Computer”.*

Participant 4, Accommodation: *“Basic computer”*

Participant 5, Accommodation: *“Short course Formal Reservation course and excel only”.*

Participant 6, Guest house: *“Basic Computer”*

Participant 7, Lodge: *“Advance computer”*

Participant 8, B&B: *“Basic”*

The skills set of the participants, which ranges from fundamental to sophisticated computer knowledge, is commensurate with their profile. The results show the participants have the necessary skills because their skill sets varied. The findings contradict those of Nazir and Khan (2022a) that ICT adoption in SMEs was sometimes constrained by a lack of ICT competence within the businesses.

- **Subtheme 4: computer course obtained by middle management**

Participants were asked to name a computer course their middle management obtained in the company. From their responses, it was uncovered the middle management of the participants have various levels of computer courses. Some have obtained basic computer courses, while others have taken advanced courses, including software used in universities. However, many participants indicated no computer courses for their middle management.

Participant 1, Tour operator: *“None”*

Participant 2, Tour operator: *“None”*

Participant 3, Private dinner, and Consulting Catering services: *“Advanced computers, short course: software in Varsity student use latest software to design posters, does have canvas, put together nice presentation”,*

Participant 4, Accommodation: *“None”*

Participant 5, Accommodation: *“None”*

Participant 6, Guest house: *“Basic computer skills”*

Participant 7, Lodge: *“No middle manager”*

Participant 8, B&B: *“None”*

Considering the responses from most participant profiles, the findings indicate a gap in terms of management abilities; potentially due to the size of the establishment where establishments are small and hence have no managers, as illustrated by Participants 1 and 2, Tour operators, Participants 4 and 5, Accommodation, Participant 7 Lodge and Participant 8 B&B. The findings are in line with those of Kamarudin *et al.* (2022), illustrating that SMEs faced several challenges, including power shortages, finance constraints, a lack of management skills and competencies, along with a lack of knowledge, and corruption. Kwabiah (2019) attests small businesses in developing countries fail to obtain adequate knowledge of IT implementation strategies.

- **Subtheme 5: computer courses obtained by supervisors.**

The participants were asked to name a computer course obtained by the supervisor in their companies. The computer courses obtained by supervisors of the various participants vary, with some having none, some having basic computer skills, and others having advanced computer skills.

Participant 1, Tour operator: *“None, the coordinator has basic computer skills”*.

Participant 2, Tour operator: *“None”*

Participant 3, Catering services private dinner, and consulting: *“None”*.

Participant 4, Accommodation: *“None”*

Participant 5, Accommodation: *“None”*

Participant 6, Guest house: *“None”*

Participant 7, lodge: *“Advance computer”*

Participant 8, B&B: *“Advanced”*

From the findings it is seen only Participants 7, Lodge and 8 B&B that attest they have line managers with computer skills. However, evidence indicates no ICT skills for supervisors. This is an indication of a lack of ICT skill among line managers. This implies a shortage of skills within; a worrying factor, particularly in an industry that needs intensive focus on technology skills.

Nazir and Khan (2022a) also found ICT adoption in SMEs was sometimes constrained by a lack of ICT competence within the businesses. To effectively manage and deploy the newest ICT gadgets for online projects, ICT knowledge is necessary. A moderate effect was caused by a lack of ICT knowledge, expensive employee training costs, a lack of a clear plan to promote ICT adoption, and difficulties hiring suitable candidates, as well as high ICT maintenance costs, a lack of SME legal ICT framework, and staff members' lack of understanding of ICTs (Cao 2021).

- **Subtheme 6: responsibility for ICT technical services**

The data show these SMEs are small companies with no lower managerial positions; this could be because these entities had to lay off workers owing to financial constraints. Considering the low adoption and expertise of ICT among the employees, it was crucial to know who is responsible for ICT technical services. From their response, most participants mention the businesses outsource ICT technical services, with some having an in-house software IT expert to assist them. A few participants manage ICT technical services themselves or with a partner.

Participant 1, Tour operator: *“Outsource, advise accordingly”*.

Participant 2, Tour operator: *“I do it myself, I have website done by private company whenever there is a problem there is a link that I use so that is managed our home”*.

Participant 3, Catering services private dinner, and consulting: *“Outsource, there is a software IT guy, assists with website domain, advise on app for invoicing is done on app which we both decide, my knowledge is basic so hence using this guy”*.

Participant 4, Accommodation: *“Outsource, there is a software IT guy who assist me”*.

Participant 5, Accommodation: *“Outsource guy and myself and my partner”*.

Participant 6, Guest house: *“Outsource, IT and me”*.

Participant 7, Lodge: *“Outsource IT guy and me”*.

Participant 8, B&B: *“Outsource”*

In terms of the findings, all participants use expertise and outsource ICT, even participant 2, the tour guide, who also indicated using his ICT to solve problems, drawing on IT knowledge because he occasionally uses links. This shows the dependency of these participants on the need for technical skills within and for their enterprises.

The findings coincide with those of Gono *et al.* (2016), suggesting technological incompatibilities can hinder the effective use of ICT and make it difficult for firms to derive benefits from the adopted ICT. This implies firms that acquire ICT systems incompatible with their business practices, may lack the necessary technical skills and capabilities. As a result, they may benefit from support provided by government agencies, sector

institutions, or consultants to address these challenges. It highlights that sourcing the right advice, external expertise, and suitable software are significant challenges faced by SMEs in utilising ICT effectively.

- **Subtheme 7: use of ICT by top managers**

In view of participants holding a top management position in their respective companies, it was critical to know how they use ICT. The following question was to elicit response from them "As a top manager how do you use ICT?" From their responses, it was uncovered the top managers in the tourism and hospitality industries use ICT for tasks such as designing flyers, responding to emails, invoicing, and promotions, as well as making reservations and payments, managing their companies, virtual meetings, and using basic computer skills such as using MS word, engaging on social platforms such as Instagram, WhatsApp, and Facebook pages. Some managers were self-taught and may benefit from ICT training to improve their skills; These are further elaborated below:

Communication

Participant 7, Lodge: "I use WhatsApp and Facebook pages to communicate with clients."

Participant 2, Tour operator: "Respond to any mail and reply to those email that I never responded to."

Administration:

Participant 4, Accommodation: "I use it for invoicing, quotation, promotions, orders, statistics, booking, meal order and all administrative duties."

Participant 6, Guest house: "Invoice, statements and make recons."

Marketing:

Participant 3, Catering services, private dinner, and consulting: "Use Instagram, WhatsApp, emails, Facebook page and get contact numbers and send formal quotation via email."

Participant 1, Tour operator: "Designing flyers."

Booking

Participant 5, Accommodation: "Making reservations and payments."

Basic computer skills:

Participant 3, Catering services private dinner, and consulting: "*Basic computer, use MS word.*"

Training needs:

Participant 2, Tour operator: "I am technologically disadvantaged, self-taught, we do not do a lot of office work. It will help if I can be equipped with ICT short course."

There is an indication from the respondents that when top managers adopt ICT, there is an increase in the use of technology. In view of the nature of hospitality and tourism, top managers use ICT in various ways for their businesses. This implies dependency of the participants on ICT by top management, depending on the type of business, because it is evident different businesses utilise a variety of e-business measures, including booking for e-business and e-commerce. The findings concur with those of Khan (2019), which state due to their ubiquitous accessibility and interactive features, Internet technologies have altered customer attitudes and behaviour toward conventional types of tourist and hospitality services.

The Internet and other ICT applications have altered how travel and tourist products are distributed (Werthner and Klein 1999; Liu 2012). The application of e-commerce to the travel and tourism sector is known as "eTourism" (Buhalis and Cooper 1998) and has led to a departure from the pre-existing supply chain patterns. Rozak et al. (2021) add SMEs with the requisite digital skills can use digital tools for e-commerce, such as social media and other tools to collaborate and market goods and services online. Organisational agility is thereby achieved, with digital transformation of the customer value generating process facilitated through the growing influence of social media and analytics, commonly referred to as the "mobile revolution".

The findings agree with those of Matarazzo et al. (2021) that, "new apps, services, platforms, data, and devices have created a crowded playground for all kinds of enterprises that seek to access rising prospects." Due to mobile devices becoming increasingly relevant, new ways of interacting have been introduced through social media, with SMEs considering social media the most effective communication means and way to generate value in the business model. Not only does social media improve and transform value propositions of client, it also assists with improved processes for delivery

6.16.3 Theme 3: use of smartphones for business

Participants in this theme discussed the various ways in which they use smartphones for their businesses. Some common uses mentioned include checking emails, marketing, taking photographs, designing flyers, and using apps such as WhatsApp and Facebook for communication and advertising. Participants also stated they cannot survive without their smartphones for their businesses, as it makes many tasks more convenient and allows them to stay connected while on the go. Some participants also mentioned considering or using tablets for their businesses but found smartphones more convenient and useful overall.

- **Subtheme 1: use of smartphone as communication tool**

The participants were asked the following question "Do you use a smartphone or mobile as a business tool to communicate with your clients?" From the responses, all participants except for participant 5 (Accommodation, lodge, and conference) use their smartphones or mobile as business tool to communicate with clients.

Participant 1, Tour operator: "Yes"

Participant 2, Tour operator: "Yes"

Participant 3, Catering services: "Yes":

Participant 4, Accommodation: "Yes"

Participant 5, Lodge- Accommodation: "No"

Participant 6, Guest house- Accommodation: "Yes"

Participant 7, Lodge- Accommodation: "Yes"

Participant 8, B&B- Accommodation: “Yes”

The findings indicate all the participants admit to using smartphones for work purposes except participant 5. These participants utilise smartphones for business purposes. The use of smartphones as critical business tools is more popular in rural areas, exceeding that of urban peers. In contrast, urban SMEs frequently use laptops and tablets for client interactions, with desktop computers playing a crucial role as supplemental security measures for their business operations. This is in line with findings by Muriuki and Sankat (2022) that indicate mobile phone applications are an important component of the ever-changing ICTs that contributed to the change in how business in today’s globalised and competitive corporate climate is conducted.

There has, furthermore, been constant growth in mobile phone usage that, when managed properly, would significantly impact SME performance. These mobile phones are primarily used by SMEs for voice communications and SMS. In the view of Harris and Patten (2014), the quick adoption of smartphones and tablets is once more altering the way small businesses compete.

- **Subtheme 2: the convenience of using smartphones for business**

With nearly all participants having agreed to using mobiles (smartphones) to communicate with their clients, it was critical to know what they are using the smart phone for in terms of business. It was determined the top managers rely on their smartphones as a critical tool for managing their businesses, using it for email communication, marketing, booking, and invoicing, as well as banking. Interestingly, some participants mentioned they cannot survive or manage their business without a smartphone. These are further elaborated below.

Mobile Communication

Participants use their smartphones for email communication, video calls, and WhatsApp communication with clients.

Participant 2: *“I can do video calls and record”.*

Participant 3: *“I work onsite most of the time and need smartphone due to the nature of the business and when am in the kitchen use my phone.”*

Participant 4: *"Most customers use WhatsApp when they want to book"*.

Marketing and advertising:

Participants use their smartphones for marketing their business through social media platforms such as Facebook and WhatsApp.

Participant 1: *"I use for marketing"*.

Participant 8: *"I use Facebook to advertise and WhatsApp my clients"*.

Booking Management:

Participants use their smartphones to manage bookings, check bookings and reply to booking requests.

Participant 6: *"I use smart phone to check the bookings done"*.

Invoicing and banking

Participants use their smartphones for invoicing and dealing with financial transactions.

Participant 7: *"I cannot manage without smart phone, it for everything using it for banking and I cannot survive without"*.

Essential and Convenience Tool:

Participants consider their smartphones an essential tool for managing their business and mention they cannot survive without it.

Participant 3: *"I use smart phone more convenient has everything as opposed to laptop"*.

Participant 4: *"It is easy to use for me; I can use it whenever I am"*.

Participant 7: *"I use smartphone, use WhatsApp and email"*.

Participant 4: *"I cannot survive without a phone"*.

Participant 6: *"I cannot manage my business without, and it helps to control the business"*.

Use for design and creation:

Participant 2, Tour operator: *"I can design anywhere can check"*.

Participant 2, Tour operator: *"I can receive emails, design Flyers using my phone"*.

The evidence from the findings indicates these participants use a smart phone as an essential tool for their business, considering the portability and convenience as most of the entities stated. Participants 3, 4, 7 and 6 stated the smart phone is convenient, can be used anywhere and they cannot do business without the smartphone. Other participants use smartphones for marketing and social media platforms, including WhatsApp, such as e-commerce, e-marketing, and e-business. These enterprises rely heavily on smart phones. Furthermore, Ameji *et al.* (2020) consider online-based platforms would have served SME performance better during the COVID-19 pandemic, had they opted for online product marketing and sales, which indicates EC tourism SMEs may improve their performance by using online-based platforms.

Considering the pivotal responsibilities ICT has in boosting business ability to generate additional revenue and scale up operations, it has emerged as a key factor in the long-term success of any enterprise (big or small). Adopting ICT technologies can help businesses be more productive, complete more work, introduce new ideas, and create opportunities for a more effective method of conducting business.

- **Subtheme 2: dependence on smartphone for business**

In view of the convenience of using smartphones mentioned above, it was essential to know whether the participants can manage without their smartphone. The following question was asked to elicit response from them “Can you manage without your smart phones for business?” From their response, most participants (seven of eight) cannot manage their business without a smartphone, indicating its importance and reliance in conducting business activities. Only one participant, who operates an Accommodation, Lodge and Conference business, stated they can manage without it due to their own complicated system.

Participant 1, Tour operator: “No”

Participant 2, Tour operator: “No, I cannot give my service for my business without smartphone”.

Participant 3, Catering services: “No, I cannot be able to survive with it.

Participant 4, Accommodation, Guest house: “No, I cannot survive without a phone”.

Participant 5, Accommodation, Lodge and Conference: *“Yes, not using my phone, cannot use it as complicated system cannot use a phone”.*

Participant 6, Guest house: *“I cannot manage my business without, and it helps to control the business.*

Participant 7, Lodge: *“I cannot manage without smart phone, it for everything using it for banking and I cannot survive without”.*

Participant 8, B&B: *“I cannot survive without it”.*

The overwhelming majority participants (1,2,3,4,6,7,8) advised they cannot function their business without their smart phone. Only participant 5 indicated they had no need to use the smartphone for the business due to the complications of their systems. This is a reflection the smartphone is a vital tool for participants. The findings are in line with Otache (2020) that adopting ICT technologies can help businesses be more productive, complete more work, introduce new ideas, and create opportunities for a more effective method of conducting business.

Due to its dynamic nature, ICT adoption has accelerated due to modern society's constantly changing business environment, making access to ICT increasingly necessary to participate in and engage in this society. Muriuki and Sankat (2022) agree mobile phone applications are one of the important components of the ever-changing ICTs that have played a major role in redefining the way business is done in today's globalised and fiercely competitive corporate climate. There has been a steady growth of mobile phone use that, when properly managed, would have a substantial positive impact on SME performance.

6.16.4 Theme 4: use of tablets for business

In this theme, the participants were asked regarding their use of tablets for business. The responses indicated most participants do not use tablets in their businesses. A few participants mentioned they had used tablets in the past but found them less convenient than smartphones for certain tasks such as taking pictures, making notes, and showing pictures to clients. They also mentioned they prefer to have one advanced phone instead of multiple devices such as tablets, phones, and laptops. One participant mentioned they have considered buying a tablet for their business but wanted to buy a quality gadget that

would last longer. Overall, the use of tablets in tourism and hospitality businesses appears to be limited, which is further elaborated in the subthemes below.

- **Subtheme 1: the use of tablet communication tool**

When asked the following question, “Do you use tablet as a business tool to communicate with your clients?” it was found most participants do not use a tablet as a business tool to communicate with clients. Participant 3, however, uses a tablet.

Participant 1, Tour operator: *“No, considering one, want to buy quality gadget that will last longer”*.

Participant 2, Tour operator: *“No, I don’t but used to have and use it when am fetching clients from the airport for name tags, however it was stolen”*.

Participant 3, Catering services, private dinner, and consulting: *“Yes”*

Participant 4, Accommodation, Guest house: *“I do not use it”*

Participant 5, Accommodation, Lodge and Conference: *“No”*

Participant 6, Guest House: *“No tablet”*

Participant 7, Lodge: *“No tablet, no need to have many gadgets”*.

Participant 8, B&B: *“No tablet”*

Most respondents indicated they do not use a tablet; except Participant 3 - catering services, private dinner, and business advice - for their enterprises. The findings agree with Harris and Patten (2014), who determined the way small businesses compete is modified by rapid smartphone and tablet adoption. For instance, by assisting SME employees to increase their individual productivity at lower service costs, these new services make technology more accessible to small businesses.

It is evident in this study that most participants indicated neutral to the statement “I use my tablet to communicate with my clients”. It thus implies some participants are unsure whether they use their mobile smartphones or tablets for ICT with clients. This is an

indication those SMEs in such areas are prone to use tablets with their clients, when compared to those in more rural areas.

- **Subtheme 2: use of tablets for specific business tasks**

When asked what the participants use tablets for in terms of business, it was found of eight participants, only one (participant 3) uses a tablet regularly for business, while participant 2 used to but no longer does as the tablet was stolen. The rest of the participants do not use a tablet, either because they feel a phone is sufficient or they prefer not to have multiple devices. Some participants mentioned the inconvenience of carrying a tablet around and others felt they do not need it because their phone can perform the necessary tasks.

Participant 1, Tour operator: *“No, considering one, want to buy quality gadget that will last longer”*.

Participant 2, Tour operator: *“Yes, used to have and use it when am fetching clients from the airport for name tags, however it was stolen”*.

Participant 3, Catering services, private dinner, and consulting: *“Yes and no, we do not so much maybe onsite need take pictures and take notes, a phone proven more convenient, tablet is limited cannot put tablet in your pocket and sometimes have lot of people can’t carry a tablet bag, we do use a tablet but not so much only for showing pictures to the client. Had a tablet and a phone and a laptop but decided that I needed one advanced phone so that cannot swop and change between tablet and laptop and smart phone. If I am meeting a client, I use tablet so that I can take notes and show the customer the pics whatever stuff that they want to see although phones can do that”*.

Participant 4, Accommodation, Guest house: *“I do not know why I should use it if I have a phone see everything, so I don’t need it”*.

Participant 5, Accommodation, Lodge and Conference: *“No, no need while have a computer”*.

Participant 6: Guest House: *“My phone is like a tablet so I can see everything”*.

Participant 7, Lodge: *“No need to have many gadgets only need laptop”*.

Participant 8, B&B: *“There is no need”*.

In terms of the responses on the use of tablets, it is not popular in these responses, with only participant 3 indicating its use. It is evident, depending on the kind of business, whether it is essential. The findings concur with Harris and Patten (2014) that the swift increase of smartphone and tablet adoption is changing how small businesses compete. For example, in helping SME employees to improve their individual productivity at decreased service costs, these new services make technology more accessible to small businesses.

When participants were asked whether they could cope without their tablet for work, they stated:

Participant 1, Tour operator: *“Yes, want to buy quality gadget that will last longer”*.

Participant 2, Tour operator: *“Yes”*

Participant 3, Catering services, private dinner, and consulting: *“Yes”*

Participant 4, Accommodation, Guest house: *“Yes”*

Participant 5, Accommodation, Lodge and Conference: *“Yes”*

Participant 6, Guest House: *“Yes”*

Participant 7, Lodge: *“Yes”*

Participant 8, B&B: *“Yes”*

The data provide a convincing justification for why most people can function without their tablet, as seen in the statement. Thus, it suggests the participants do not view tablets as beneficial to their line of work.

6.16.5 Theme 5: use of laptops for business

This theme explores the use of laptops by the tourism and hospitality industry SMEs in their business operations and communication. All participants use laptops for their businesses, for tasks such as work on business documents, communication, and financial management. It was revealed the participants cannot manage without their laptops, as they rely on these for their day-to-day business operations as they are convenient due to portability. These aspects are further elaborated in the subthemes below.

- **Subtheme 1: use of a laptop as a communication tool**

When asked whether the participants use a laptop to communicate with their clients, all agreed to using a laptop as a communication tool.

Participant 1, Tour operator: “Yes”

Participant 2, Tour operator: “Yes”

Participant 3, Catering services, private dinner, and consulting: “Yes”

Participant 4, Accommodation, Guest house: “Yes”

Participant 5, Accommodation, Lodge and Conference Laptop: “Yes”

Participant 6, Guest House: “Yes”

Participant 7, Lodge: “Yes”

Participant 8, B &B: “Yes”

The findings overwhelming indicate the majority participants use laptops. The finding coincides with that of Özşahin *et al.* (2022), who advise Internet and basic computer usage are both present in the company. Furthermore, Alma *et al.* (2018) emphasise the importance of fundamental communication tools, such as desktop or laptop computers with restricted use, and limited internet use with basic communication features. By adopting these viewpoints SMEs have, at this stage, attained the following objectives: supplied all employees with access to PCs through ERP, networking hardware/software solutions, and security services, as well as internal communication and information flow, through an Intranet and automated internal processes by means of ERP deployment.

- **Subtheme 2: the purpose of using laptops for business**

When asked what the participants use laptops for, the following were uncovered:

Convenience:

Participants 1 and 4 mentioned they find laptops convenient, as they are portable and can be used anywhere.

Participant, 1 Tour operator: *“It makes life easy can put in my bag and easy to carry and go wherever I want to go have to be in the office”*.

Participant 4, Accommodation, Guest house: *"I use laptop, when I am away from home, it is easy for me as it becomes handy... for documents I do need laptop it is easy as to carry on"*.

Essential tool for work:

Participant 6 mentioned they cannot do business or perform their work without a laptop.

Participant 6, Guest house: *"It is used by the bookkeeper for recons for the business"*.

Versatility:

Participants 1, 3, and 7 mentioned they use laptops for various tasks, such as working on business documents, keeping pictures, communicating via email, and more.

Participant 1, Tour operator: *"Laptop can work anywhere, flexible instead of fixed computer"*.

Participant 3, Catering services, private dinner, and consulting: *"Laptop use it when you want to work on business documents, work as a computer, there are certain things that you cannot use a phone that needs a laptop, when at home or office it's better to use a laptop, when there is a need as there are certain things that needs it"*

Participant 7, Lodge: *"I use it every day, I use it on settled environment"*.

Preference over other devices:

Participant 2 mentioned a preference for using laptops over other devices such as a fixed computer or a phone for certain tasks.

Participant 2, Tour operator: *"I use it all the time, I rely more on laptop, for example there is more in spaces, can keep my pictures"*.

Dependence

Participants 1, 3, and 5 mentioned they cannot survive without a laptop.

Participant 1, Tour operator: *"No will not be able to do business without [a laptop]"*

Participant 3, Catering services, private dinner, and consulting: *"I cannot survive without it"*.

Participant 5, Accommodation, Lodge and Conference Laptop: *“I use it for everything, will not be able to survive without the laptop”.*

The overwhelming majority participants use laptops for all business-related activities, which means it is reasonable to state it is used as a vital tool for the business. The findings agree with those of Diyaolu and Oso (2023), who indicate smart phones, desktop computers, and laptops are the most used gadgets among SMEs, which shows they derive some level of satisfaction and confidence from their use. It is also possible to obtain more of such services when SMEs adopt other electronics such as PDAs, tablets, and various server-based applications. In view of the wide participant dependence on laptops, it was critical to know whether they can manage without it for business. All participants indicated “no”, reiterating the usefulness, convenience, and dependency on laptop use for their businesses.

Participant 1, Tour operator: *“No, Laptop can work anywhere, flexible instead of fixed computer, it makes life easy can put in my bag and easy to carry and go wherever I want to go have to be in the office. No will not be able to do business without, its more convenient.*

Participant 2, Tour operator: *“No, I use it all the time, I rely more on laptop, for example there is more in spaces, can keep my pictures”.*

Participant 3, Catering services, private dinner and consulting: *“No, I cannot survive without it Laptop use it when you want to work on business documents, work as a computer, there are certain things that you cannot use a phone that needs a laptop, when at home or office it’s better to use a laptop, when there is a need as there are certain things that needs it”*

Participant 4, Accommodation, Guest house: *“No, it is easy as to carry anywhere, I use laptop, when I am away from home, it is easy for me as it becomes handy. I need it think it will be disadvantaged to use it especially for documents if I do need it have it, for documents so I do need laptop”.*

Participant 5, Accommodation, Lodge and Conference Laptop: *“No, I use it for everything, will not be able to survive without the laptop”.*

Participant 6, Guest House: *“No, it is used by the bookkeeper use for recons for the business, so it’s needed”.*

Participant 7: Lodge: *“No, I use it every day, I use it on settled environment, I can work without laptop”.*

Participant 8: B &B: *“No, I communicate from emails, I cannot function without laptop”.*

The results affirm that indeed the laptop plays a tremendous role. The findings agree with those of Dayour *et al.* (2023), whose study discovered SMTHes used various ICT equipment, for example, PCs, laptops, POS, and mobile phones, as well as smart televisions, CCTV cameras, printers, and radios, among others, in addition to software, including PMS, social media applications, and office-based applications. The findings and this literature justified the gaps also indicated by the empirical findings, which are, in addition, supported by the theoretical framework for this study.

Both the literature and the findings highlight the ICT tools utilised by SMEs are convenient, portable, and simple to use, serving as essential devices for their establishments to efficiently conduct and manage their business. The relationship between ICT adoption and its five factors—perceived benefits, perceived cost, ICT knowledge, and external pressure, as well as government support—is relevant to this study. This implies SMEs benefit from ICT use by increasing the profitability of their operations, making it an important aspect of the research.

The study objectives explored the internal factors that influence SME owner/manager attitudes to adopt ICT in the tourism sector. The relevance is it explores these factors that deal with the attitude and the behaviour pattern of SME owners/managers in adopting ICT for the business. According to Jena (2023), the TPB theory (Ajzen 1991) deals with attitudes and norms, where the perceived behavioural mechanism is almost a precise behaviour, forming a function to envisage individual behaviour, particularly for behaviours that must be premeditated and planned.

6.16.6 Theme 6: application of desktop computers in tourism business

This theme explores the application of desktop computers in tourism and hospitality businesses. The theme is discussed under the subthemes below.

- **Subtheme 1: desktop computer usage in tourism business**

When participants were asked whether they use a Desktop computer, four of the eight participants mentioned they use a desktop computer for their business. The other participants do not use a desktop computer. Among those who do, it was uncovered their use of a desktop computer varies from being a backup system to being used for all the reservation system and email. Participant 8 noted once having had a desktop, but it was stolen.

Participant 1, Tour operator: *“No had it before, but it’s not necessary.”*

Participant 2, Tour operator: *“No desktop”*

Participant 3, Catering services, private dinner, and consulting: *“No desktop”*

Participant 4, Accommodation, Guest house: *“Yes, I had desktop, it was my first computer and use it as a backup system”.*

Participant 5, Accommodation, Lodge and Conference: *“Yes, 2 desktops, I use for all the reservations system and mails”.*

Participant 6, Guest House: *“Yes, 1 Desktop we use most for booking and invoices capture, when the desktop is broken don’t wait for the insurance for payout should buy same time”.*

Participant 7, Lodge: *“Yes, I have one, but it’s an alternative otherwise I do not need it”.*

Participant 8, B &B: *“Yes, I use 1 to have it before, but it was stolen”.*

The findings indicate the participants use a desktop computer, which align with Diyaolu and Oso (2023), whose study indicates smart phones, desktop computers, and laptops are the most used gadgets among SMEs, showing they derive some level of satisfaction and confidence from their use. It is also possible to obtain more such services when they (SMEs) adopt other electronics such as PDAs, tablets, and a variety of server-based applications. This implies they have the necessary tools to run the business.

Subtheme 2: managing business without a desktop computer

The participants were asked whether they can manage without their desktop for business. It was uncovered some participants do not have a desktop and can manage without it, while some participants have a desktop but use it as a backup system. Others, however, depend on it for business operations. These are further detailed below.

- **Dependence on desktop for business operations**

Participant 5, Accommodation, Lodge and Conference: "I have 2 desktops, I use for all the reservations system and mails".

Participant 6, Guest House: "I use Desktop we use most for booking and invoices capture".

- **Ability to manage without a desktop.**

Participant 1 and 2: *"Yes, No desktop"*

Participant 3, Catering services, private dinner, and consulting: *"Yes, no desktop, but will need it in future for the rest of the staff can use ICT"*.

Participant 7, Lodge: *"I have one, but it's an alternative otherwise I do not need it"*.

Participant 8, B&B: *"Yes, used to have it, but was stolen"*.

It is a mixture of responses, where some participants do not rely on a desktop computer, while in some it serves as a back-up and is used by employees, with some who may use it in future once they engage employees. This is in line with the study of Maryama and Suhong (2022), who find the use of ICT technologies, such as PCs with various built-in managerial tools and procedures, provide essential professional skills and administrative advantages to SMEs and their employees that will seemingly boost business (Nyakuma *et al.* 2016). The use of ICT in these businesses is expected to provide employees with fundamental professional skills and administrative improvements, ultimately contributing to business growth. This is evidence of desktops being useful in this study.

Sub-theme 3: number of working desktop computers

Considering many participants personally had no need for desktop computers, it was vital to know how many working desktop computers they have in their company. From their

response, it was uncovered the number of working desktop computers in their company varies from none to two.

- **Participants with no desktop computers**

Participant 1, Tour operator: *"None"*

Participant 2, Tour operator: *"No desktop"*

Participant 3, Catering services, private dinner, and consulting: *"None"*.

Participant 8, B &B: *"None, had one but there was theft in the property and was stolen"*.

Participants with one desktop computer:

Participant 4, Accommodation, Guest house: *"1"*

Participant 6, Guest House: *"1"*

Participant 7, Lodge: *"1"*

Participants with two desktop computers:

Participant 5, Accommodation, Lodge and Conference: *"2"*

6.16.7 Theme 7: Software usage

- **Subtheme 1: the usage of mobile apps in tourism and hospitality businesses**

To elicit response from the participants, they were asked the following question "Do you use any tourism and hospitality mobile apps as a business tool?"

From their response, of eight participants, six indicated they use mobile apps as a business tool and two do not.

Participant 1, Tour operator: *"Don't use app"*.

Participant 2, Tour operator: *"Yes"*

Participant 3, Catering services, private dinner, and consulting: *"Yes"*

Participant 4, Accommodation, Guest house: *"No, I do not use"*.

Participant 5, Accommodation, Lodge and Conference: *"Yes"*

Participant 6, Guest House: *"Yes"*

Participant 7, Lodge: “Yes”

Participant 8, B &B: “Yes”

Most participants (2, 3, 5, 6, 7, and 8) use mobile tourism and hospitality applications, whereas participants 1, and 4 do not. The findings agree with those of Matarazzo *et al.* (2021), regarding the use of social media and mobile applications having revolutionised how corporate brand communication strategies are implemented, encouraging collaboration, involvement, and interaction. Their use encourages constant communication with customers, shapes brand meanings and messages, and directs the development of products or services. Social media use differs from the traditional "one-to-many" strategy, instead users create content and connect with people by means of a "many-to-many" model, where customers can assist in developing the process through active participation. Due to their interactive nature, these digital media enable both information sharing and exchange between buyers and sellers, as well as between consumers.

While the course of the COVID-19 pandemic resulted in many SMEs experiencing decreased business, mobile applications and services still drive global economic development. In addition, notwithstanding the importance of innovative ICT and mobile application use to SMEs, few studies have focused on the acceleration of SME growth and evolution through the adoption of broadband mobile applications. The enterprise digitisation driving force will, however, presumably be broadband mobile applications (Chiu *et al.* 2022). ICT adoption and its application allow efficient resource management and improved communications for organisations (Abdullah et al. 2018).

- **Subtheme 2: alternative tools used in the tourism and hospitality industry**

Considering some participants do not use tourism and hospitality apps in their businesses, it was vital to know what alternative tools they employ. Participants mentioned they use social media, websites, and other private apps to run their business as they are the more cost-effective, and suitable for their target market.

Participant 1, Tour operator: *“I am using social media most of the time”*.

Participant 4, Accommodation, Guest house: *“I do not use hospitality and tourism apps they are expensive, I use my website, so people go to my website, can only take once you*

have a variety of customers who use these alternatives as they are more cost-effective, and they are suitable for their target market”.

Some participants also mentioned their use of these alternatives, even though they are unsure whether the mobile apps are effective in gaining clients.

Participants 5 and 7 Lodge: *“I use the apps so that can get customers online”,*

Participant 8, Accommodation B&B: *“I use it but not sure if it works, I can survive without apps, it is not every time that I get clients through the apps”.*

There are mixed reactions in terms of the use of the apps, it could be due to how the industry or those in accommodation, specifically the Lodge, use it. Participants (5 and 7) in accommodation, specifically the Lodge, use the tourism and hospitality apps to attract and gain customers. The findings are in line with those of Kamau *et al.* (2023), who explain mobile applications, which are also referred to as “apps”, are a type of application software for use on mobile devices, for example, smartphones and tablets. Their use is specifically for wireless computing devices smaller than desktop or laptop computers such as smartphones and tablets.

Sastararuji *et al.* (2022) and Geissinger *et al.* (2019), furthermore, concur the online accommodation distribution platform is a new enterprise in the travel and hospitality sectors, and its emergence and disruptive effects on destination economies have generated significant research awareness. In fact, Gupta *et al.* (2023) found security and privacy were the main factors impacting cloud utilisation by SMEs, followed by simplicity of use and convenience.

Adopting ICT and its application enable better resource management and communication (Abdulla *et al.* 2018). Significant benefits are offered by e-business and internet to SMEs, which include reduced costs and increased transaction speed and reliability. The internet can potentially transform SME marketing in many CRM areas, such as marketing, novel market access, B2B collaborations, and product creation with customers, while also improving internet effectiveness (Alford and Page 2015).

6.17 EXTERNAL FACTORS THAT INFLUENCE THE ATTITUDE OF TOURISM EC SME OWNERS/MANAGERS TO ADOPT ICT

6.17.1 Theme 8: government support and challenges

This theme explores government support and challenges faced by the tourism and hospitality industry in terms of ICT adoption in EC province. The participants discussed their experiences with financial assistance from the government, indicating they have experienced challenges with government assistance, financial support, and e-marketing funding. In addition, they expressed frustration with the lack of support and advancement in services offered by government, as well as issues with payment delays and corruption. They also requested more support from the NDT for SMEs and highlighted the favouritism and biases towards establishments affiliated with the ruling party.

- **Subtheme 1: government assistance**

Participants have varying views on the level of government support they received for ICT use in their businesses. Some have received financial and branding assistance, while others reported not receiving any financial support from the government and yet others mentioned receiving assistance from government agencies such as Seda for branding. Overall, the participants mentioned obtaining financial assistance from the government was difficult and time-consuming.

Participant 2, Tour operator: *“Financial assistance, but I have not been assisted no financial support from government, so I just stopped because we do not get any; however, government agencies like Seda assist with Branding”.*

Participant 3, Catering services, private diner, and consulting: *“Government, are backward the way they assist, they do not understand the industry and they are not helpful, they are not flexible with their funding”.*

Participant 4 mentioned the unreliability of government patronage.

Participant 4, Accommodation, Guest house: *“When using government as a customer... they may not show up... we end up reserved the place and not taking any clients and we lose business.”*

The implication of the above is the participant became less trusting of government patronage.

Participant 4, Accommodation, Guest house: *"I do not need their assistance due to my experience; I do not have a sense of entitlement from the government I like to be independent."*

More worrisome is that government officials are requesting bribes prior to patronising the establishment. This is akin to sabotaging the business by government officials, who should be at the forefront in promoting the industry.

Participant 4, Accommodation, Guest house: *"Employees... they demand to pay them upfront... they want bribes for the fact that they are using your establishment".*

The responses of the participants indicate they do not seem to need assistance from the government; however, this may be due to past disappointments and lost hope.

Participant 1, Tour operator: *"Financial assistance, but I have not been assisted no financial support from government, so I just stopped because we do not get any however government agencies like Seda assist with Branding. It takes time and then we can assist her."*

There is also an indication the government is not facing the reality and moving at the same pace with regard to industry needs.

Participant 3, Catering services, private diner, and consulting: *"Government, are backward the way they assist, they do not understand the industry and they are not helpful, they are not flexible with their funding."*

There is sabotage as well, from government officials who demand bribes,

Participant 4: Accommodation, Guest house: *"Employees... they demand to pay them upfront... they want bribes for the fact that they are using your establishment."*

There is an indication from the respondents that government is not doing enough in terms of support.

Participant 2, Tour operator: *“Financial assistance, but I have not been assisted no financial support from government, so I just stopped because we do not get any, however, government agencies like Seda assist with Branding”.*

The findings reveal a need for government support from these participants, as stakeholders play a crucial role. These findings coincide with Eze *et al.* (2019b) who mention while ICTs have unlocked diverse opportunities, however, it also stimulates SMEs, opening them up to reservations and risks. Hence, information has become vital for SMEs' decision-making to reduce risks and uncertainties. There are uncertainties whether technology adoption can impact competitive performance, notwithstanding extensive electron business technologies. On the one hand, the organisation's ICT adoption challenges can usually be solved internally; on the other hand, government intervention in external challenges might be outside the jurisdiction of the organisation.

The approach to recognising obstacles hindering the adoption of ICT exhibits similarity across SMEs. The SA government recognised its obligation in creating a policy environment that enables developing a sustainable investment environment. This could be established through proper investment policy and regulations, building research and development capacity and promoting innovation (SA Department of Communications and Technology 2020).

- **Subtheme 2: challenges in keeping up with technological advancements**

In this subtheme, several participants noted challenges in keeping up with technological advancements in the tourism and hospitality industry. They mentioned they had to teach themselves new skills and technologies, such as photography, videography, and social media marketing.

Participant 3, Catering services, private diner, and consulting: *“I had to teach myself lots of things, before I used to spend money on websites and all types of advertising which are outdated now, things are moving towards advertising and marketing on social media, I must do photography. I must teach myself do videos, take pictures, the advanced social media apps and which is challenging you must live by create content to stay relevant, it's all about social media, as opposed website set once and nice pictures for all set have a photo shoot”.*

They also mentioned they had to constantly update their content and methods to stay relevant and attract customers. In addition, the pace of technological change is challenging and requires constant adaption and adjustment of their practices.

Participant 3, Catering services, private diner, and consulting: *"as before, now you need to keep on going with the pace when you just have everything is virtual people looking on social media they look at videos and delicious you, when they have an event they will come back to you they don't go to google, so catering comes after the nice video on delicious food you have created, its less about being formal its getting tricky we need to adjust and which is challenging"*

More concerning is that government is not moving with the pace of technological advancement needed in the sector.

Participant 3, Catering services, private diner, and consulting: *"Govt is not advanced in terms of the needs of this sector, they still offer services five years back."*

The above could have contributed to the technical glitches mentioned by participant 1.

Participant 1, Tour Operator: *"ICT makes things easier for clients overseas, although there are technical glitches, you can do business."*

Participant 2, Tour operator: *"I am technologically disadvantaged, self-taught, we do not do a lot of office work. It will help if I can be equipped with ICT short course."*

There is a need for infrastructure and training highlighted in this study. The findings are in line with Hashim (2007) and Cant *et al.* (2015), who established the ability of SME to accept ICT is directly related to owner-manager/worker ICT abilities. Notwithstanding the efforts by governments in countries such as Malaysia and Taiwan, where SMEs are encouraged to adopt ICTs through various support structures, because they do not have the necessary ICT skills, many still have not done so. In addition, Gono *et al.* (2016) suggest technological incompatibilities can hinder effective ICT use ICT and make it difficult for firms to derive benefits from the adopted ICT.

Moreover, Nguyen *et al.* (2015) advise firms often seek professional consultants to assist with IT adoption, because small businesses generally lack IT expertise and skills, it has been suggested this advice from professional consultants or IT vendors can prove useful

for small business management or owners, particularly when they have insufficient IT experience or understanding.

The findings coincide with those of other authors (Ogunsola 2005; Ejemeyovwi and Osabuohien 2018; Ogundile *et al.* 2019; Ogunkola *et al.* 2021), who assert globalisation factors primarily drive ICT with its role considered critical to the growth and development of an economy. ICT is the infrastructure that enables modern computing and communication, comprising the workforce, skill, instructions and methods, as well as mechanisms.

In the digital world, ICT enables individuals and organisations to communicate when combined, where it is found in all devices, elements of networking, applications and systems. ICT incorporates both the internet-enabled and the non-enabled spheres, mobile devices that are wireless-powered, as well as older technology, for instance, telephones, radio, and television broadcasting, where many remain commonly used together with innovative ICT components, such as AI and robotics.

ICT adoption by SMEs offers a way to access, process, and transmit greater information quantities to those within the context of being external to an entity. It is important to note technology adoption in SMEs, specifically in relation to computer hardware and software solutions, supports reducing strategic planning risk and considers factors such as size, industry, and the imposition of larger trading partners that appear more effective due to their extensive resource base.

Firms that acquire ICT systems incompatible with their business practices may, by implication, lack the necessary technical skills and capabilities. SMEs in tourism and hospitality have a lack of training in ICT, requiring the government to intervene and offer training with the newest ICT. Additionally, these firms require financial support because, when conducting business online, they must pay for the e-marketing content. As a result, they may benefit from support provided by government agencies, sector institutions, or consultants to address these challenges. This highlights that sourcing the right advice, external expertise, and suitable software are significant challenges faced by SMEs in utilising ICTs effectively.

- **Subtheme 3: a call for assistance for SMEs**

Some participants call for more support for SMEs.

Participant 4, Accommodation, Guest house: *"Need for more support for SMEs... they only look on for organisations as opposed to individuals."* A call for assistance from the NDT.

Participant 4, Accommodation, Guest house: *"if not a particular belong to an association... it is difficult for them to help."* A call for assistance from the NDT.

The evidence indicates the government needs to intervene and support these businesses. The findings are in line with the study of Yang and Zhang (2022), who posit major driving factors for rapid growth of new types of digital financial inclusion include the quick development of mobile internet and big data technologies, the e-commerce sector expansion, dealing with a company funding gap that is extensive, and government regulatory policy delays. Furthermore, the environmental context, according to the studies of Ghobakhloo *et al.* (2022) and Masood and Sonntag (2020), is explained to denote the external variables that could potentially affect technology adoption. Determinants related to the tourism SME business environment, for example industry structure or stakeholders external to the enterprise, were classified as environmental contributors to technology adoption.

The most well-known environmental influence is external support, closely followed by external pressure. External assistance includes stakeholder support, external financial assistance, and government assistance. Masood and Sonntag (2020) contend a need exists for collaboration across numerous stakeholders, including SMEs, government, industry groups, and large enterprises, as well as consumers, because these stakeholders comprise the vital ecosystem required to run the CE. In the opinion of Parida *et al.* (2019) and Sohal *et al.* (2022), because SMEs are micro in nature, the lack of cash is a frequent challenge and a reliable link with potential stakeholders, for instance, governments and relevant industry groups. In most of these cases the relationship is acknowledged as basically top-down. The findings indicate a need for government to aggressively intervene in the tourism sector and provide support to the sector.

- **Subtheme 4: corruption and favouritism**

Some participants bemoan the extent of corruption and favouritism in the sectors. According to them, the government only supports establishments affiliated with the ruling political party.

Participant 4, Accommodation, Guest house: *"Corruption (NDT) is supporting for the ruling party rather than helping everyone... the department serve only the government due to that."* (Corruption NDT)

Participant 4, Accommodation, Guest house: *"If affiliated to the ruling party then your establishment will get support from (NDT): but if not, you will not be assisted."* (Favouritism or biasness)

The findings from this study confirm a need for intervention from government due to favouritism and corruption within This implies favouritism and corruption in the industry. SMEs faced several challenges according to the findings of Kamarudin *et al.* (2022), with among these shortages of power, constraints in finance, insufficient management skills and competencies, along with a lack of knowledge, as well as corruption. SMEs in developing countries fail because of insufficient knowledge regarding IT implementation strategies (Kwabiah 2019).

In the opinion of Kirlidog *et al.* (2018), the evidence for shortage of ICT skills has been publicised in SA and has been recognised by the government. As a result, the ICT skills deficiency has been acknowledged, while other related fields renowned as significant indicate urgency in areas for ICT skill development in the National Plan for HE. There are opportunities in the ICT sector with job creation across micro, small, medium, and large enterprises. It is of the utmost importance to have coordination so that these sectors can find each other (Gillwald *et al.* 2018).

6.18 KEY RESEARCH OBJECTIVE QUANTITATIVE FINDINGS

To investigate the internal factors that influence the attitudes of SME owners/managers to adopt ICT in tourism in the EC.

6.18.1 Internal factors likely to influence the attitudes of SME owners/managers to adopt ICT in EC tourism

- **Business and ICT adoption**

Based on the literature review and the empirical findings, ICT adoption is critical in business, as evident from most respondents (94 percent) that identified the ICT they use fits with their micro business' environment. In addition, this suits employee preferences, and the daily business operations, most importantly business partners indicate ITC as business channels (84 percent).

Dassanayake and Krishnanunni (2023) additionally state a variety of technologies, crucial for business performance, are employed in IT to generate, and analyse data, as well as for processing and evaluation. In addition, the need for additional employees can be reduced through office automation, while business costs have been reduced by means of information optimisation, with the production of diverse products and services. This positively impacted the business' financial goals.

McRae (2019) advises technology enhances the performance of the entity and advances the organisation's capabilities and capacity to remain competitive. Certain technologies improve the competences of an organisation enabling it to remain competitive and assisting personnel development.

Competitive benefits apply to the general performance of the organisation, its personnel and its profits. Resource dependencies, in the context of remaining competitive, help to gain a competitive edge and identify suitable external resources. This diminishes their reliance on important external resources and supply organisations (Ku 2022).

- **Top management support (TMS)**

It is evident from the empirical findings that top management (87 percent) made their management aware how crucial it is for the business to accept the adoption of ICT for the benefit of the business. The survey results indicate the respondents recognise the

importance of TMS for ICT in the company (Table 6.33). This is evident from the positive mean scores for all the focus areas, particularly for encouraging management to support ICT use (M=1.54) and encouraging management to encourage employees to use ICT (M=1.75).

The literature suggests the allocation of resources for ICT is also important, as it enables management to invest in the necessary hardware, software, and infrastructure to support ICT use. This can lead to increased efficiency, productivity, and cost savings for the company. The literature suggests management is responsible for using ICT technologies to efficiently manage activities. ICT encompasses all types of software, including applications, services, products, and embedded software. Examples of customised ICT solutions include mobile app development, website design, and animation design. Broadly speaking, ICT has now become an integral part of business around the world. This echoes prior studies that found TMS for ICT critical for successful ICT implementation in organisations (Dassanayake and Krishnanunni 2023).

Encouraging management to motivate employees to support ICT is also important, as it promotes communication and collaboration among employees, which can lead to increased employee engagement and job satisfaction (Wang 2018). Making management aware of the benefits ICT hold for the company is also crucial, as it assists in creating a shared vision and understanding of the potential impact of ICT adoption on company operations and performance. This can lead to greater management buy-in and commitment, essential for successful implementation (Chen *et al.* 2019).

Furthermore, encouraging management to motivate ICT use among employees is also important, as it promotes a culture of innovation and continuous learning within the organisation. This can lead to increased employee motivation, engagement, and productivity (Li *et al.* 2018). For innovation adoption and acceptance to be successful, SME decision-makers are more likely to be a top-management team, and their dedication and support are essential. Since the propensity to adopt is correlated with level of innovation, the TMT supports the relationship between people and innovation adoption.

This is consistent with study results that show a significant positive relationship between TMS and attitudes towards ICT adoption, supporting the hypothesis (H1) that TMS is

positively associated with attitudes towards ICT adoption (Table 6.53). These findings are consistent with previous research that highlighted the importance of TMS for successful ICT adoption. When top management is supportive of ICT, it can create a culture that promotes innovation, continuous learning, and collaboration, leading to positive attitudes towards ICT adoption among employees (Wang *et al.* 2020). The findings agree with those of Sharma *et al.* (2022), who determined top management championship a critical factor influencing innovative technology adoption in a firm.

The TPB theory of Ajzen (1991) focuses on attitudes and norms, according to Jena (2023), where the perceived behavioural mechanism is almost a precise behaviour, forming a function to envisage individual behaviour, particularly for premeditated and planned behaviours. The study objectives explored the internal factors that influence SME owner/manager attitudes to adopt ICT in the tourism sector. The relevance lies in it exploring these factors, which deal with the attitude and behaviour pattern of SME owners/managers in adopting ICT for the business.

The findings of this study have important implications for organisations seeking to adopt ICT, showing it is crucial top management provides the necessary support and resources for successful ICT implementation, as this can influence employee attitudes towards ICT adoption. Encouraging a culture that supports ICT adoption can lead to increased employee engagement, productivity, and overall business performance.

- **Benefits of ICT for business on its adoption**

The benefits of ICT for businesses have been widely recognised in the literature as important factors in ICT adoption. Based on the findings there is significant agreement by most participants that ICT will assist: their business performance (92.9 percent), their business to gain more clients (85.9 percent), to track business performance (96.5 percent), with half (50 percent) the participants that agreed (strongly agree=20.2 percent; agree=29.8 percent). These are positive indications that the respondents perceive ICT use as a benefit to the business. The results indicate the acceptance of ICT and a positive attitude towards adoption.

Many studies have shown businesses are more likely to adopt ICT when they perceive the benefits to outweigh the costs (Beynon *et al.* 2021). Some benefits of ICT for business

include increased efficiency, improved communication, reduced costs, and improved decision-making, as well as increased competitiveness. In the opinion of Beynon *et al.* (2021), ICT use may result in these advantages through greater ICT security and data protection, even though other aspects regarding ICT benefits may seemingly link to competition and improved communication effects. Consistent with this, the study results indicate most respondents strongly agreed ICT adoption would have significant benefits for their business performance, ability to gain more clients, track business performance, and have control over the business daily, as well as collaborate with suppliers (Table 6.38).

The study found the mean values for all statements indicated a positive response towards the benefits of ICT adoption for businesses. These findings are consistent with previous research that identified similar benefits of ICT adoption for businesses. The benefits mentioned include increased productivity, improved decision-making, enhanced communication, and better customer service. The studies cited to support these findings include those conducted by Chen and Hwang (2019), among others.

Relatedly, a study by Ondieki and Ogutu (2020) conducted in Kenya, found the perceived ICT benefits significantly influenced ICT adoption among SMEs. In addition, the most important benefits of ICT for SMEs were found to be improved business performance, increased productivity, and reduced operational costs. The high level of agreement among the respondents suggests they recognise the importance of ICT adoption for their businesses (Table 6.40).

More importantly, business owners aware of ICT benefits are more likely to adopt and utilise ICT in their operations, which can improve their competitiveness and sustainability (Liao *et al.* 2017). This is consistent with study results that show a significant positive relationship between ICT benefits for business and attitudes towards ICT adoption, supporting the hypothesis (H3) that benefit is positively associated with attitudes. Furthermore, this can be corroborated by regression analysis, where results show a significant positive relationship between attitudes towards ICT adoption and its benefits for business ($\beta = .367$, $p = .001$). It is thus suggested businesses are more likely to adopt ICT when they perceive it will provide benefits to their business (Table 6.38). In line with the findings by Khin and Ho (2018), innovative digital solutions are seen as critical business

digitisation accelerators across industries in numerous areas such as marketing, customer service, human resource management, and logistics, as well as production.

Furthermore, the study results suggest the benefits of ICT adoption are significant drivers of its adoption in SMEs. Business owners who recognise the benefits of ICT adoption are more likely to adopt and utilise ICT in their operations, which can positively impact their business performance, competitiveness, and sustainability. This supports the study by Ziemba (2019) that found benefits associated with ICT utilisation, which improves business productivity, nurtures innovation, reduces costs, and increases process services' effectiveness, as well as supplementing business decision-making competence, while being timeously proactive to the needs of their clientele, and new client acquisitions.

- **Challenges of ICT acceptance for business on its adoption**

According to Chege *et al.* (2019), because of their size and uncertain settings, technological innovation creates challenges for SMEs in developing nations. Internal factors may be controlled within the company and external aspects, beyond the control of the organisation, where these factors can either serve as impediments or prohibit organisations from progressing. This score is negative (Table 6.34), with 48.3 percent respondents shown to have disagreed with the statement that ICT software is expensive and will not benefit the business, while the majority (69.3 percent) agreed ICT hardware is expensive and will not assist the business.

The survey findings report the proportion respondents that disagreed was significantly higher when compared to those who agreed ($p < 0.001$). These findings contradict those of Okundaye *et al.* (2018) that indicate the costs of purchasing software and computers, recruiting trained ICT people, educating current employees, and other expenses related to the use of ICT are prohibitive for many small businesses. This may imply SMEs in this study do not perceive hardware and software to be expensive. However, the study results show a negative impact of ICT challenges on attitudes towards adoption (H4). In the opinion of Jalloh (2022), small businesses are hesitant to implement ICT in their operations, because they believe it is costly to maintain and has negative variation effects.

The findings of this study are consistent (Table 6.34), which indicates ICT is a negative significant predictor of ATT ($\beta = -.272$, $P = 0.003$) and the relationship between challenges

and attitudes towards ICT adoption will be negative. These findings agree with previous studies that found SME owners/managers face a variety of challenges when implementing ICT, including a lack of financial resources, expertise, technical skills, and employee computer literacy. Environmental, human capital, and structural characteristics of the firm, as well as competitive strategy, and internal organisation are all factors that contribute to SME scepticism regarding ICT adoption (Jalloh 2022). This implies a gap in skills shortage to advance technology as a need for training has been indicated for the business to keep up with changes brought by technology.

- **Business performance**

In the opinion of Otache and Usang (2022) and Maryama and Suhong (2022), adopting ICT technologies can help businesses be more productive, complete more work, introduce new ideas, and create opportunities for a more effective method of conducting business. The dynamic nature of ICT adoption has accelerated due to modern society's constantly changing business environment, with access to ICT increasingly necessary to participate in and engage in this society. The positive score of the respondents (87 percent) for all the areas, specifically for strategies in place to evaluate ICT use in the suppliers and strategies in place to evaluate employee performance using ICT (Table 6.40).

These are the positive findings of a study, which indicate significant agreement among the respondents, where this agreement is quantified using two measures: the mean (M) and standard deviation (SD) of the respondent answers. It also suggests the study findings are consistent with the results of other studies (Alam *et al.* 2022b; Chege *et al.* 2019; Chen *et al.* 2016). These studies suggest ICTs have significantly and positively impacted firm performance. Additionally, increased small firm productivity, efficiency, and performance reportedly result from ICT (Škare and Soriano 2021b).

According to the data, SME managers and owners are highly educated and possess the abilities required to successfully operate a business (Table 6.6), the majority of SME managers and owner's 90.4 percent are proficient computer users, and many have advanced degrees (Table 6.16). Other researchers, such as Basak *et al.* (2022), suggest SME performance has benefited from ICT skills and understanding. This indicates more than 99 percent respondents in this study are largely educated.

The behaviour behind the adoption is based on the incentive of improved business performance linked to the adoption. The aspects fostered in the TPB are behaviour, attitude, and subjective norm. The SME owners/managers are forced to adopt ICT due to pressure from society; customers use ICT and are more advanced and inclined to use technology because of globalisation. This is relevant, as SMEs assume using ICT will benefit the establishment. The empirical evidence suggests a benefit, offering competitive advantage and enhanced business performance through ICT adoption in the tourism SME sector, with specific reference to the EC.

To investigate external factors likely to influence SME owner-manager attitudes to adopt ICT in the EC tourism sector

6.18.2 External factors likely to influence SME owner-manager attitudes to adopting ICT in the EC tourism sector

- **Government support**

Nazir and Zhu (2018, citing Chan and Al-Hawamdeh 2002) and Dunt and Harper (2002) assert the level of e-commerce, particularly in developed economies, has been boosted by the intervention of government participation that established a conducive environment for ICT adoption. The findings of this study suggest respondents are aware of government support on financing or funding, as the percentage is higher for those that agree, compared to those that do not agree (Table 6.43), which has the highest mean value ($M=2.21$, $SD=1.334$), implying government support of SMEs through grants and loans is viewed as the form of most government support.

The empirical findings of the study indicate more than half (60 percent) the respondents agreed the NDT, DSBD, and EC Economic development and environmental affairs assist tourism SMEs through Seda. This is supported by a significant number of respondents who agreed Seda assists with resources for ICT at a provincial level, however, just more than half (56.1 percent) is spent at local level. The empirical study evidence indicates half (50 percent) the respondents mentioned the municipality in their area assists with resources for ICT at a local level.

This supports findings reported by Nazir and Zhu (2018) that illustrate government intervention boosted the e-commerce level, particularly in developed economies thereby

creating an environment conducive for ICT adoption. An example to this effect by these authors is that of Singapore, where the government has been making progress in terms of endorsing legislation that stimulates e-commerce.

Another related study conducted by Nazir and Zhu (2018) posits there are a number of countries where bodies are established to enhance e-commerce adoption as a business tool, such as the Institute for the Information Society of Wales in the UK. It is evident the developed countries have better opportunities when compared to developing countries, as there is robust provision from their governments.

This is consistent with the findings, indicating a significant positive relationship between government support and attitudes towards ICT adoption, supporting hypothesis (H6) that the impact of government support on attitudes towards ICT adoption will be positive (Table 6.43). The findings also coincide with the study of Murati-Leka and Fetai (2021) that determined a beneficial correlation between Government financial support and business innovation performance (ICT adoption). Zhanga *et al.* (2020) add government assistance to SMEs could take the form of creating an environment that fosters positive and healthy competition. Furthermore, Anwar and Li (2021) agree government incentives, both financial and non-financial, have a significant and positive influence on financial and environmental performance, differentiation, and cost leadership strategy. Yet, the findings are met with conflicting reactions whether the government should help with low-cost software for ICT, with 39.5 percent respondents that agreed, while the proportion of those who were neutral and or disagreed (60.6 percent) higher than those who agreed.

- **Stakeholder support**

Various stakeholders play distinct roles in ensuring the successful implementation and operation of systems, including managers, individuals, government, and IT experts, as well as vendors, and customers; they work collaboratively to achieve socio-economic objectives. Kapoor *et al.* (2021, cited in Sohal *et al.* 2022) support this view. These players may range from employees to significant stakeholders, and it is crucial for all to work together to attain the organisation's CE goals. This concurs with study results that show a significant positive relationship between the impact of stakeholders (SH) on attitudes towards ICT adoption, supporting hypothesis (H2) that stakeholder support is positively

associated with attitudes towards ICT adoption. The findings of this study suggest significant stakeholder support for ICT adoption in the tourism, hospitality, and travel industry SMEs (Table 6.47).

This holds important implications for SMEs in these industries, where SMEs that are considering adopting ICT can feel reassured of significant stakeholder support for their decision. Additionally, SMEs can leverage the support of other stakeholders, such as private businesses and IT companies, to help facilitate their ICT adoption. This can be particularly beneficial for SMEs that may lack the technical expertise or resources to implement ICT on their own. The study findings are consistent with previous research that identified the importance of stakeholder support in facilitating ICT adoption in SMEs (Wang *et al.* 2020). By highlighting the existing support within the tourism, hospitality, and travel industry, this study adds to the growing body of literature that emphasises the importance of stakeholder engagement in facilitating the adoption and diffusion of innovation in SMEs.

The findings of this study have important implications for SMEs provided with additional assistance, particularly on the technical side, where experts are needed in ICT. It is vital for the development of the entities that support is provided in reaching out to the client. It may happen that the IT expertise is outsourced, as they do not need these experts permanent daily, maybe expensive, or costly in their business hence rather, outsource instead and depending on the size of the entity.

ICT deployment in construction enterprises is shown by Chua *et al.* (2022) to face difficulties resulting from insufficient opportunities for preparation and learning, in addition to learning and training limitations. Despite these limitations at the individual level, a deficit in personnel training and assistance is also evident. The contractor, technical (ICT users need a solid, well-defined support structure), and senior management support are all optional (the absence of help and support from senior managers will thwart ICT innovation diffusion in construction firms).

Many of these organisations employ IT specialists to help them operate the system as expected; a commendable approach that also emphasises the critical role experts and stakeholders play in these companies.

- **Competition and suppliers towards the adoption of ICT.**

Beynon *et al.* (2021) declare, while SMEs may better track the nature of competition, set prices more effectively, and differentiate their goods and services from those of rivals to suit consumer wants, ICT use may also enable SMEs to strengthen and more efficiently integrate their value chain (Barba-Sanchez *et al.* 2018). Based on the findings, 91 percent respondents identified they gained a competitive advantage in using ICT. The survey results indicate respondents note how important it is to keep up with competition in the competitive environment of tourism and the important role played by suppliers to enhance performance (Table 6.45). This is evident from the positive score in all areas of ICT in dealing with the inherent industry competition ($M=1.37$, $SD=0.613$), with attending better to suppliers the most significant competition and suppliers' statement ($M=1.49$, $SD=0.707$).

These findings agree with several researchers, such as Salah, Yusof and Mohamed (2021), who identified organisational leaders employ a competitive strategy to maximise market share as a result of globalisation, growth technologies, and "competition forces". In a highly competitive market, those that adopted e-commerce among SMEs in Malaysia had a higher propensity to embrace innovative systems.

The findings indicate suppliers have less than half the experience customers demand of e-commerce services offered. This coincides with results from Ku (2022), positing that SMEs potentially provide competitive benefits to SMTAs due to the complexity of the tourism supply chain, including frequently complex changes in demand for tourism products, in the context of changes in competition. This requires competition tactics to be altered to the competitive climate so that SMTAs may gain a competitive advantage. Since they may leverage technology to gain a competitive edge, SMTAs have started using e-marketing systems as an innovative interorganisational system for the tourism supply chain.

Khan (2019), moreover, shows various options available to tourism and hospitality businesses to attain ICT-based competitive advantages, such as creative online marketing campaigns, continued communication with a variety of organisational stakeholders, and various other means. The organisation's ability to compete by making use of intranets to reorganise internal procedures, extranets to increase transactions with dependable

partners, and the Internet to communicate with all its stakeholders and customers, is all controlled by e-tourism (Koliouska and Andreopoulou 2023). Relatedly, a study by Salah *et al.* (2021) found, in the case of the Arab world, in particular Saudi Arabia, “competition pressure” encourages commercial organisations to monitor their clients and determine their demands, in order to provide service personalisation.

This is consistent with this study’s results, showing a significant positive relationship between competition and suppliers and attitudes towards ICT adoption, supporting hypothesis (H7) that the impact of competition and suppliers on attitudes towards ICT adoption will be positive (Table 6.56). These findings are consistent with previous research such as Paulus and Hermanto (2022) and the relevant study findings from earlier scientists on SMEs in Malaysia, which demonstrated a favourable relationship between innovation and competitive advantage. SMEs, likewise, demonstrated substantial results between innovation and corporate competitive advantage.

The regression coefficient in this study supports this, as it shows a positive relationship between attitude on ICT adoption and competition and suppliers for business ($\beta = 0.432$; $P > 0.021$). This suggests the competition and suppliers will put on to the business (Table 6.39). It further implies competition, and suppliers positively influence ICT adoption in the tourism sector. This finding is consistent with those of Chege *et al.* (2019) who have identified the environmental pressures of stakeholders that force business to adopt ICT.

Chege *et al.* (2019) attest decisions regarding how to apply technological innovations can sometimes be influenced by external factors such as competition, supplier pressure, customer needs, and the entrepreneur’s industry experience. In addition, the corporate environment is characterised by quick technical and market changes, which puts processes for developing new products or services at risk. Environmental changes, such as ongoing technological advancements, market needs, and fierce rivalry, all impact how well businesses succeed. The level of competition, client demands, market demand, and governmental regulations may all affect a company’s profitability (Chege *et al.* 2019).

The findings of the study agree with previous researchers, such as Tawfik *et al.* (2022) who state, in addition to the effective use of resources, fierce competition is a key component in the acceptance of innovations. The technology sector is characterised by rapid

development, which puts pressure on businesses to compete and make them more aware of their rivals' new innovations.

To understand whether attitudes towards ICT adoption moderate the relationship between tourism SME owners/managers and ICT use in the EC

6.18.3 Attitude likely to influence ICT adoption in EC tourism sectors

The overwhelming majority (95 percent) respondents know ICT adoption will assist to enhance communication with their suppliers and 87 percent know ICT adoption will assist communication with government entities. The findings show a positive attitude by tourism SMEs to ICT adoption. Based on the findings and the literature, as Rozmi *et al.* (2020) determined, only attitude was found to have a significant and positive relationship with ICT adoption. Alkhateeb and Abdalla (2021) additionally state the technological context influences SME adoption of social media, and social media adoption, in turn, influences SME performance. Perceived IT adoption refers to a person's beliefs regarding the expected outcomes of the IT used, whereas perceived behavioural control refers to one's belief on the technology's degree of usability. To develop positive attitudes toward broadband in society, successful broadband adoption necessitates a clear message regarding broadband use and benefits.

Knight *et al.* (2017) suggest how an organisation behaves and how its research is perceived are shaped by norms, attitudes, and views, impacting the selected strategy's effectiveness in the long-term. To ensure success, it is important to consider the psychological characteristics of SME decision-makers, as they can act as mediators between a firm's resources and its organisational behaviour and disclosure. In this regard, Almashawreh *et al.* (2024) and Shaharuddin, Kassim and Ibrahim (2023) state internal factors, such as personal characteristics and perceptions, can play a critical role in shaping the ICT adoption attitudes of SME owners-managers in the tourism industry. Understanding these factors is important to develop effective strategies to promote ICT adoption and improve overall tourism business competitiveness. In this study, the influence of internal factors such as TMS, benefits, challenges, and business performance on the attitudes of EC tourism SME owner-managers to adopt ICT in tourism were examined.

The TAM theory by Fred Davies (1989) is applicable in the acceptance of information communication in measuring perception and attitude. The PU and simplicity of use influence the user's attitude toward utilising technology. The PEOU refers to the degree to which a person feels it would be effortless and less stressful to use a specific device. Perceived benefits contribute to ICTs' PU, which is a major factor of people's attitudes toward ICT adoption.

The qualitative findings are discussed in detail in the subsequent subsections.

6.19 KEY OBJECTIVES OF THE QUALITATIVE FINDINGS

6.19.1 Internal factors likely to influence the attitudes of SME owners/managers and business performance on ICT adoption

Based on the responses, the respondents' businesses perform very well (72 percent) as SMEs; their revenue is evidence that their business revenue is promising. The fact the revenue is that much, is a further indication the segment they fall under is medium business. The evidence from the interview on the question of revenue, portrays that Participant 5, Accommodation: Lodge, stated: *"R7 million per annum, terrible year, COVID, business travellers stop coming"*. This reveals that, apart from one participant, all these businesses can be categorised under micro business, as the revenue is less than R5 million. Table 6.63 indicates participant 5 is thus under medium enterprises, with more than 20 employees, although the rest have less than 27 employees, where 22 are permanently employed and five are on contract basis, other participants have less than 10 employees, therefore, they fall under micro enterprises since they have from 0-10 employees.

The empirical study findings indicate that where revenue data for the majority participants (72.8 percent) were concerned, their annual revenue was less than one million rands, 24.6 percent indicated between one and five million rands, while less than one percent (0.9 percent) each make R5.1-10 million rands, R10.1-20 million rands and above R20.1 million rands, respectively. According to the SA definition of SME, an enterprise's revenue varies depending on the sector or subsector in which it operates. This indicates most businesses are micro establishments; however, 73 percent fall into the category of micro enterprises based on turnover, as respondents in the findings earn less than R7 million per year.

The findings are supported by a SA Department of Small Enterprise Business Development report (2019) on SMEs in the amended definition of a SME as a company with fewer than 250 employees. "Small enterprise" means a separate and distinct business entity, together with its branches or subsidiaries, if any, including cooperative enterprises, managed by one owner, or more predominantly carried on in any sector or subsector of the economy. Microenterprises typically have between 0-10 full-time employees, small enterprises have between 11-50, and medium enterprises have between 51-250 employees (Rambaruth *et al.* 2022).

Gono *et al.* (2016) agree with Hlaing (2022) that the microenterprise sector characteristics include its low level of balanced salaries and low capital receipts. The amended small enterprises act defines an SME as having less than 200 workers, less than R64 million (\$3,733,803) annual turnover, and a less than R19 million total gross asset worth (\$1,108,473).

- **Percentage of budget spent on ICT**

Based on the evidence whether the businesses do budget, some participants reported not having a budget due to the impact of COVID-19, while others spent minimal amounts such as R24 000 or R1 000. The answers from the participants show a range of budget spent, from no budget allocation to R60 000. In addition, the amounts spent on ICT appears to vary greatly depending on the type and size of the business, as well as the level of ICT usage required, for example, data and camera use, while others allocated more to marketing through social media and email.

The evidence on the budget spent on ICT from the responses shows Participant 1, Tour operator: *"No budget allocation, only as and when needed"*. Participant 7, Lodge: *"No budget due to COVID"*. This indicates a good number of participants providing medium budgetary allocation for ICT. The findings further indicate that most SMEs dedicate less than 10 percent of their budgets to ICT, while only 2 percent allocate between 10 and 20 percent. Additionally, only eight percent of businesses invest a higher proportion in ICT. The literature posits SMEs are committing more than 40 percent of their budgets to ICT (Xin and VincentKow 2022).

In accordance with Kano *et al.* (2022), a low-budget approach was chosen, taking benefits into account such as affordability and wide applicability. This strategy turns out to be the best way to deal with the limitations SMEs currently face from tight budgetary constraints and constrained promotional space. The findings agree with Nazir and Khan (2022b) who determined the developing nations generally lack suitable infrastructure, education, and budget, while also needing to deal with problems in politics and society that impede ICT adoption.

- **Employees on the use of ICT**

Based on the question regarding the percentage employees in the company able to use ICT services. The information from the interview responses uncovered the percentage employees in the companies that can use ICT services varies and ranges from 0-100 percent, with some companies having no employees who can use ICT services, while in others all employees can use ICT services but are not necessarily experts. Responses provided additionally indicated some employees and line managers have no ICT skills.

This is not a good indication of ICT use among employees of tourism sectors in the EC province. However, Cant *et al.* (2015) found the majority participants in their study lacked ICT knowledge and hence needed outside assistance, which emphasises the shortage of skills in the labour force (Gono *et al.* 2016). More technological tool training is, therefore, required for personnel of tourism and other SMEs to obtain better outcomes.

The finding is in line with the literature, such as the evaluative report on the performance and developmental dynamics of Small, Medium, and Micro Enterprises (SMMEs) in the EC, which identified a significant lack of skills that were required to effectively manage digital transformation in rural areas. Furthermore, the report shows a notable deficit in the number of entrepreneurs actively involving their workforce in ICT training initiatives (Kavese 2020).

By implication, there is a need for greater investment in ICT training and skill development within the labour force of the tourism sectors in the EC province to enhance technology adoption and productivity. In view of the low number of employees able to use ICT, it was critical to have budget in place for ICT. These findings highlight critical challenges

associated with acquiring and disseminating digital competencies in the rural SMME landscape, emphasising the need for targeted interventions to address these identified limitations.

- **Management computer literacy level**

The evidence from the findings reveals the level of computer literacy differs from one level to another, which uncovered the middle management of the participants have various levels of computer courses. Some have obtained basic computer courses, while others have taken advanced courses, including software used in universities.

Based on the findings, top management were shown to have attended a computer course. The following question was asked to stimulate a response from the participants: “What is the name of a computer course that the top management have?” The survey revealed the top management of the participating industries has undergone a range of computer courses, such as basic, end-user, and advanced computer, as well as short courses in formal reservation and graphic design. Some participants have acquired skills through self-study or by attending short courses to enhance their capabilities. The literature shows managers begin to comprehend and embrace new technological capabilities at the highest management level (Lutfi 2022).

The participants were asked to name a computer course obtained by the supervisor in their companies. These courses vary, with some supervisors shown to not have any, some having basic computer skills, and others having advanced computer skills. This suggests a lack of ICT skilled online managers, which implies a skills shortage within tourism SMEs and is a worrying factor, indicating the industry needs to focus more intently on equipping existing employees with the requisite technology skills.

- **Mobile phone as convenient tool**

Based on the findings, the mobile phone is regarded as one of the tools convenient for the business because both managers and employees can use their smart phones for the business. Respondents were asked whether they use a smartphone or mobile as a business tool to communicate with their clients. Other than participant 5 (Accommodation, lodge, and Conference), most respondents indicated using their smartphones or mobile as a business tool to communicate with clients. The literature indicates an important part of

ICT is mobile phone applications that have helped redefine the way business is done globally today (Muriuki and Sankat 2022). The steady increase in mobile phone use, managed appropriately, could positively impact SME performance.

- **Software use**

Evidence from the findings indicates most respondents (2, 3, 5, 6, 7, and 8) use mobile tourism and hospitality applications, whereas participants 1 and 4 do not. The literature evidence from Nazir and Khan (2022a) suggests the costs to purchase software and computers, recruit trained ICT people, educate existing employees, and other expenses associated with ICT use are unaffordable for many small businesses.

Kallmuenzer *et al.* (2024) adds there are other factors that prevent digitization, which include the continued use of legacy systems and the risk-averse culture of small and medium-sized enterprises. Employees may also pose additional obstacles to digital orientation; the most well-known in this case is a lack of the required competencies and skills. Businesses with a digital orientation are often thought to have substantial training requirements, because some digital tools require much training from their employees. Employee resistance to changing hiring practices so that only candidates with a high degree of digital literacy are hired, is a major barrier to employee adoption of digital orientation.

To investigate external factors likely to influence SME owner-manager attitudes to adopt ICT in the EC tourism sector

6.19.2 External factors likely to influence SME owner-manager attitudes to adopting ICT in tourism

- **ICT technical services**

Considering the low adoption and limited expertise of ICT among employees, it was crucial to determine who is responsible for ICT technical services. Based on the findings, these SMEs are shown to be very small businesses with no lower managerial positions; possibly because these entities had to lay off workers owing to financial constraints. From their response, most participants mention the businesses outsource ICT technical services, and with some constraints, IT experts assist them. A few participants personally manage ICT technical services on their own or with a partner. de Mattos *et al.* (2023) suggest

technological incompatibilities can hinder effective ICT use and hinder firms from deriving benefits from the adopted ICT.

Research by Nguyen *et al.* (2015) suggest external IT expertise plays an important role in the IT implementation process. In addition, consulting firms have acquired and absorbed knowledge from assisting their clients and, therefore, can offer this knowledge to firms that seek their help. Although IT expertise has been perceived to have benefits for small businesses in IT adoption, not all small businesses utilise these resources, as the knowledge comes at a cost and some firms cannot afford such expenses.

- **Government support**

Based on the findings the respondents are shown to have varying views on the level of government support they received for ICT use in their businesses. Some have received financial and branding assistance, while others have not received any support. Although some participants reported not receiving any financial support from the government, others mentioned receiving assistance from government agencies such as Seda for branding. Overall, participants mentioned obtaining financial assistance from the government was difficult and time-consuming. The respondents indicated their support from government varies, as in some instances, the turnaround time to respond for support serves as a restraint, in addition to not keeping up to date with the kind of services offered/required, particularly now there is a digital space that needs funding for network connectivity when uploading content.

It was further indicated that participants experienced challenges with government assistance, financial support, and e-marketing funding. They expressed frustration with the lack of support and advancement in services offered by the government, as well as issues with payment delays and corruption. In addition, participants indicated having called for more support from the NDT for SMEs and highlighted the favouritism and biasness towards establishments affiliated with the ruling party.

These findings resemble those by Sadiq *et al.* (2022) after conducting a study on ICT adoption among SMEs in Botswana, which determined a lack of adequate government support was the cause of its low adoption and emphasised a lack of government support can destabilise the growth of developed ICTs in SMEs, particularly where the country lacks

standardised policies to regulate and allow competition to thrive in the telecommunications industry. Furthermore, proposed government assistance can help accelerate ICT adoption among SMEs by encouraging more open competition in the telecommunications sector (Sadiq *et al.* 2022).

There is a call from the government through the NDT to intervene and support the businesses. The literature reiterates both industry and government organisations can help to promote and support small business networking and ICT. The use of ICT is essential for the success of any tourism business. Moreover, policy formulation is critical for destination management organisations, particularly in relation to ICT use by the tourism industry at the destination, to create a conducive business environment that may aid tourism growth (Mugobi and Mlozi 2021). This implies aspects where SMEs should focus more, with intervention by government, in addition to a need's analysis, leaving a gap requiring further investigation.

The significant ramifications are that more work needs to be done to further LED, even though the government is supporting these businesses locally through infrastructure development, SMEs require practical knowledge and in-person nurturing. Local government cannot be influenced by the ruling party; impartial institutions and governance are necessary to prevent bias and corruption. This suggests a gap at the municipal level that needs to be addressed.

The relationship between ICT adoption and its five factors—perceived benefits, perceived cost, ICT knowledge, and external pressure, as well as government support—is relevant to this study. This implies SMEs benefit from ICT use by increasing the profitability of their operations, making it an important aspect of the research. Both the literature and the findings highlight the ICT tools utilised by SMEs are convenient, portable, and simple to use, serving as essential devices for their establishments to efficiently conduct and manage their business.

- **Stakeholders**

The qualitative findings reveal consistency in stakeholder support, as there is ICT expertise (Theme 4; Subtheme 6). Most participants mention the businesses outsource ICT technical services, with some having a software IT staff member to assist them. As per the study, only a small number of participants in the tourism sector personally manage their ICT technical services or with the help of a partner. Due to the unique characteristics of the tourism industry, there is an apparent requirement for external assistance in managing the technical aspects of ICT-related services.

- **Challenges**

Based on the findings, several respondents noted challenges in keeping up with technological advancements in the tourism and hospitality industry. The respondents mentioned they had to teach themselves new skills and technologies, such as photography, videography, and social media marketing. They further identified a need for reliable infrastructure, as sometimes there are technical network glitches, with training also needed as respondents indicated they are not technologically advanced and therefore need training, which could be addressed by offering them ICT short course.

The literature concurs, compared to LBEs, organisational, financial, infrastructural, and technological, as well as infrastructural factors were identified as inhibitors of ICT adoption among SMEs. These factors included a lack of skilled personnel, a coherent ICT strategy, high investment costs, and access to power, as well as internet bandwidth, and reliable internet connections (Okundaye *et al.* 2018). Kamarudin *et al.* (2022) agree SMEs faced several challenges, including power shortages, financial constraints, a lack of management skills and competencies, along with a lack of ICT knowledge, and corruption.

6.20 CONCLUSION

This chapter presented and analysed ICT adoption in the tourism sector. With regard to the qualitative findings, the tests employed in the analysis using SPSS v28 comprised descriptive statistics, including means and standard deviations, with frequencies represented in tables. EFA and CFA were applied to validate and test the reliability of the model. Multiple regression analysis was performed to address the seven hypotheses, while

structural equation modelling (SEM) was used to fit the model. On the quantitative findings, the themes were coded with the aid of software (NVivo version 12).

The findings show both external and internal factors influence SME owners' and owner-managers' attitudes towards ICT adoption in the EC tourism sector. These attitudes, in turn, influence how much ICT is integrated into business operations, emphasising the importance of both environmental factors and managerial perceptions in driving ICT adoption.

The following chapter discusses the reflective study summary, conclusions, recommendations, contributions to knowledge and implications for future research

CHAPTER SEVEN

REFLECTIVE STUDY SUMMARY, CONCLUSIONS, RECOMMENDATIONS, CONTRIBUTIONS TO KNOWLEDGE AND IMPLICATIONS FOR FUTURE RESEARCH

7.1 INTRODUCTION

The purpose of this research was to explore and evaluate the main factors that affect ICT adoption among tourism SMEs, using the EC tourism SME sector as context. Based on the research framework for the performance and benefits of SMEs' adoption in the tourism sector. Secondary data were provided by an in-depth review of the literature, with primary data from a lengthy empirical study meticulously analysed to determine any significant connections between the variables under study. This chapter provides conclusions as a synopsis of the major discoveries and proof that the study goal was met. The theories that underpin the study will be discussed considering the findings, with the study limitations also provided and explained, along with recommendations related to the results. In concluding this final chapter, suggestions for additional research are provided.

7.2 REFLECTIVE STUDY SUMMARY OF KEY FINDINGS

The research aim was to investigate internal and external factors affecting ICT adoption by SMEs in the EC Province tourism sector, SA, to offer possible solutions for ICT adoption and business transformation. The following conclusions can be drawn based on the findings:

The biographical and background data obtained indicate:

the largest group of tourism SME owners/managers was aged between 20 and 40 years.

most tourism SME owners/managers are of female gender.

most tourism SME owners/managers have at least a first degree.

most tourism SME owners/managers possess computer skills.

7.3 KEY QUANTITATIVE FINDINGS

The findings on the SME profile indicate 99 percent participants have achieved a significant education level. Moreover, 94 percent respondents indicated their computer skills are good, which implies SMEs are well-equipped in terms of ICT within the tourism sector. This is crucial, as the tourism industry needs well educated SMEs that are well equipped with ICT.

7.3.1 Business on ICT

Based on the literature review and the empirical findings, an overwhelming majority (94 percent) participants indicated their business make use of ICT, as it is critical for their survival, while it also fits with their business environment and moreover, their business partners and business channels (84 percent). The findings indicate 88.6 percent participants show ICT always affects business activities, meaning it has a huge effect on tourism business activities in the study area. This observation signifies a favourable outlook regarding the internal and external acceptance of ICT.

7.3.2 TMS

The findings on TMS reveal respondents have encouraged management to support the use of ICT, with results at 87.7 percent. This is evident from the positive mean scores for all the focus areas, particularly for encouraging management to support ICT use ($M=1.54$) and encouraging management to motivate employees to use ICT ($M=1.75$). The findings reveal that SMEs exhibit a supportive stance toward the adoption of ICT by both management and employees. This attitudinal alignment, particularly demonstrated by top management, is indicative of a positive orientation towards the integration of ICT as an essential component of the business operations.

7.3.3 Benefits of ICT

The benefits of ICT for businesses have been widely recognised in the literature as important factors in ICT adoption. Based on the findings, there is significant agreement by most participants that they think ICT will assist: their business performance (92.9 percent), their business to gain more clients (85.9 percent), to track the business performance (96.5 percent), where half (50 percent) the participants agreed (strongly agree=20.2 percent;

agree=29.8 percent). The present findings substantiate positive indications, wherein respondents manifest a perception of utility deriving from the integration of ICT within the business context. The outcomes further signify an acknowledgment of ICT and a favourable disposition towards its adoption.

7.3.4 Competition and suppliers

In terms of competitive awareness, the findings reveal significant agreement by most participants that they know: of ICT opportunities to gain competitive advantage (91.2 percent), ICT is important to keep up with the competition in the market (94.7 percent), and their company responds quickly to ICT to eliminate competition (92.1 percent). These enterprises demonstrate awareness regarding the competitive landscape, recognising the imperative of staying abreast of industry rivals, with the dual objective of augmenting market share and sustaining relevance.

7.3.5 Challenges of ICT adoption

The findings reveal the challenges identified by most respondents agreed with the statements that ICT software is expensive and will not benefit the business, with 48.3 percent pointing out ICT hardware is expensive and 69.3 percent agreeing it will not assist the business. This observation serves as an indication that cost implications, whether associated with software or hardware, assume critical significance for these enterprises. It underscores the essentiality of both hardware and software in ICT adoption, as none of these businesses can sustain viability without the requisite technological infrastructure.

7.3.6 Business performance

The findings indicate on business performance that most respondents agreed there are strategies in place to evaluate ICT performance for their business (78.9 percent), they have strategies in place to evaluate ICT for marketing using social media (65.8 percent), and they have strategies in place to evaluate their employees' performance using ICT (86.8 percent). There was also significant agreement by most participants that they have strategies in place to evaluate the use of ICT in their suppliers (86.9 percent) and use the company's website for online booking and payments (78.1 percent). This underscores a positive mindset, wherein the stakeholders perceive the performance of the business as a

pivotal factor for its survival. It also emphasises the importance of implementing strategies to monitor and optimise business performance through the utilisation of ICT.

7.3.7 Stakeholders

The findings reveal stakeholders as external factors, namely outsourcing of IT expertise, where the IT server is outsourced by the SME, with 82.5 percent, indicating agreement. This is an indication they know it is critical to have someone with such expertise for the business to outperform, in addition to. knowing IT service providers /suppliers provide information and resources on ICT adoption (91.2 percent).

External considerations are also important, as SMEs are motivated to adopt ICT by external forces such as competitiveness. Moreover, the findings suggest significant stakeholder support for ICT adoption in SMEs in the tourism, hospitality, and travel industry. More than 80 percent respondents (87.8 percent) agreed or strongly agreed other stakeholders in the industry support ICT adoption ($M=1.65$). Similarly, 84.2 percent participants indicated private businesses have initiatives and programmes in place to support ICT adoption ($M=1.77$). This shows the stakeholders are indeed supporting the SMEs, which is positive in terms of these businesses. Managers, employees, the government, and IT professionals, as well as vendors, industry, and customers all play specific roles in ensuring the successful implementation and operation of systems. To attain their socio-economic goals, they cooperate.

By highlighting the support within tourism, this study adds to the growing body of literature that emphasises the importance of stakeholder engagement in facilitating ICT adoption in SMEs. The findings emphasise the importance of internal variables in ICT acceptance and adoption. SMEs have been identified as the major drivers of digital enterprise innovation and allowing corporate growth. The advantages of ICT adoption have a favourable impact on SMEs, leading to improved business outcomes and performance.

7.3.8 Government support

The findings of this study suggest the respondents are aware of the support by the government in financing or funding, as the percentage is higher for those that agreed, compared to those that did not agree (Table 6.43), which has the highest mean value

($M=2.21$, $SD=1.334$), implying government support of SMEs through grants and loans is viewed as the main form of government support. More than 60 percent respondents agreed the NDT, DSBD, EC Economic development, environmental affairs and tourism department assist through Seda and Sefa. This is supported by a significant number of respondents that agreed these entities assist with resources for ICT at a provincial level, however, only 56.1 percent agreed this happened at local level.

7.3.9 Attitude

With regards to attitude, the findings indicate an overwhelming majority (95 percent) respondents agreed ICT adoption will assist to enhance communication with their suppliers and 87 percent know ICT adoption will assist communication with government entities. The findings reveal a positive disposition among SMEs in the tourism sector towards ICT adoption within their business operations. This positive attitude extends not only towards the enterprises themselves but also encompasses various stakeholders. Considering the interdependent nature of the tourism industry, the acknowledgement of suppliers and other stakeholders is recognised as integral, highlighting their essential role in ensuring the viability and survival of the tourism sector.

7.4 KEY QUALITATIVE FINDINGS

7.4.1 Business performance

Considering the responses, the SMEs under study demonstrate commendable performance, with promising indications of robust business revenue. The substantial revenue figures further suggest these enterprises predominantly fall within the category of medium-sized businesses. However, an examination of the evidence gleaned from participant responses, particularly pertaining to revenue in accommodation establishments, reveals most of these establishments qualify as micro-businesses, in accordance with the SA definition of SMEs, in view of their annual revenue below R5 million, with only one participant exception.

7.4.2 Challenges

Based on the challenges found, the skills gap has been identified as a vital aspect in these businesses. The findings indicate that middle and lower management still lacks computer

skills, with the data indicating a need for training and development of technical skills, particularly for lower management. As the lower managers are involved in dealing with operational issues on a day-to-day basis, having adequate computer skills becomes essential for efficient and effective performance. Investing in training and development programmes can enable lower management to leverage technology, improve productivity, and streamline operational processes.

By bridging the skills gap, SMEs can empower their lower management to make informed decisions, leverage technology-driven solutions, and contribute to overall business growth and success. This implies a gap in skills shortage, due to advanced technology, as there is a need for training, so the business can keep up with changes brought by technology. The difficulties listed include a lack of infrastructure, insufficient funding, the cost of implementation, and a lack of awareness, as well as inconsistent governmental policies, insufficient skills, and training. Inadequate power supply, widespread corruption, a poor educational level, along with insufficient knowledge, and more, show the eagerness and willingness of the SME to have a positive attitude in engaging top management and the employees at large. Good management is crucial in encouraging ICT adoption, and TMS is critical in empowering staff to accept technology.

Based on the findings the respondents have varying views on the level of government support they receive for ICT use in their businesses. Overall, the participants mentioned obtaining financial assistance from the government was not only difficult but also time-consuming. The respondents indicated their support from government varies, as in some instances, the turnaround time to respond for support serve as a restraint, in addition to not being informed regarding the kind of services available to them. This is more pertinent now there is digital space that requires funding, such as for network connectivity on uploading content.

The data underscores the pivotal role of government support in facilitating the operations of these businesses, as evident in the responses indicating a substantial need for assistance across various governmental domains. As the business landscape undergoes a transformation, marked by a shift towards technological innovation and digital content creation, particularly accentuated by the impact of the COVID-19 pandemic, there is an

imperative for adaptive changes in government interventions. Evolving business dynamics necessitate a re-evaluation and recalibration of government support mechanisms, to better align with the contemporary demands of businesses, particularly those leaning towards digital innovation and resilience without the means to adopt ICTs.

7.5 HYPOTHESES TESTING

The following key areas were tested for hypotheses based on the study objectives and literature review. The following sub-sections address the primary hypotheses for this investigation; each premise is repeated below with a Cronbach's reliability score.

H1: The impact of Top management support (TM) on attitudes towards ICT adoption (ATT) will be positive. (0.737)

H2: The impact of stakeholders (SH) on attitudes towards ICT adoption will be positive. (0.849)

H3: The impact of benefits of ICT for business (BIB) on attitudes towards ICT adoption (ATT) will be positive. (0.910)

H4: The impact of ICT challenges (CIT) on attitudes towards ICT adoption (ATT) will be negative. (0.834)

H5: The impact of business performance (BP) on attitudes towards ICT adoption (ATT) will be positive. (0.900).

H6: The impact of government support (GS) on attitudes towards ICT adoption (ATT) will be positive. (0.963)

H7: The impact of competition and suppliers (CS) on attitudes towards ICT adoption will be positive. (0.527)

7.5.1 Sub-construct for the conceptual framework

Amron *et al.* (2019) and Majengo and Mbise (2022) explain top management constitutes a group of executives that sets policies and makes organisational decisions. Its assistance is critical to, for example, successfully implement ICT such as cloud computing in the enterprise. TMS thus becomes fundamental to create a healthy organisational climate and provide sufficient resources for SMEs to adopt new technology breakthroughs (Karkonasasi *et al.* 2016). According to Kim *et al.* (2017), senior management support is more crucial than resources or IT capacity where adoption is concerned. As a result,

without senior management backing, the decision to embrace “software as a service” is unlikely to be successful (Martins, Oliveira and Thomas *et al.* 2016: 19-33).

Lutfi (2022) clarifies the level of assistance senior management provides for implementing innovative and even pioneering technology in the workplace, is referred to as TMS. At organisational level, TMS is one of the top three crucial determinants in IT innovation adoption. In addition, studies on the adoption of new technologies based on the TOE framework, show TMS significantly and favourably influences an organisation’s choice to adopt new technologies (Lutfi 2022).

According to Chege *et al.* (2019), technology breakthroughs can improve organisational performance when existing opportunities are exploited through entrepreneurial strategies, actions, and behaviours. Organisations with strong management backing for innovative technologies are, furthermore, more likely to implement social commerce. In addition, support from management is a key factor in creative approaches to work processes and modifying daily practices, procedures and processes for successful enactment.

The biggest challenge in ICT use was, nonetheless, discovered to be the nature of SMEs and owner-manager involvement in the ICT adoption process, including specific and advanced technical features and complex administrative function executions (Gono *et al.* 2013).

Malodia *et al.* (2023) assert SME leaders must engage in digital transformation by demonstrating their commitment, providing resources, fostering positive relationships, and facilitating leader-member social interaction, as well as boosting self-esteem, encouraging positive behaviours, and communicating “job-to-be-one” innovation techniques. The introduction of new technology relies on the intuitive dynamic abilities of SME leaders. Younger members of influential families frequently influence the SME to adopt advanced digital technologies.

Okundaye *et al.* (2018) posit ICT adoption affects an organisation’s flexibility; businesses with ICT-adopting executives are more likely to outperform their competitors and offer distinctive products and services. This is confirmed by Malodia *et al.* (2023), who advise ICT has been used by top SME executives to boost product and service innovation and gain a competitive edge. Moreover, ICT improves organisational efficiency and facilitates

wise decision-making so that business prospects may be explored, and benefits maximised (Okundaye *et al.* 2018). In accordance with Shin and Cho (2022), employees and business partners can be directly impacted by ethical leadership inside an organisation, ultimately resulting in the development of favourable ethical attitudes.

In the opinion of Zahoor *et al.* (2023), to foster a good attitude toward these technologies in SMEs and assist digital transformation, managers must utilise their digital abilities in their work by practically applying digital technologies such as AI, data analytics, and blockchain. Digitally literate managers can deal with the SME's digital transformation through critical and innovative ICT use (Okundaye *et al.* 2018), assisting SME leaders in making decisions regarding ICT adoption that will advance their goals for innovation, growth, profitability, and competitiveness.

Sharma *et al.* (2022), for example, found a positive correlation between top management championship and adoption of electro magnetic resonance (EMR) technology by US hospitals. To ensure technology adoption in a firm, top management needs to assign resources, create and implement policies and procedures that influence control and communication, and plan and observe processes to facilitate effective relationships between line managers and the IT team. Khin and Ho (2018) attest managerial readiness was found significantly and favourably impacted by perceived benefits. Therefore, it is hypothesised:

H1: The impact of Top management (TM) on attitudes towards ICT adoption (ATT) will be positive.

Dholakia and Kshetri (2004, cited in Nam *et al.* 2021) aver internal factors that affect an organisation's decision to adopt ICTs have been identified as: company characteristics, history with and attitude toward technology, and strategy pursued. In a similar vein, discovered internal factors such as organisational culture, internal ICT resources and expertise, and perceived ICT benefits all affect ICT adoption. According to Nam *et al.* (2021: 553), three factors influence the adoption of innovation: "individual (leadership attitude toward change), internal organisational structure (centralisation, complexity, interconnectedness, the number of employees, and organisational slack), and external organisational characteristics (system openness)". Furthermore, technological factors are

deemed to be all factors, both internal and external, relevant to the firm. These technologies include not only those currently in use, but also those widely available in the market (Nam *et al.* 2021).

Alkhateeb and Abdalla (2021) state the theory applied in the IT context predicts the determinants of IT adoption, for example, used these factors to predict the intention to use social networking sites. Their findings revealed that standard TPB variables had a positive influence on the intention to use social media.

External factors are further posited by Dholakia and Kshetri (2004, cited in Nam 2021); to be found at three different levels: industry, macroeconomic, and national policy. These external factors impact the general and competitive environment in which a specific firm must operate. Marangunić and Granić (2015) indicate the TAM assumes two variables, PEOU and PU, play a mediating role in a complex relationship between system characteristics (external variables) and potential system use.

In the opinion of Khan *et al.* (2021), being a service industry that combines a variety of goods and services from different stakeholders, tourism is currently one of the fastest growing businesses in the world. Accordingly, e-commerce and the adoption of ICT offer significant economic possibilities. By providing a tourism and hospitality product, various activities and information are combined, allowing for the distribution of specific products and establishment of value-adding chains.

Okundaye *et al.* (2018) advise the ability to streamline work processes, encourage effective communication and coordination between various value chain partners, boost productivity, and enhance customer service that leads to increased customer satisfaction, are some tangible ICT adoption benefits. Positive effects could, therefore, be anticipated in the private sector, should adequate infrastructure, qualified IT people, and funding for ICT investments be provided/made available.

Subjective criteria and their attitude toward ICT are stated by Jalloh (2022) to determine motivation of the executive to adopt the technology, which establishes the central idea of the theory of reasoned action (TRA). To develop executive intention and belief in IT, it has become a necessity that government and NGOs work together. Khin and Ho (2018) advise the results demonstrate managerial, operational, and technological preparation are

positively impacted by financial capacity. The effect of consumer needs on managerial readiness was, likewise, positive.

Therefore, it is hypothesised:

H2: The impact of stakeholders (SH) on attitudes towards ICT adoption will be positive.

According to Chatterjee *et al.* (2022), entrepreneurial behavioural control is regarded an important variable, because it can reflect an individual's perception of the extent to which the entrepreneur can control the behaviour that favours intention. There is a positive relationship between behavioural control and intention.

IT skills and expertise are found by Khin and Ho (2018) to positively affect SME performance. In addition, ICT aspects that SMEs view as benefits include cost savings, logistical advantages, shortened time to market, and greater sales, as well as strengthened relationships between businesses, and favourable organisational effects. ICT further positively impacts SME productivity through its cost-cutting capabilities.

In the opinion of Chatterjee and Kar (2020), PEU has been linked in numerous studies to the intention to use new technology. For instance, in the use of new technology, it is noted PEU has a favourable relationship to actual new technology use (Chatterjee and Kar 2020). Furthermore, PEU has a favourable relationship with using smartphone technology, even when using social media through a mobile platform. Najib and Fahma (2020) advise the TAM can, in theory, predict factors influencing digital payment adoption in SMEs. According to the developed model, usefulness, and ease of use influence perception, which explains the behaviour of digital technology adoption.

Awa *et al.* (2015) found successful ICT adoption in organisations is impeded, notwithstanding technology benefits through, for example, competitive advantages. SME owners-managers were of the opinion the benefits they could derive from ICT use (PU) would add to the success of their company. These owners-managers as decision makers can develop new strategies to improve business operations through ICT devices.

Khin and Ho (2018) advise it has been empirically demonstrated that utility influences people's adoption of digital technologies. As stated by Okundaye *et al.* (2018), depending on the industries, ICT adoption appears to have a favourable impact on productivity, both

directly and indirectly, with much potential to contribute to sustainable development. ICT benefits business success in terms of output, earnings, market value, and market share. Therefore, it is hypothesised:

H3: The impact of benefits of ICT for business (BIB) on attitudes towards ICT adoption (ATT) will be positive.

According to Khan *et al.* (2021) many academics advise incorporating additional factors to boost the TPB model's explanatory power, even though its determinants are typically sufficient for predicting intention and/or behaviour. It is believed while attitudes and arbitrary standards cannot directly influence how organisations behave, decision-makers' intentions can. In addition, other elements can also impact how SMEs behave (Erul *et al.* 2020).

Yuriev *et al.* (2020) and Salimon *et al.* (2021) emphasised the need for researchers to consider variables that can directly impact behaviour. Barriers and dynamic capacities were added to the TPB model as direct factors that might influence how businesses behave. Khan and Mihaisi (2023) view obstacles as issues impeding CE adoption, while dynamic capabilities are seen as factors (or organisational competency) that might aid adoption. Intention and dynamic skills of SMEs are key factors of their CE behaviour, whereas impediments are also a substantial (but negative) determinant that generates the intention-behaviour gap (Sohal *et al.* 2022). SMEs do not generally adopt e-commerce, because of concerns regarding security and a lack of cyberlaw, (Salimon *et al.* 2021). Therefore, it is hypothesised:

H4: The impact of ICT challenges (CCICT) on attitudes towards ICT adoption (ATT) will be negative.

Santos-Jaén *et al.* (2022) advise that past researchers reveal a considerable beneficial ICT influence on performance. Chege *et al.* (2019) indicate the connection is less obvious in the hotel industry. ICT adoption, according to some experts, is a competitive advantage factor, as it enhances the customer experience, which can improve hotel performance. ICT adoption is not, however, cited by other scholars as a crucial determinant in obtaining extraordinary company performance. This is due to their belief the introduction of technology may not improve hotel performance. ICT adoption is not specifically meant to

raise productivity; instead, these cutting-edge systems are intended to improve customer service and expand the range of available services. This is an indication of the different views from previous researchers whether ICT will assist in the performance of tourism SMEs (Santos-Jaén *et al.* 2022).

It is highlighted by Chatterjee *et al.* (2022) that PU is characterised as an ephemeral indicator of a person's belief that using a system will improve their ability to accomplish their job; this is consistent with Davis's TAM (1989). In addition, the SME authority will be aligned to accept IT when it believes using digital technology will boost its performance. PU is thus positively correlated with people's inclination to use new technology.

Basak *et al.* (2022) confirm SME performance has benefited from the skills and understanding of ICT aspects; SMEs view these benefits as cost savings, logistical advantages, shortened time to market, and greater sales, as well as strengthened relationships between businesses, and favourable organisational effects. ICT has a positive impact on SME productivity in its cost-cutting ability through technology adoption.

Pinho and Prange (2017) posit innovation and scientific knowledge enhance company performance. Nevertheless, SMEs are more likely than larger competitors to face several issues and dangers due to their small size and frequent lack of financial and human resources, resulting in a SME sector with a hostile viewpoint toward innovation, generally. In accordance with Okundaye *et al.* (2018), ICT adoption will assist companies in growing and succeeding, which will benefit society by creating jobs, decreasing poverty, and bolstering the local economy. This is consistent with the study, which shows a significant positive relationship between business performance and attitude towards ICT adoption, supporting hypothesis (H5) of a positive business performance (BP) impact on attitudes towards ICT adoption.

According to Malodia *et al.* (2023) better and more efficient digital resource use leads to coordination and enhanced corporate performance. The premise was that implementing digital technology will enhance business performance. Therefore, the hypothesis is as follow:

H5: The impact of business performance (BP) on attitudes towards ICT adoption (ATT) will be positive.

As determined by Khan (2019), ICT has positively impacted organisations in the industry, evidenced from their ability to use ICT for internal efficiencies, processing and disseminating information, managing distribution and creating new avenues for future commercial growth with a global audience.

Murati-Leka and Fetai (2021) assert the overall success of the IE is greatly influenced by the government. In addition, the starting and scaling phases of start-up enterprises are likely to be accelerated by government policy and the regulatory framework. Moreover, government function can be viewed through three lenses: encouraging innovation, maintaining infrastructure, and conceiving and funding “entrepreneurship”. Governments may provide the physical and technological infrastructure required for IE participants, indicating the effect government has on corporate innovation success, depends on both external and internal factors.

Maryama and Suhong (2022) agree ICT adoption and use also rely on physical infrastructure, favourable legal and regulatory frameworks, sufficient research and development, and sustainable policies. In this regard, the Nigerian government demonstrated the crucial role they played in encouraging ICT adoption by Nigerian SMEs, since most needs may be met and put in place through the government’s effective governance, support, and leadership. Notwithstanding their tremendous achievement, entrepreneurs are nonetheless impacted by government policy in some way. Due to this interdependent relationship, policies that promote entrepreneurship and growth are essential. According to Murati-Leka and Fetai (2021), both external and internal factors affect how well a corporation innovates, which impact how the government performs.

Environmentally, government support and policies are deemed more important for the business sector. As a result, government regulations and incentives (both financial and non-financial) to improve environmental performance should be prioritised. It is also suggested environmental agencies and local government councils disseminate environmental monitoring data. In other words, public participation and government legislation are critical for environmental and sustainability policies in a variety of countries.

As a result, in rising economies, the link between stakeholders and government authorities should be improved to encourage enterprises to adopt environmental protection policies (Anwar and Li 2021).

Therefore, the hypothesis is:

H6: The impact of government support (GS) on attitudes towards ICT adoption (ATT) will be positive.

Khan (2019) posits tourism and hospitality businesses have a variety of options for achieving ICT-based competitive advantages, including creative online marketing campaigns, ongoing effective communication with several organisational stakeholders, and a variety of other techniques. E-tourism is stated by Willaddara (2023) to control the SME's ability to compete, reorganizing internal procedures through intranets, increasing transactions with reliable partners, and communicating with all its stakeholders and customers via the internets.

Mulungula *et al.* (2022) suggest ICT use enables SMEs to avoid competition, while emphasising the significance of competitive pressure in innovation adoption. One major factor in IS adoption is competitive pressure. As a result, these authors accentuate how IT deployment affects the competitive environment. In a clear way, the research highlights how competitive pressure is a significant element influencing ICT adoption. Nevertheless, competition has a relatively minor impact on adoption in small enterprises, other writers have been shown to disagree. Thus, while with an unclear indication, the significance of competition on technology adoption has been proven.

In the opinion of Chege *et al.* (2019), the level of competition, client demands, market demand, and governmental regulations may all impact a company's profitability. Further to this, SME performance is significantly impacted by technological innovation, while it can also be impacted by additional factors such as supplier pressure and distribution issues. These results show IT innovation affects entrepreneurs' ability to increase business productivity, with other elements that could affect a company's performance that include competition, market dynamics, and shifts in client preferences.

Basak *et al.* (2022) advise innovative ICT application helps firms not only lower costs but also increases efficiency and forges connections with various clients. Overall, previous findings show ICT has a variety of beneficial effects on SME growth and competitiveness. Farida and Setiawan (2022) posit competitive advantage are positively impacted by company tactics, where improved business tactics increase SMEs' comparative advantage. Sharma *et al.* (2022) attest to the attempt by hotels to adopt standards similar to other hotels in the industry, to thereby mimic competition with the aim of achieving legitimacy in the marketplace. According to Basak *et al.* (2022), ICT use has a positive and significant influence on SMEs, which can be a competitive advantage. Sharma *et al.* (2022) also maintain a positive relationship has been found between coercive pressure and technological adoption. Therefore, it is hypothesised:

H7: The impact of competition and suppliers (CS) on attitudes towards ICT adoption will be positive.

- **TMS impact on attitudes towards ICT adoption**

Ha1: The impact of Top management support (TMS) on Attitudes (ATT) towards ICT adoption will be positive.

TMS accounts for 19.4percent ($R^2 = .194$) variance in ATT, $F(1, 122) = 26.737$, $p < 0.001$) which indicates TMS is a positive significant predictor of ATT ($\beta = .441$, $p < 0.001$). This means, as TMS (agreement that top management provides support in ICT adoption) increases, ATT (agreement on positive attitudes towards ICT adoption) increases (Table 6.54)

These findings indicate that when top management actively supports ICT adoption through encouragement, resource allocation, or strategic prioritisation, the overall attitudes within the organisation toward ICT adoption improve significantly and positively. An increase in TMS is associated with a corresponding increase in positive attitudes toward ICT adoption, emphasising the critical role of leadership in shaping organisational acceptance and readiness for technological change.

- **Stakeholder impact on attitudes towards ICT adoption**

Ha2: The impact of stakeholders (SH) on Attitudes (ATT) towards ICT adoption is positive.

SH accounts for 11.6 percent ($R^2 = .116$) variance in ATT, $F(1, 122) = 14.716$, $p < 0.001$) which indicates SH is a positive significant predictor of ATT ($\beta = .341$, $p < 0.001$). This means as SH (agreement that stakeholders provide support on ICT) increases, ATT (agreement on positive attitudes towards ICT adoption) increases (Table 6.55).

These findings indicate that support from stakeholders, such as suppliers, partners, customers, or other third parties, has a significant and positive impact on attitudes toward ICT adoption among tourism SMEs. As stakeholder support increases, so does the overall positive perception and attitude toward ICT adoption. This emphasises the role of external support networks in creating a conducive environment for ICT adoption, reinforcing the notion that stakeholder involvement is critical for driving technological acceptance and positive organisational attitudes.

- **The impact of ICT benefits in business (BIB) on attitudes towards ICT adoption**

Hypothesis

Ha3: The impact of benefits in business (BIB) of ICT for business on Attitudes (ATT) towards ICT adoption is positive.

BIB accounts for 13.5 percent ($R^2 = .116$) variance in ATT, $F(1, 122) = 17.486$, $p < 0.001$); which shows BIB is a positive significant predictor of ATT ($\beta = .367$, $p < 0.001$). This means as BIB (agreement there are ICT benefits for business) increases, ATT (agreement on positive attitudes towards ICT adoption) increases (Table 6.58).

These findings suggest when stakeholders in tourism SMEs recognise and agree on the benefits of ICT for their business, such as increased efficiency, competitiveness, or customer engagement, positive attitudes toward ICT adoption increase significantly. In essence, the stronger the belief in ICT's potential benefits, the more likely the business will be to embrace its integration and use. This accentuates the importance of highlighting the tangible benefits of ICT to drive acceptance and adoption within the sector.

- **The impact of ICT challenges on attitudes towards ICT adoption**

Hypothesis

Ha4: The impact of challenges of ICT (CICT) on attitudes (ATT) towards ICT adoption is negative.

CICT accounts for 7.4 percent ($R^2 = .074$) variance in ATT, $F(1, 122) = 8.961$, $P=0.003$) which indicates CIT is a negative significant predictor of ATT ($\beta = -.272$, $P=0.003$). This means, as CIT (agreement that there are challenges of ICT) increases, ATT (agreement on positive attitudes towards ICT adoption) decreases.

These findings indicate that recognising or perceiving ICT challenges, such as high costs, a lack of skills, technical issues, or resistance to change, negatively impacts attitudes toward ICT adoption among tourism SMEs. As stakeholders become more aware of the challenges associated with ICT, their overall attitude toward adopting these technologies becomes less positive. This underscores the importance of addressing and mitigating these issues to foster a more optimistic outlook on ICT adoption. Identifying and overcoming obstacles is critical for improving attitudes and increasing the likelihood of successful ICT integration in the workplace.

- **The impact of business performance on attitudes towards ICT adoption**

Hypothesis

Ha5: The impact of business performance (BP) on attitudes towards ICT adoption is positive.

BP accounts for 13 percent ($R^2 = .130$) variance in ATT, $F(1, 122) = 16.799$, $P=0.001$), which indicates BP is a positive significant predictor of ATT ($\beta = .361$, $P=0.001$). This means, as BP (agreement on the positive increase of business performance) increases, ATT (agreement on positive attitudes towards ICT adoption) increases (Table 6.59).

These findings suggest when stakeholders believe ICT adoption improves business performance, such as increased efficiency, revenue, customer satisfaction, or competitiveness, they are more likely to adopt ICT. In essence, the belief that ICT contributes to business success encourages a more positive attitude toward its adoption.

The importance of demonstrating the tangible benefits of ICT to foster positive attitudes and drive adoption within the tourism SME sector are thus emphasised.

- **The impact of government support on attitudes towards ICT adoption**

Ha6: The impact of government support (GS) and attitudes towards ICT adoption is positive.

GS accounts for 8.8 percent ($R^2 = .088$) variance in ATT, $F(1, 122) = 10.834$, $P=0.001$), which indicates GS is a positive significant predictor of ATT ($\beta = .297$, $P=0.001$). This means, as GS (agreement there is government support) increases, ATT (agreement on positive attitudes towards ICT adoption) increases (Table 6.56).

These findings suggest when tourism SMEs perceive adequate government support (for example, funding, training programmes, policy initiatives, or infrastructure development), their attitudes toward ICT adoption improve significantly. Essentially, government support increases the likelihood of positive attitudes toward adopting ICT. This stresses the importance of government involvement in creating an environment conducive to ICT adoption, encouraging SMEs to incorporate technological advancements into their operations.

- **The impact of competition and suppliers on attitudes towards ICT adoption**

Ha7: The impact between competition and suppliers (CS) and attitudes towards ICT adoption is positive.

CS accounts for 13.4 percent ($R^2 = .134$) variance in ATT, $F(1, 122) = 17.397$, $P=0.001$), which indicates CS is a positive significant predictor of ATT ($\beta = .367$, $P=0.001$). This means, as CS (agreement on competition and suppliers) increases, ATT (agreement on positive attitudes towards ICT adoption) increases (Table 6.57).

These findings indicate when tourism SMEs perceive strong competition and are influenced by suppliers, their positive attitudes toward adopting ICT improve. Competitive pressures drive businesses to innovate and adopt new technologies to stay competitive, while suppliers may encourage or facilitate ICT adoption through support or technological solutions. This demonstrates the external business environment, particularly competitive dynamics and supplier relationships, has a significant impact on shaping positive attitudes

toward ICT adoption, driving SMEs to adopt ICT as a means of gaining or maintaining a competitive advantage.

7.5.2 Key gaps based on the conceptual frameworks

According to these findings, the identified gap revolves around the varying influences of different factors on attitudes toward ICT adoption among tourism SMEs, emphasising the need for a more comprehensive approach to address both positive and negative drivers of ICT adoption.

Specifically, the key gaps identified are:

Uneven influence of support factors: While top management, stakeholders, the government, and perceptions of business performance all have a positive influence on attitudes toward ICT adoption, their impact varies. The uneven strength of influence indicates that support is not uniformly available or leveraged, resulting in disparities in how SMEs perceive and adopt ICT. There is a need for a more consistent and comprehensive approach to support, particularly from stakeholders and the government, to foster stronger positive attitudes toward ICT adoption.

Negative impact of ICT challenges: The study found that perceived ICT challenges (such as high costs, a lack of skills, and technical issues) have a negative effect on attitudes toward adoption. This gap suggests when these challenges are not effectively addressed, efforts to promote ICT adoption may be undermined. The existence of these barriers highlights the critical need for targeted interventions, such as training, financial incentives, and technical assistance, to overcome these challenges and positively shift attitudes.

Insufficient emphasis on competitive pressure and supplier Influence: The findings indicate that competition and supplier influence significantly impact attitudes towards ICT adoption. However, when SMEs do not fully engage with these external pressures as growth opportunities, there will be a gap in leveraging competitive dynamics and supplier relationships as strategic drivers of ICT adoption. SMEs must better understand and capitalise on these external factors to improve their ICT adoption strategies.

Limited integration of benefits and performance perception: Attitudes are positively influenced by perceptions of improved business performance and the benefits of ICT, but

this influence is only mild. This suggests a gap in the awareness and communication of the potential ICT adoption benefits for business performance. SMEs might not fully understand or be able to measure the advantages, which could result in underinvestment in ICT. Better training, awareness campaigns, and verifiable case studies, demonstrating how ICT adoption can directly improve business performance, are needed to close this gap.

As a result, the primary gap identified in this study is the need for a more comprehensive approach that addresses both enablers and barriers to ICT adoption among tourism SMEs. While positive influences exist, the presence of significant challenges, as well as the uneven impact of supportive factors, indicate the current efforts are insufficient to fully drive positive attitudes and widespread ICT adoption. Closing this gap will necessitate coordinated efforts that include increased support from management, stakeholders, and the government, as well as targeted interventions to mitigate challenges and better leverage competitive pressures and supply relationships.

7.6 IMPLICATIONS

The study findings include ICT adoption implications in the tourism sector for SMEs in the EC. The study sheds light on how the integration of ICT tools affects SMEs, particularly in the local tourism sector.

7.6.1 Implications for tourism SME practice

The practical implications are the new understanding and knowledge on ICT adoption by tourism SMEs brought by this study. SA's tourism industry has experienced strong economic growth and service expansion under the new government. Furthermore, SMEs play an important role in this sector, significantly improving quality of life and stimulating GDP growth.

Considering this, it is essential to provide these businesses with the foundational support they need for SMEs to fully use ICT. The study conclusions indicate SMEs generally have a positive attitude toward ICT adoption. The perceived advantages—such as the possibility of business expansion, enhanced positioning, and a competitive edge—underline this optimism. In view of this positive attitude, it is conceivable stakeholders, and the tourism

sector will be willing to assist these businesses, particularly in a supportive setting, because the transition to digitisation benefits the business strategically.

Government support can help businesses overcome obstacles, particularly in addressing aging infrastructure. One significant obstacle is the skills gap, noted at staff level, which calls for targeted training for managers and employees alike, particularly at lower levels. Additionally, government support is crucial in encouraging SMEs to improve their business capacities. The importance of ICT is, furthermore, increased in the tourism industry context, where a complex global network of stakeholders operates. Its vital role in tying these businesses together across regional borders highlights how crucial government support is in creating an atmosphere that allows SMEs to prosper and grow internationally.

7.6.2 Implications of ICT theory on SMEs

The theoretical implications for this study are the theories that bring new understanding and knowledge through this study. The proposed integrated ICT theory framework (Figure 6.1) outlines the importance of several factors, including business in ICT, benefits, challenges, and government support, as well as TMS, business performance, supply and competition, along with stakeholders, and attitude, in promoting ICT adoption among SMEs. As such, it becomes necessary to consider these theoretical dimensions, as well as other frameworks, for technology acceptance when adopting ICTs.

The results demonstrating the positive impact of ICT adoption's perceived business benefits are in line with TAM. Attitudes toward ICT adoption are largely influenced by their perceptions of its usefulness, which is influenced by perceived benefits. Furthermore, the strong correlation between attitudes regarding ICT adoption and actual ICT use supports the TAM's central claim that attitudes directly influence people's usage behaviour. Perceived benefits, therefore, contribute to ICT's PU, which is a major factor of people's attitudes toward adoption. Furthermore, the TAM's premise that attitudes directly influence individuals' usage behaviour is supported by the substantial link between attitudes regarding ICT adoption and actual ICT use.

Regarding the TPB, the results regarding how attitudes toward ICT adoption are impacted by TMS align with this theory. TMS can thus be interpreted as a form of subjective norm, signifying influential individuals or organisations that affect attitudes and intentions. The

positive effect of TMS on attitudes supports the TPB's claim that behavioural intentions are influenced by subjective norms.

This strategic consideration is particularly important when navigating the existing complex and ever-changing business environment. The TAM and TPB theories provide entrepreneurs with insightful advice, particularly in view of the complex and unstable nature of the current business environment. Through an understanding of the complex environment in which they work, entrepreneurs can apply these theories to improve overall productivity and promote sustainability in their businesses. Accepting these frameworks becomes essential for SMEs trying to adjust and prosper in the constantly changing business and technology environment. The introduction of new theories will, therefore, provide entrepreneurs with innovative perspectives, in addition to development of new system models. These models seek to understand the operational dynamics of businesses and facilitate their growth.

Addressing the barriers to ICT adoption is critical, as they significantly impact the growth and sustainability of tourism SMEs. The importance of SMEs in the broader business landscape cannot be overstated, as they play a significant role in both economic growth and job creation, both globally and in SA, collaborating with the government and industry to boost employment numbers. Considering their economic importance, overcoming barriers to ICT adoption within SMEs is critical not only for individual business development but also for overall societal and economic advancement. Effective strategies to address these impediments are thus required to unlock the full potential of SMEs and ensure their continued contribution to economic vitality and job creation.

7.7 RECOMMENDATIONS BASED ON THE STUDY RESULTS

The recommendations of this study are based on the empirical findings discussed below.

7.7.1 Theoretical framework developed using variables identified from literature review

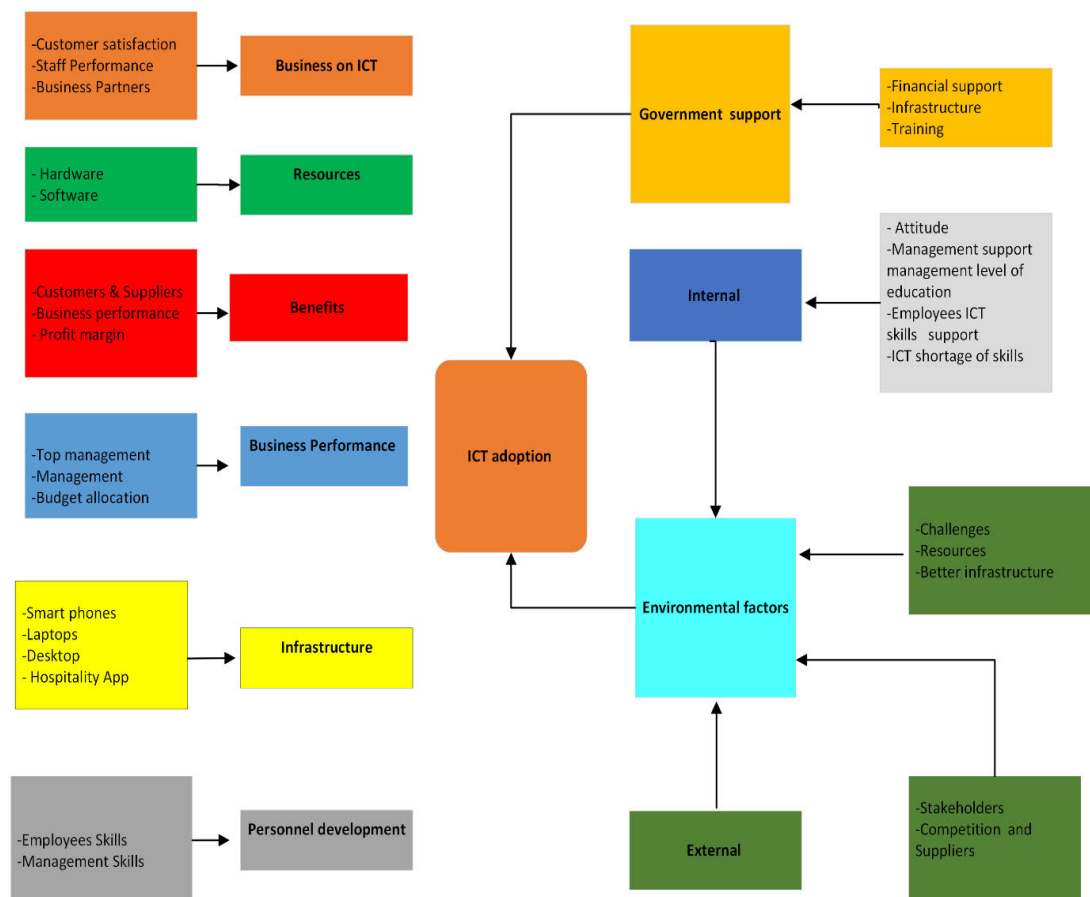
An extensive literature search was used to carefully define the research objectives, hypotheses, and design of the data collection instrument(s). The comprehensive literature review served as a foundational reservoir, critically informing the identification and

selection of variables crucial to the design of the research study (Figure 7.1). This process demonstrates the scholarly rigor used to ground the research framework in existing academic discourse.

The literature review reveals the presence of a wide range of impediments confronting tourism entrepreneurs, posing potential success and growth barriers. These identified factors have been rigorously characterised and systematically classified into distinct research themes. This meticulous categorisation served a dual purpose, not only were the multifaceted challenges identified in the literature structured, but the researcher also develops a thematic framework, directing and concentrating the research study's investigative focus. The result is reflected in the theoretical framework (Figure 7.1)

7.8 THEORETICAL FRAMEWORK BASED ON THE LITERATURE

Figure 7.1: Theoretical Framework

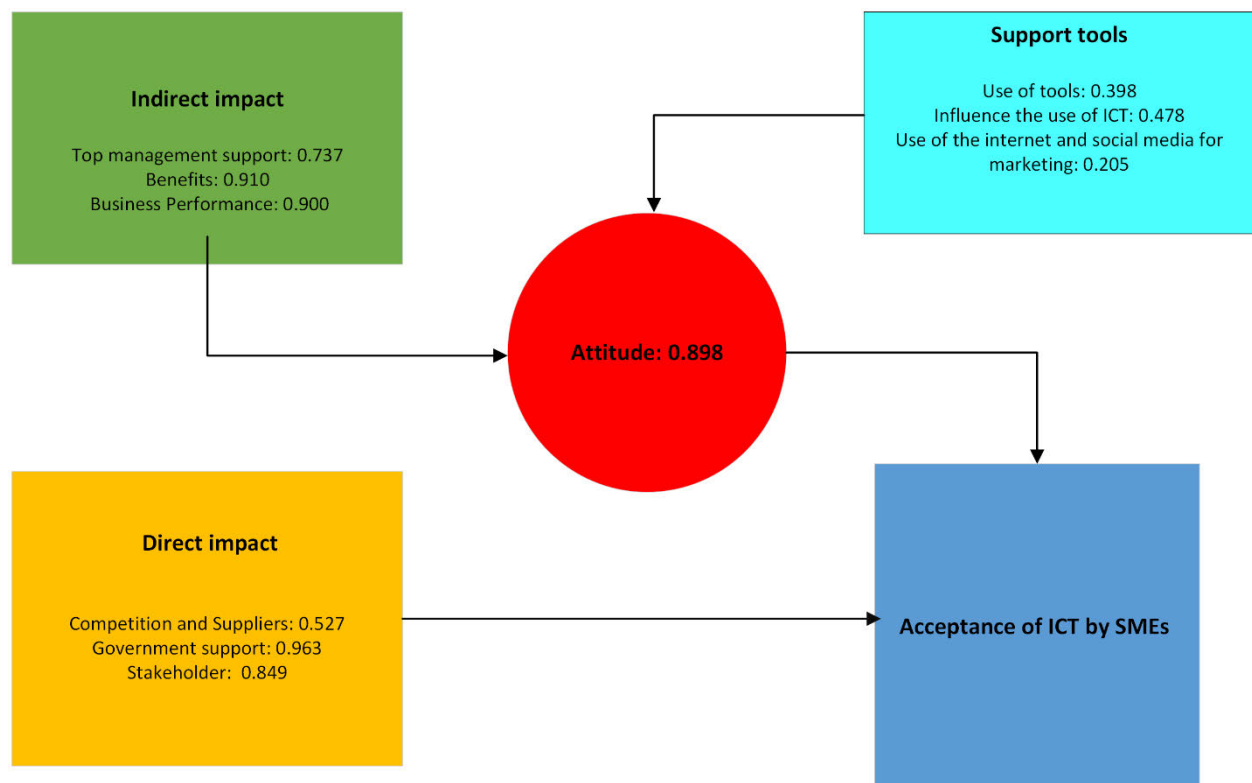


Source: *Researcher generated*

The framework was developed through a meticulous analysis of both secondary and primary data, guided by insights gleaned from the study's conceptual framework (Figure 7.2). The primary, empirical data were sourced from a systematic examination of a wide range of variables, all deemed by respondent SMEs to significantly impact ICT adoption in the context of EC tourism SMEs. This rigorous analytical approach ensured the research study's subsequent stages were built on a solid foundation.

7.9 PROPOSED INTERGRATED CONCEPTUAL FRAMEWORK

Figure 7.2: Conceptual Framework



Source: Own research

7.10 CONCLUSIONS

Stakeholders directly impact ICT adoption in SMEs. However, it is important to note this impact does not extend to influencing SMEs' overall attitudes toward ICT. The adoption of ICT in the tourism industry is found to not be significantly impacted by stakeholder support. This suggests attitudes regarding ICT adoption are not significantly influenced by the support of external stakeholders, such as partners, suppliers, or customers.

While stakeholders can help shape an environment that promotes ICT adoption, SME attitudes remain distinct and are influenced by a variety of internal and external factors. This nuanced distinction emphasises the importance of distinguishing between direct stakeholder impact on ICT adoption and broader attitudinal considerations within SMEs. The government also has a direct impact and important role in influencing ICT adoption in businesses. This influence is manifested through the provision of essential infrastructure for ICT integration, as well as the extension of supportive measures. However, it is worth noting government influence does not directly affect business attitudes toward ICT adoption. Rather, encouraging such adoption is aided when businesses receive substantial support from government initiatives. The nuanced interplay between government support, infrastructure provision, and attitudinal shifts demonstrates the government's multifaceted role in promoting ICT adoption in the business landscape.

Competition has a direct impact on ICT acceptance in SMEs, regardless of SME attitudes. This influence is regarded as an external factor outside the control of individual SMEs, indicating its importance as a contextual determinant. The inextricable link between competition and ICT acceptance further highlights the external factors that influence the technological landscape for SMEs. It is worth noting this impact occurs irrespective of SME attitudes, highlighting the deterministic nature of competition as an external factor in ICT adoption.

Among tourists, ICT adoption is greatly boosted by suppliers and competition, which implies industry ICT adoption can be influenced and supported by market competition, as well as the accessibility to ICT-related services and products from vendors. Suppliers impact SME ICT adoption in the tourism sector significantly. When SMEs lack in-house IT expertise, suppliers have a greater direct impact on ICT adoption. Supplier challenges in this context can result in a shortage of services required for optimal SME functionality. As a result, disruptions in the ICT supply chain from suppliers can impede SMEs' ability to operate at full capacity, emphasising the importance of external suppliers for seamless ICT integration and operation in the tourism sector.

TMS indirectly impacts attitudes, with a positive attitude toward such support being associated with better outcomes in ICT adoption. Support from top management has a

significant positive effect on attitudes toward tourism sector ICT adoption. This means, when senior management promotes ICT use, it contributes to positive attitudes among employees or participants toward incorporating ICT into their operations. Similarly, perceived benefits from ICT adoption indirectly influence attitudes, and a positive outlook can benefit the overall business. Furthermore, ICT adoption in the tourism industry is influenced by the perceived ICT benefits for business. Participants are, therefore, more likely to use ICT solutions when they are aware of the advantages and benefits of ICT for their company.

Business performance has an indirect impact on attitudes, with higher performance levels associated with greater ICT adoption, however, ICT adoption in the tourism sector is not significantly influenced by business performance. This indicates the adoption of ICT technologies is not directly impacted by the performance or success of a business. Nevertheless, businesses face challenges that indirectly impact attitudes, which can influence the overall disposition toward ICT adoption. Furthermore, the businesses' proficiency in ICT use also indirectly impacts attitudes, shaping the overall acceptance of ICT within the business. These complex interconnections highlight the intricate relationship between managerial support, perceived benefits, business performance, and challenges, in addition to ICT proficiency, with attitudes toward adoption.

7.11 RECOMMENDATIONS

TMS: The executive teams/policymakers may support and encourage initiatives that improve senior management's comprehension and acceptance of ICT use in the tourism industry, such as knowledge-sharing platforms, awareness campaigns, and training initiatives. The results show that increasing TMS has a significant influence on attitudes toward ICT use. To promote the benefits of ICT adoption for businesses, executive team should focus on increasing awareness of the benefits of ICT adoption in the travel and tourism sector. This may include showcasing case studies, present success stories, and organising workshops or seminars to demonstrate how ICT can improve customer experiences, operational effectiveness, and overall business performance. Executive teams can encourage businesses to consider implementing ICT solutions by emphasising their benefits.

Examine reasonably priced ICT solutions: Despite the study findings that SMEs do not consider software and hardware to be expensive, it is critical for businesses to investigate reasonably priced ICT solutions tailored to their specific needs. To determine the ICT investments that will yield the greatest ROI for their operations, SMEs should perform a cost-benefit analysis.

Government support: Advocate for more government support to promote ICT adoption among SMEs. Focus on improving infrastructure to create a favourable environment for technological integration. It is recommended governments provide a favourable environment for these SMEs, as well as technologically viable infrastructure. SMEs ought to seek government support, because it is crucial to interact with government organisations and programmes that offer support for technical improvements, particularly considering the difficulties faced by SMEs in adopting new technologies. SMEs should investigate any grants, loans, or other financial aid that may be available to lessen the cost of ICT adoption.

Skills Development Initiatives: Implement educational programmes to close the skills gap among SME employees and managers, particularly at the lower levels. Encourage continuous learning to improve ICT knowledge and proficiency. Invest in technology education and training; SMEs may consider investing in technology education and training programmes to address the technological innovation and skill gaps. This can help employees and business owners develop the skills needed to keep up with technological changes. Collaboration with local educational institutions or requesting government funding for training programmes can be beneficial. The necessary training should be completed, but it should not be one-size-fits-all, as different businesses in this sector require different training, so customisation is critical.

Stakeholder involvement: Collaborate with stakeholders to create a supportive ecosystem for ICT adoption. Use external pressures, such as market trends, to encourage positive ICT attitudes and behaviours. To improve stakeholder collaboration, SMEs in the tourism, hotel, and travel industries should actively engage with a diverse range of stakeholders, including managers, employees, government agencies, and IT specialists, as well as vendors, and customers. Establishing strong relationships with these stakeholders is critical for ensuring the successful deployment and operation of ICT

systems. Based on the study findings, SMEs should recognise and capitalise on strong stakeholder support for ICT adoption. Employees, government initiatives, and industry experts are all potential sources of help. To increase ICT adoption, SMEs may also form partnerships with private businesses and IT firms. This collaborative endeavour has the potential to provide technical skills and resources that SMEs may lack. In collaborating and sharing knowledge with other enterprises in the tourism and associated sectors, SMEs benefit from industry collaboration and knowledge sharing. Creating networks or groups for businesses to share their insights, experiences, and best practices for technology adoption can be advantageous. This can help bridge the knowledge gap and solve problems collectively.

Addressing infrastructure challenges: Address frail infrastructure barriers with targeted government interventions. Ensure SMEs have access to the technological resources required for successful ICT implementation.

Promotion of positive attitude: Promote a positive attitude toward ICT adoption among SMEs by demonstrating its perceived benefits. Highlight how ICT integration can lead to business growth, improved positioning, and a competitive advantage. Due to the speed at which modern technology is developing, SMEs need to continue to be flexible and adaptable. Encourage a creative and ever-learning culture in the company. Recognise that technology is evolving and be willing to explore new ideas that can enhance business procedures and customer service.

Holistic approach to overcoming challenges: Create strategies to address the challenges SMEs face, recognising these as potential impediments to successful ICT adoption. Consider addressing challenges using a comprehensive, multifaceted approach. For instance, SMEs can benefit from industry collaboration and knowledge-sharing, in addition to establishing networks or groups to exchange experiences and best practices in technology adoption. This can help tourism SMEs to overcome challenges.

Global competence: Fostering competition and a strong supplier ecosystem, considering the positive impact competition and suppliers have on ICT adoption, governments can work to create a competitive market environment and a robust supplier ecosystem. This can include lowering entry barriers for ICT-related businesses, incentivising ICT innovation

and growth, and encouraging collaboration between suppliers and tourism businesses. Emphasise the significance of ICT in the global arena for SMEs that operate beyond local borders. Encourage SMEs to consider ICT adoption as a strategic tool for global competitiveness.

Policymakers, industry associations, and other stakeholders should, therefore, continue to promote the benefits of ICT adoption to encourage more SMEs to adopt and use ICT in their businesses. Overall, these recommendations emphasise the need for a comprehensive and supportive framework that addresses not only technological aspects but also the broader business environment, skills development, and collaborative efforts to foster successful ICT adoption among SMEs in the EC tourism sector.

7.12 CONTRIBUTION TO KNOWLEDGE

The findings show more work is required to support SMEs, particularly those in rural/semi-rural areas that face barriers such as insufficient skills and infrastructure due to their location. As a result, government policymakers must upskill business owners with relevant ICT training tailored to their specific needs, rather than providing one-size-fits-all training. The study goal was to investigate factors influencing ICT adoption by tourism SMEs in the EC Province of SA, to propose potential solutions for ICT adoption and business transformation.

7.13 CONTRIBUTION TO THE BODY OF KNOWLEDGE

- Understanding the function of TMS, the study emphasises the importance of TMS in promoting positive attitudes toward ICT adoption in the tourism industry. This discovery advances our understanding of the business elements that lead to the successful implementation of ICT initiatives.
- The research emphasises the importance of perceived ICT benefits for business in encouraging its adoption in the tourism sector. The study provides useful insights into the motivations underlying ICT adoption decisions in the sector, accentuating the beneficial influence of these perceived benefits.
- The findings reveal competition, and suppliers have a key role in pushing ICT adoption in the tourism sector, after identifying the role of competition and suppliers.

This information adds to our understanding of the external elements that can influence attitudes toward ICT adoption, with practical implications for organisations in terms of using competitive dynamics and supplier relationships to drive ICT adoption.

7.14 IMPLICATIONS FOR FUTURE RESEARCH

- The limited emphasis on challenges, based on the findings presented, leave an opportunity for future study, as challenges were not included in the SEM model. This suggests a possible vacuum in understanding the specific issues and impediments to tourism sector ICT adoption. More research and analysis are, therefore, required to identify and address these issues, which can substantially impact the acceptance and use of ICT solutions.
- Insufficient government support in the model indicates it was not included in the SEM model. This highlights a gap in understanding the impact of government policies, initiatives, and support programmes on ICT adoption in the tourism industry. Understanding the government assistance function and its possible impact on attitudes and behaviours toward ICT adoption is critical for policymakers developing effective strategies and policies.
- ICT adoption results in various effects on the environment and society, requiring further investigation. Future research should, thus, examine the possible advantages or difficulties pertaining to ethical issues, societal well-being, and sustainability from ICT adoption in SMEs.

7.15 CONCLUSION

This study aimed to investigate the internal and external factors influencing ICT adoption among SMEs in the tourism sector of the EC Province, SA. Specifically, the study sought to: (1) examine the internal factors affecting SME owner-manager attitudes toward ICT adoption; (2) determine whether these attitudes moderate the relationship between ICT use and influencing factors; (3) assess SME owner-manager intention to adopt ICT; and (4) design a framework to support improved ICT adoption among EC tourism SMEs.

The internal factors evaluated included Top Management Support (TMS), Business Benefits (BIB), ICT Challenges (CICT), and Business Performance (BP) as independent variables, with attitudes (ATT) toward ICT adoption serving as the dependent variable. The external factors were Government Support (GS), Competition and Suppliers (CS), and Stakeholders (SH), with attitudes (ATT) serving as the dependent variable.

A mixed-method approach was used. In phase one, qualitative data were gathered through semi-structured interviews. The second phase involved the collection of quantitative data via structured surveys. Quantitative data were analysed using SPSS v28 and Structural Equation Modelling (SEM), with tests for collinearity, multicollinearity, and normality. Multiple regression analysis ($p < 0.001$) addressed the first two research objectives, while Confirmatory Factor Analysis (CFA) confirmed or rejected predefined constructs. SEM was then used to define the proposed conceptual framework and evaluate model fit. NVivo version 12 was used to analyse qualitative data, and emerging themes were classified based on patterns and meanings extracted from transcribed responses. The study found internal factors such as TMS and perceived benefits influence SME owner-managers' positive attitudes toward ICT adoption. The study confirmed SMEs in the tourism sector have generally positive attitudes toward ICT usage.

The findings were interpreted more effectively using the Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB). Perceived Usefulness (PU) and Ease of Use (PEOU) were found to influence ICT attitudes, supporting TAM's claim that perceived benefits drive technological adoption. Similarly, TMS was interpreted as a subjective norm within TPB, emphasising how influential individuals or institutions shape behavioural

intentions. These theoretical insights are particularly useful in today's complex and dynamic business landscape.

A thorough literature review helped shape the research objectives, hypotheses, and instruments. This critical review also contributed to identification and selection of relevant variables. The study sheds light on ICT adoption practices in the EC tourism sector and makes a novel contribution in the form of a new theoretical framework based on both empirical findings and existing literature.

The policy implications are significant; policymakers must develop effective strategies to promote ICT integration among SMEs. Furthermore, industry associations and key stakeholders should continue to raise awareness regarding ICT adoption advantages, as this will result in a more digitally inclusive and competitive EC tourism sector.

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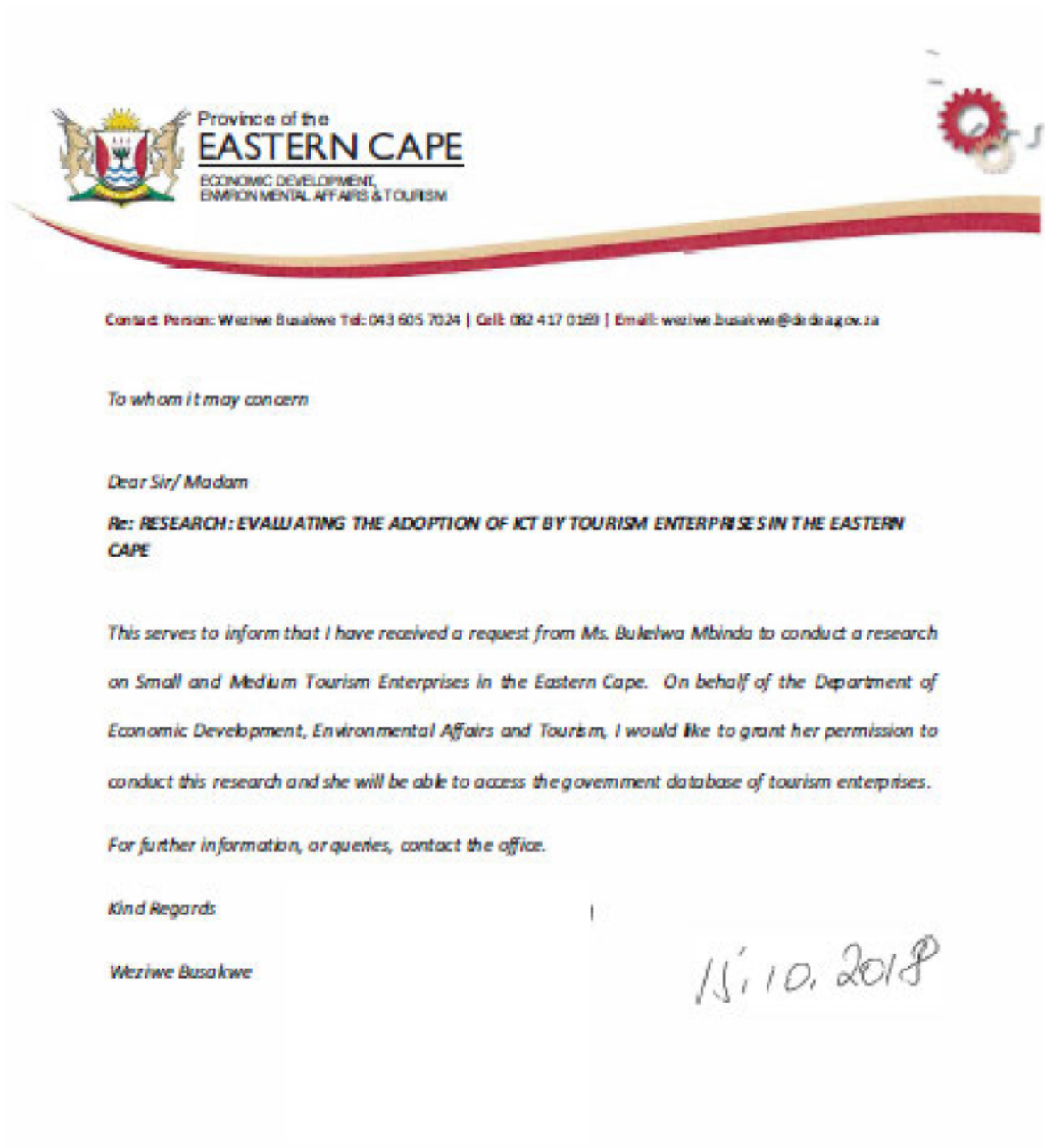
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ANNEXURES

ANNEXURE 1A: LETTER OF PERMISSION



ANNEXURE A2: GATE KEEPER'S LETTER



DEPARTMENT OF ENTREPRENEURIAL STUDIES AND MANAGEMENT
6th Floor B Block
ML Sultan Campus Durban
Tel: (031) 373 6746
Fax: (031) 373 5475

DATE : 03 AUGUST 2018
RE : REQUEST GATE KEEPER'S LETTER

To whom it may concern

My name is Bukelwa Mbinda, I am currently pursuing my PhD studies at the Durban University of Technology. As part of my studies, I have to conduct research on Small Medium sized Enterprises in Eastern Cape. I would like to request permission to conduct research on SMEs listed in Eastern Cape database, the areas which I would look for is East London, Port Elizabeth, Queenstown and Umlata

My research topic is "Evaluating the adoption of Information Communication Technology (ICT) in Small and Medium-sized Enterprises (SMEs) in the Tourism sector in Eastern Cape Province. I envisage that the findings of this study will increase SMEs awareness on ICT adoption and it benefit them by improving their business performance and safeguard their sustainability.

Yours sincerely

Ms. B Mbinda



MS BUKELWA MBINDA
Lecturer
Entrepreneurial Studies & Management
Durban University of Technology
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Fax to email: 031 373 5475
Email: Bukelwa.M@dut.ac.za
www.dut.ac.za

ANNEXURE A3: ETHICS APPROVAL



MANAGEMENT SCIENCES: FACULTY RESEARCH ETHICS COMMITTEE (FRECC)

1 October 2019

Student Name: Ms B Mbinda

Student No: 21855832

FREC REF: 54/19FRECC

Dear Ms B Mbinda

DOCTOR OF PHILOSOPHY: BUSINESS ADMINISTRATION

TITLE: THE ADOPTION OF INFORMATION COMMUNICATION TECHNOLOGY (ICT) BY SMALL MEDIUM ENTERPRISES (SME) IN THE TOURISM SECTOR OF THE EASTERN CAPE PROVINCE

Please be advised that the FRECC Committee has reviewed your proposal and the following decision was made: **Approved – Ethics Level 2**

Date of FRECC Approval: 28 August 2019

Approval has been granted for a period of two years from the above FRECC date, after which you are required to apply for safety monitoring and annual recertification. Please use the form located at the Faculty. This form must be submitted to the FRECC at least 3 months before the ethics approval for the study expires.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the FRECC according to the FRECC SOP's. Please note that ANY amendments in the approved proposal require the approval of the FRECC as outlined in the FRECC SOP's.

Yours sincerely

Prof JP Govender
Chairperson: Faculty Research Ethics Committee

ANNEXURE A4: ETHICS APPROVAL RECERTIFICATION



MANAGEMENT SCIENCES: FACULTY RESEARCH ETHICS COMMITTEE (FREC)

08 December 2021

Student No: 21855832

Dear Ms G Mthinda

RECERTIFICATION: DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION

TITLE: The adoption of Information Communication Technology (ICT) by Small and Medium Enterprises (SMEs) in the Tourism sector of the Eastern Cape Province

Please be advised that the FREC Committee has reviewed your proposal and the following decision was made: **Ethical Level 2**

Date of FREC Approval: 28 August 2019

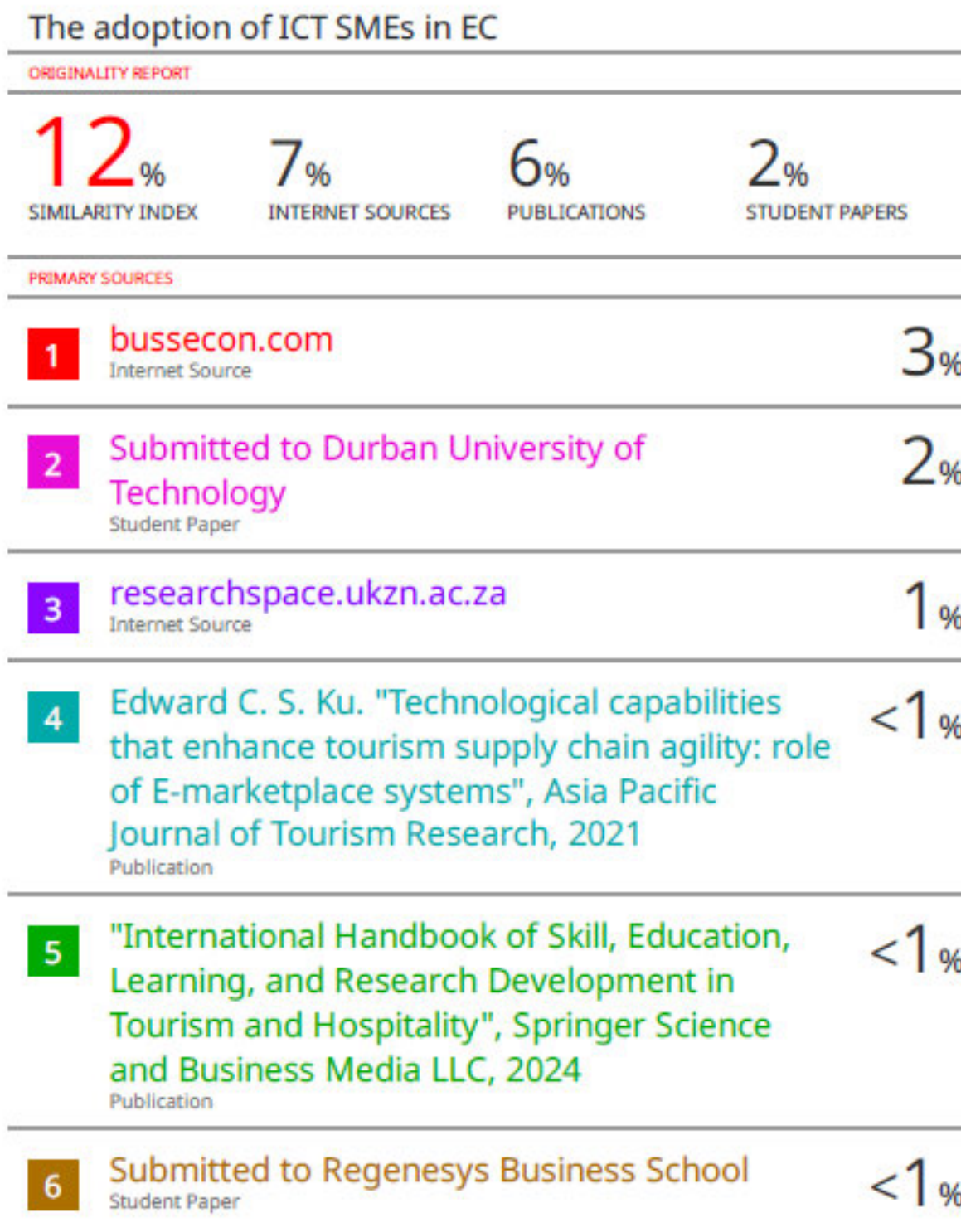
The Faculty Research Ethics Committee has granted your request for recertification for a period of One year (From 8 December 2021), after which you are required to apply for safety monitoring and annual recertification. Please use the form located at the Faculty. This form must be submitted to the FREC at least 3 months before the ethics approval for the study expires.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the FREC according to the FREC SOP's. Please note that ANY amendments in the approved proposal require the approval of the FREC as outlined in the FREC SOP's.

Prof JP Govender

Chairperson: FREC

ANNEXURE A5: APPENDIX A5 TURN IT IN REPORT



Exclude quotes	On	Exclude matches	< 10 words
Exclude bibliography	On		

ANNEXURE A6: CERTIFICATE OF EDITING AND AUTHENTICATION

Helen Richter
Advanced Editing & Proofreading

editassist2023@gmail.com
072 9227221

15 August 2025

To whom it may concern:

CERTIFICATE OF EDITING & AUTHENTICATION

I have proofread and language edited the examiner correction to the dissertation titled:

**“The adoption of Information Communication Technology (ICT) in Small and Medium
Enterprises (SMEs) in Tourism Sector in Eastern Cape Province**
by

Bukelwa Mbinda

The work remains the author's own work, to the best of my knowledge, and is free of spelling,
grammar, and structural and stylistic errors.

With thanks.

H. S. Richter (Ms)

ANNEXURE A7: COVER LETTER

QUESTIONNAIRE

DURBAN UNIVERSITY OF TECHNOLOGY

DEPARTMENT OF ENTREPRENEURIAL STUDIES AND MANAGEMENT

PhD Business Management

Researcher: Bukelwa Mbinda

Main Supervisor: Prof. Albert, Tchey, Agbenyegah

Title of the survey:

**ADOPTION OF INFORMATION COMMUNICATION TECHNOLOGY (ICT) IN
SMALL MEDIUM-SIZED ENTERPRISES (SMES) IN THE TOURISM SECTOR IN
EASTERN CAPE PROVINCE.**

This survey forms part of the data for a PhD study in the Faculty of Management Science at the Durban University of Technology. This study aims to assess the adoption of Information Communication Technology (ICT) by SMEs in the tourism sector of the Eastern Cape (EC) province. You are kindly invited to participate in this survey. The information that you provide will be used for academic research purposes be treated confidentially and your identity will be kept anonymous

Thank you for taking part in this survey

ANNEXURE A8: QUESTIONNAIRE

SECTION A: BIOGRAPHICAL INFORMATION

Please Tick [v] the most appropriate alternative/s

GENERAL BACKGROUND INFORMATION

1. Are you the owner of the business or enterprise?

Only the SME owners can complete the questionnaire. If your answer is YES, you can continue with survey section A, but if it is NO please do not continue.

Yes	
No	

2. What is your gender/sex?

Male	
Female	

3. Which of the categories best describe your age?

Below 21	
21 – 40 years	
41 – 60 years	
61 – 80 years	
Above 81	

4. What type of business is the company engaged in? You can choose more than one option.

Travel agent	
Accommodation	
Tour operator	
Hospitality	
Others (please specify)	

5. How long have been operating in the business?

1-5 years	
6-10 years	
11-15 years	
16-20 years	
Above 21 years	

6. What is your highest education level?

No formal education	
Primary school completed	
Secondary school completed	
Certificate/Diploma	
Undergraduate Degree	
Postgraduate Degree	
Other (please specify)	

7. Which of the following categories best describe your company ownership? Can only choose **ONE** option.

Sole proprietorship	
Private company	
Partnership	
Incorporated company	
NGO/NPO	
Other (please specify)	

8. What is your current position in the company?

Managing Director	
Chief Executive Officer (CEO)	
Tour Manager	
Accommodation Manager	
Restaurant Manager	
Other (please specify)	

9. Which of the following categories best describes the total number of your company's employees?

1 – 4 employees	
5 – 10 employees	
11 – 20 employees	
21 – 30 employees	
31 – 40 employees	
41 – 50 employees	
51 and above	

10. Which of the following categories can best describe your company's annual revenue estimates in 2021

Below R 1000 000 million	
R 1 000 000- 5 000 000 Million	
R5 100 000– 10 000 000 Million	
R10 1000 000– 20 000 000 Million	
21 million and above	

11. What percentage of the company's total budget spend on ICT for the year 2021?

Less than 5%	
More than 5% – 10%	
More than 10% – 15%	
More than 15 % – 20%	
More than 20 % – 25%	
Above 25%	

12. What percentage of employees in your company can use ICT services?

Less than 10 percent	
11 – 20 percent	
21 - 30 percent	
31 - 40 percent	
41 – 50 percent	
Above 51 percent	

13. Where is your company office located?

East London	
Butterworth	
Umtata	
Port St Johns	
Gqeberha	
Coffee	
Others (specify)	

SECTION B: BUSINESS INFORMATION

14. Does your business use Information and Communication Technology (ICT)?

No	
Yes	

If NO, what does it use? Please specify

.....

.....

.....

15. How many working computers do you have in your company?

1-5	
6- 10	
11- 20	
21 and more	

16. Rate your computer literacy, only select ONE

None	
Fundamental Skills	
Basic Computing and Applications.	
Intermediate Computing and Applications.	
Advanced Computing and Applications.	
Proficient Computing, Applications, and Programming.	

17. What is the top management's level of computer skills? only select ONE

None	
Fundamental Skills	
Basic Computing and Applications.	
Intermediate Computing and Applications.	
Advanced Computing and Applications.	
Proficient Computing, Applications, and Programming.	

18. What is the middle management's level of computer skills? only select ONE

None	
Fundamental Skills	
Basic Computing and Applications.	
Intermediate Computing and Applications.	
Advanced Computing and Applications.	
Proficient Computing, Applications, and Programming.	

19. What is the lower management's level of computer skills? only select ONE

None	
Fundamental Skills	
Basic Computing and Applications.	
Intermediate Computing and Applications.	
Advanced Computing and Applications.	
Proficient Computing, Applications, and Programming.	

20. Who is responsible for ICT technical services in your company?

Managing director	
IT/ Computer manager	
Employees	
Outsourced (a person outside the company)	
Other (please specify)	

21. Who influences the decision to select the kind of ICT to be utilised in the company? You can select more than one

Managing Director	
Management committee	
Computer manager	
Finance/accounts manager	
Outsourced (a person outside the company)	
Other (please specify)	

22. Is your IT server insourced (hire in-house employees)

No	
Yes	

23. Is your IT server outsourced (use another company)

No	
Yes	

24. How best can you describe your understanding of how to use computer technology? Select only ONE response

Learned by experience	
Attended short course	
I have a certificate in computer technology	
I have a diploma in computer technology	
I have a degree in computer technology	
Other (please specify)	

25. How often does your business use ICT in its business activities?

Never	
Rarely	
Sometimes	
Always	
Often	

26. How often do you use smartphones as a business tool?

Often	
Always	
Sometimes	
Rarely	
Never	

27. How often do you use mobile apps as a business tool?

Often	
Always	
Sometimes	
Rarely	
Never	

28. How often do you use tablets as a business tool?

Often	
Always	
Sometimes	
Rarely	
Never	

29. How often do you use laptop as a business tool?

Often	
Always	
Sometimes	
Rarely	
Never	

SECTION C: ICT ON BUSINESS

Please read each statement carefully and then indicate with a tick (✓) your level of agreement with the opinion expressed in the statement. The scale where 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, and 5 = strongly disagree

STATEMENT	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Business on ICT	1	2	3	4	5
30. I use ICT as it fits well with the way our company does business					
31. I use ICT that fits well with our company's business values and culture					
32. I use tourism and hospitality software for the ICT system as it fits well with my business					
33. I use ICT, as it fits well with the organizations' existing distribution channel					
34. I use ICT, as it fits well with the way our management would like to operate					
35. I use ICT; it is easy for our employees					
36. I use ICT; it is easy for our business partners					
37. I use ICT; it is clear and understandable to our business partners					
Use of tool for ICT					
38. I use my mobile smartphone for ICT with my clients					
39. I use my tablet to communicate with my clients					
40. I use the laptop to communicate with my clients					
41. I use my desk computer for ICT					
42. I advertise the products of my business on the company website					
43. I use my own tourism and hospitality app for my business?					
Benefits of ICT for the business					
44. I think ICT will assist my business performance					
45. I think ICT will assist my business to get more clients					
46. I think ICT will assist to track the business performance					
47. I think ICT will assist me to have control of the business daily.					
48. I think ICT will assist in the business with the suppliers					
49. I think ICT will assist as a business tool for control measures					

STATEMENT	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Challenges of ICT	1	2	3	4	5
50. I think ICT software is expensive and will not benefit the business					
51. I think ICT hardware is expensive and will not assist the business					
52. I think ICT will bring more problems than solutions					
53. I think ICT will make other companies in competition to steal my ideas					
Influence the use of ICT					
54. I think using ICT will get more clientele					
55. I think using ICT will increase profit margins					
56. I think using ICT will enhance the relationship with the existing customers					
57. I think ICT will assist to get customers locally in South Africa					
58. I think ICT will assist to get customers globally					
Top Management support					
59. I have allocated resources to the top management for ICT					
60. I have encouraged management to discuss with employees to support ICT					
61. I have made the management to be aware of the benefits of ICT to the company					
62. I have encouraged the management to support the use of ICT					
63. I have encouraged the management to encourage employees to use ICT					
Competition and suppliers					
64. I have experienced that our customers demand E-commerce services being offered to them for payments					
65. I have experienced that our suppliers demand ICT services offered to them					
66. I know of ICT opportunities to gain competitive advantages					
67. I know that ICT is important to keep up with the competition in the market					
68. I know that our company responds quickly to ICT to eliminate competition					
69. I know that IT service providers /suppliers provide information and resources on ICT adoption					

STATEMENT	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Government support	1	2	3	4	5
70. I know that the government offers grants and loans for adoption to enable the environment to support SMEs in the adoption of ICT services					
71. I know that government is in support of the adoption of ICT for SMEs					
72. I know that the government has initiatives and programs in place in support of the adoption of ICT for SMEs					
73. I know that the government provides SMEs with low-cost software for ICT					
74. I know that the government is providing ICT infrastructure to support SMEs					
75. The National department of Tourism assists with the resources for ICT					
76. I know the Department of Small and Development assist through SEDA (Small Enterprise Development Agency) to support SMEs on ICT					
77. I know that the Eastern Cape Economic development, environmental affairs, and tourism department assist with ICT resources at a provincial level					
78. I know the municipality in my area in Eastern Cape assists with the resources for ICT at a local level.					
Impact of ICT					
79. I know that the adoption of ICT will enhance communication with my customers					
80. I know that the ICT will enhance communication with my suppliers					
81. I know that the adoption of ICT will enhance communication better with other stakeholders in the tourism					
82. I know that the adoption of ICT will have to enhance communication with the government					
83. I know that the adoption of ICT will enhance communication to reach other markets					

STATEMENT	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Stakeholder support	1	2	3	4	5
84. I know that other stakeholders in the tourism, hospitality, and travel industry are in support of the adoption of ICT business					
85. I know that private businesses have initiatives and programs in place in support of the adoption of ICT for SMEs					
86. I know that other stakeholders are providing infrastructure for the adoption of ICT					
87. I know that the business community provides technical support for the ICT to SMEs					
88. I know that IT companies promote ICT adoption by offering free training sessions to SMEs					
Use of the internet, social media for market					
89. I use Digital Subscriber Line (DSL) for my business.					
90. I use Fiber internet service for my business.					
91. I use WhatsApp to market my business					
92. I use Facebook to market my business					
93. I use Twitter to market my business					
94. I use Instagram to market my business					
95. I use other social media to market my business					
Business performance					
96. I have strategies in place to evaluate ICT performance for my business					
97. I have strategies in place to evaluate ICT for marketing using social media					
98. I have strategies in place to evaluate my employee's performance using ICT					
99. I have strategies in place to evaluate the use of ICT in my suppliers					
100. I use my company's website for online booking and payments					

Thanks for your support.

Enkosi ngenxaso yakho.

ANNEXURE A9: STRUCTURED INTERVIEW QUESTIONNAIRE

STRUCTURED INTERVIEW QUESTIONNAIRE

**TITLE: ADOPTION OF INFORMATION COMMUNICATION TECHNOLOGY (ICT)
IN SMALL AND MEDIUM-SIZED ENTERPRISES (SMES) IN THE TOURISM
SECTOR IN EASTERN CAPE PROVINCE.**

1. What is your type of business?
2. What is your age?
3. How long have been operating in the business?
4. What is the ownership in your business?
5. What is your highest education level?
6. What is your current position in the company?
7. What is the total number of employees in your company?
8. What is the company's annual revenue estimates?
9. What percentage of the company's total budget is spent on ICT?
10. What percentage of employees in your company can use ICT services?
11. How many working computers do you have in your company?
12. Does your top management have a computer course; if Yes What is the name of the computer course did obtain?.....
13. Does your middle management have a computer course,
If Yes What is the name of the computer course your middle management obtained?.....
14. Does your lower management i.e. supervisor have a computer course?
if Yes What is the name of the computer course that your supervisor obtained?.....
15. Who is responsible ICT technical services?
16. Do you use my smartphone or mobile as a business tool to communicate with your clients?
If yes, Why do you use it?
17. Do you use my tablet as a business tool to communicate with your clients?

If yes, do Why do you use it?.....
18. Do you use a laptop to communicate with your clients?
If yes, why do you use it?.....
19. Do you use any tourism and hospitality mobile apps as a business tool?
If yes, why are you using it?.....
20. Is there anything else you want to talk about that I have not mentioned but strongly believe it is important?

Enkosi , Ndyabulela, Thank you.