Effective use of payment gateways by travel and tourism SMEs in Gauteng

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DECLARATION

I, Vulani Sithole, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the field of Digital Business at the University of the Witwatersrand, Johannesburg, and has not been submitted before for any degree or examination in this or any other university.

Name: Vulani Sithole Signature: DocuSigned by: Vulani Sithole 60BB85C6E17949D...

Signed at Midrand

On the 28 day of August 20 24

DEDICATION

I dedicate my dissertation to my son (7), my biggest motivator, and my late uncle, Phillip Vulani Msimeki, who always reminded me that my brain is a muscle that needs school to grow and to God, where all my faith and my trust lie.

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KEYWORDS

SMEs, payment gateways, online payments, competitive advantage, travel and tourism

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LIST OF ACRONYMS

BI – Behaviour Intention

E-commerce – Electronic commerce

EFT – Electronic Funds Transfer

E-payment – Electronic payment

EPS – Electronic Payment System

PEU – Perceived Ease of Use

PU – Perceived Usefulness

SEDA – Small Enterprise Development Agency

SME – Small and Medium Enterprise

SPSS – Statistical Package for Social Sciences

TAM – Technology Acceptance Model

TOE – Technology Organization Environment

TTCI – Travel and Tourism Competitiveness Index

UTAUT – Unified Theory of Acceptance and Use of Technology

DEFINITION OF TERMS

E-commerce (Electronic commerce) – the process of buying and selling products and services using technology using web browsers

EFT- Electronic Funds Transfer

E-payment (Electronic Payments (or electronic online payments)) – the process of transferring money to a recipient from a payer using a third party

Payment gateways – a service provider that offers equipment to facilitate a transaction between buyers and merchants, along with financial institutions over the World Wide Web

ABSTRACT

This study aimed to determine the effective use of payment gateways by travel and tourism Small and Medium Enterprises and to design a framework that will inform the effective use of payment gateways in Gauteng, South Africa. This study was a survey in design and followed a positivism paradigm utilizing a quantitative approach, and was underpinned by the Technology, Organisation, Environment model. The study used a sample of 297 participants randomly selected from the travel and tourism in Gauteng province. The study's findings show that, with the exception of technology characteristics and environmental factors, all other constructs positively contribute to the overall prediction of the model. The study recommends that SMEs in the travel and tourism sector in South Africa embrace and make use of the proposed framework to reap the rewards offered by payment gateways.

Keywords: Payment Gateway, e-payment, e-Commerce, Small and Medium Enterprise

CHAPTER 1: INTRODUCTION

This chapter serves as a foundation for a comprehensive investigation of the effective use of payment gateways by Small and Medium Enterprises (SMEs) in South Africa, focusing on the travel and tourism sector in Gauteng. The chapter begins by discussing the study's background, highlighting SMEs' role. The chapter then discusses the statement of purpose, which highlights the need to explore a framework to empower SMEs in navigating a dynamic environment through the use of technology, which then leads to the research problem and the main and specific objectives of the study. The chapter further discusses the study's rationale and, lastly, offers a structured outline of the content that summarizes what is expected in each chapter.

1.1 Background of the study

SMEs contribute to the economic development of a nation through job creation and production output for both developed and developing countries (Ramukumba, 2014). SMEs play a crucial role in developing countries because of their income distribution potential, new employment creation, poverty reduction, and facilitating growing exports (Naradda et al., 2020). They offer job opportunities to low and non-skilled labour, and they assist in developing and nurturing entrepreneurial skills (Fubah & Moos, 2022). In South Africa, SMEs contribute approximately 36% to the country's GDP, which results in approximately 70% to 80% of employment, and approximately 98.5% of SMEs form part of the economy. Therefore, their sustainability is essential for the country's economic growth (Msomi & Olarewaju, 2021). The sustainability of SMEs can only be obtained if they can attract more customers and maintain their loyalty through better and quicker services, which can be achieved by leveraging technological innovations (Matekenya & Moyo, 2022). These technological innovations may include but are not limited to, online payments, also known as e-commerce and e-business, e-recruitment, and the use of emails. As much as

this is so, many SMEs still use traditional manual payment systems due to a lack of capital investments (Yusof et al., 2018).

Lukhele and Soumonni (2020) describe manual payments as a method where a customer physically visits the store to order and pay for goods. This includes receiving cash and returning the change, processing invoices, reconciling the payments, or telephonically taking credit card details. However, this method of carrying out payment transactions has been prone to several business risks, which include loss of customers since advanced ones may not buy as they would prefer alternative payment methods (Yusof et al., 2018). Another risk is physical theft by employees handling cash or people posing as customers who can steal from the premises. In some instances, employees of the SME can steal, or the establishment may be at risk of being burgled on their premises or when the cash is being transported to the bank (Meheret al., 2021).

SMEs tend to be highly dependent on cash, which has led them to be operational in the areas they are situated in, limiting them from a larger customer base (Talom & Tengeh, 2019). The study further highlights that SMEs that have a bank account and require funds at the bank must wait in long queues, which leads to the loss of business while they are away from their premises.

On the other hand, Singh and Gupta (2019) define online payments as “a type of financial commitment that includes the purchaser and the vendor enabled by the utilisation of electronic infrastructures.” They further elaborate that online payments have capabilities such as e-cash, online banking, internet banking, e-banking, and m-banking, to name but a few.

The benefit of online payments is that they are convenient, meaning that payments can be made from anywhere and anytime, and depending on the system, they can provide a low-cost solution for businesses (Supriyati & Nurfiqo, 2019). Additionally, technological innovations in the payments sector correlate to financial inclusion, where online payment service providers can offer services to those outside the traditional banking market (Muchandigona & Kalema, 2023).

Moreover, Yusof et al. (2018) earlier highlighted that the World Bank has observed that online payments are crucial to developing a country's economic growth.

COVID-19 exponentially accelerated the adoption of new technologies across all sectors (Fubah & Moos, 2022). In the past few years, SMEs were not widely using technology, but because of the pandemic, they had to adopt technology to prevent their business from shutting down (Rajagopaul et al., 2020). Additionally, Chandra and Pradipta (2022) explain the history of Electronic Funds Transfers (EFTs), which started as early as the 70s. This increased the use of electronic payments because of the adoption of the internet and has shifted the market.

E-payments are described as the process of transferring money to a recipient from a payer using a third party. Budiarto et al. (2022) further elaborate that payment gateways are experiencing growth because they facilitate and simplify the transactions between electronic payment providers and sellers. Payment gateways provide businesses with convenience by providing online platforms that offer increased efficiency, protection, and ease of use, providing comfort for their consumers. Payment gateways benefit businesses by automatically reconciling consumer transactions, reducing transaction errors, and providing ease of use for their consumers.

1.2 Statement of Purpose

This study sought to develop a framework for effective use of payment gateway systems by Small and Medium Enterprises (SMEs) in South Africa. It focused on the travel and tourism sector in Gauteng. By examining the effective use of payment gateways, this study provided insights into SMEs' strategies to obtain a competitive advantage.

Budiarto et al. (2022) highlights the importance of payment gateways for SMEs. They indicate that implementing payment gateways can help SMEs survive the uncertainties within their environment. They also note that payment gateway

systems play an important role in bridging the geographical distances between SMEs and their clients. Additionally, SMEs compete with large enterprises in the same environments because they tend to offer the same products and services; hence, leveraging technology to communicate with their clients is important for their operations (Fubah & Moos, 2022).

By nature, SMEs are supposed to be agile and capable of adapting easily, and they need to be close to their customers to flourish (Fubah & Moos, 2022). This implies that SMEs need to adopt other ways of operating to achieve their objective of serving customers. However, to achieve competitiveness within their business environment, they ought not to serve only those customers within the vicinity but also others globally. To achieve this globalisation and cope with the changes in legislation and regulation, SMEs need to decrease trade barriers by taking advantage of the exponential growth of technology and innovation, such as payment gateways, to serve their customers in real-time and promptly (Budiarto et al., 2022).

1.3 Research problem

Many online payment and mobile application systems in the market that have been developed are intended to facilitate customers when conducting business with different types of organisations (Supriyati & Nurfiqo, 2019). Additionally, mobile apps have been developed and customised for SMEs. However, even though the benefits of these systems are well documented, SMEs still have the challenge of choosing whether to focus on performance improvement or technology innovation (Budiarto et al., 2022). More so, there is still limited research that informs the contextualisation of these payment systems to the travel and tourism industries (Bayona & Rua, 2019).

1.4 Research objectives

The objectives of this study were:

1.4.1 Main objective

The main objective of this study was to determine the effective use of payment gateways by travel and tourism SMEs in Gauteng, South Africa.

This study designed a framework to guide SMEs in South Africa in the effective use of payment gateways. It took the case of travel and tourism in Gauteng as its example, emphasizing the importance of creating a competitive advantage through customer satisfaction.

1.4.2 Specific objectives

To achieve the main objective of this study, the following specific objectives were set to be fulfilled:

1. To determine the benefits associated with the use of payment gateways in the South African SMEs of the travel and tourism industry.
2. To determine the factors influencing the effective use of payment gateways by travel and tourism SMEs in South Africa.
3. To analyse the challenges of the current payment systems used by travel and tourism SMEs.
4. Using the identified factors to design a framework for the effective use of payment gateways by travel and tourism SMEs.

1.5 Research questions

The research questions this study sought to address are;

1.5.1 Primary research question

The primary research of this study was; How effectively can payment gateways be used by travel and tourism SMEs in Gauteng, South Africa?.

1.5.2 Secondary research questions

The secondary research questions this study sought to address were;

1. What are the benefits associated with the use of payment gateways in the South African SMEs of the travel and tourism industry?.
2. What factors influence the effective use of payment gateways by travel and tourism SMEs in South Africa?.
3. What are the challenges of the current payment systems used by travel and tourism SMEs?.
4. How can the identified factors be used to design a framework for the effective use of payment gateways by travel and tourism SMEs?.

1.6 Rationale

The study's rationale was to highlight the critical role of SMEs in the South African market, the competitive advantage that payment gateways can create for SMEs in the travel and tourism sector in Gauteng and identify research gaps. By conducting research within this context, the study sought to share discoveries of new insights that contribute to the existing knowledge that SMEs can use to create a competitive advantage through effective payment gateways.

Budiarto et al. (2022) observe that globally significant research has been conducted on the SME’s implementation of technology and performance, however, they allude that there are inconsistencies in the findings of these studies regarding the reasons why SMEs fail to succeed in the adoption of online payment systems. One of the challenges is the limitations of SMEs in achieving global competitiveness, hence seeing no justification for adopting technology. Another challenge has been SMEs' failure to choose whether to focus on performance improvement or technology innovation (Matekenya & Moyo, 2022). Moreover, other researchers point to SMEs lacking an appropriate framework to inform their adoption of technological innovations (Budiarto et al., 2022; Lukhele & Soumonni, 2020). This study highlights the need to develop a framework that

informs SMEs' effective use of not only payment gateways, but also other technological innovations.

1.7 Delimitations of the study

The scope of this study was SMEs within the Gauteng region, specifically those in travel and tourism.

1.8 Outline

This dissertation comprises of five chapters that assess the effective use of payment gateways by SMEs in South Africa.

Chapter 1 discusses the introduction of the study, gives the background and rationale of the problem, highlights the problem this study investigated, based on which the set objectives are derived, highlights the justification of the study, and ends by giving the dissertation outline.

Chapter 2 presents a review of the literature that delves deeper into the effective use of payment gateways by SMEs and the use of online payments in general, along with the related literature and work, theoretical foundations, and conceptual frameworks.

Chapter 3 discusses the research methodology used by this study, the alignment of the methods used to collect and analyse the data, and the justification of the selected research method. It further highlights the research approach, sampling techniques, methods of data collection and analysis, and the reliability and validity of the measuring instruments. The chapter concludes with the ethical considerations of the study.

Chapter 4 presents the results obtained from the analysis of the collected data. This will include a discussion of the respondent's demographics, the relationship

between the attributes and the associated score, the regression, and a summary of the hypothesis testing.

Chapter 5 discusses the detailed results presented and the hypothesis tested. It will further examine the findings in relation to the research objectives, purpose, and goals. The chapter concludes by giving this study's contribution, limitations, and recommendations.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

This chapter focuses on the SMEs and the role they play in the economic development of a country. The chapter also explores the different payment systems associated with the different SME transactions, highlighting the shift from manual payments to online payments. It also delves deeper into the benefits of payment gateways, the possible challenges SMEs encounter, and the factors that influence the effective use of payment gateways. The chapter then discusses the related work to the study and the theoretical foundations underpinning the study. A conceptual framework was designed based on the theoretical foundations and related work, and hypotheses were developed.

2.1 Small Medium Enterprises

The National Small Business Act of South Africa (1996) defines a small enterprise (business) as a "separate and distinct business entity, together with its branches or subsidiaries, if any, including co-operative enterprises [and non-governmental organisations], managed by one owner or more." On the other hand, Rajagopaul et al. (2020) define SMEs as "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."

SMEs play a critical role in the economic development of developed and developing countries (Naradda et al., 2020). This is further supported by Msomi and Olarewaju (2021), who states that SMEs are critical in the contribution of economic growth through job creation, poverty alleviation, income distribution, and innovation. SMEs also play a role in the expansion of local development, eliminating inequality, poverty, and unemployment in rural areas because they support the fulfilment of basic needs for people, assist groups that are

marginalised such as households led by females, uneducated people, those that are disabled and those residing in rural areas (Naradda et al., 2020).

A good SME sector is imperative to creating an economy with a functioning industrial sector that will continue to sustainably grow the economy (Msomi & Olarewaju, 2021). The South African Government's National Development Plan 2030 highlights the importance of SMEs as being a critical driver of growth and unemployment (Viswanathan & Telukdarie, 2021). SMEs in South Africa are encouraged to find innovative solutions that will solve social challenges that will alleviate inequality, create job opportunities, and contribute to the growth of the economy (Msomi & Olarewaju, 2021). Even with the country's increasing unemployment rate, economic growth possibilities exist because of the young workforce population and technological advancements (Viswanathan & Telukdarie, 2021).

2.1.1 Challenges faced by SMEs

In South Africa, there is no increase in the number of SMEs because of the 75% failure rate, which is the highest globally (Msomi & Olarewaju, 2021). Additionally, Leboea (2017) explains that new SMEs do not move from the first stage of growth, which is the existence stage, due to their owners being unable to make their businesses unsustainable. Compared to other developing countries, the growth of South African SMEs remains low (Kikawa et al., 2019). SMEs face challenges including, but not limited to, acquiring financing, the burden of their administration, acquiring and retaining talent, the lack of management skills and technology, financial access, lack of digital infrastructure, and the pressure to be efficient (Viswanathan & Telukdarie, 2021).

There is an increase in competition for SMEs due to economic globalisation which has resulted in a high failure rate over a short period of time (Naradda et al., 2020). SMEs generally lack global markets, and those that happen to get market globally fail to satisfy their stakeholders due to limited capital. This implies that

SME competition globally will be limited compared to their counterpart corporate enterprises (Prasanna et al., 2019). This limitation is a key factor that hinders SMEs' business expansion and improvement. Leboea (2017) states that South African SMEs' financial restraints limit their innovativeness, but also the limited knowledge of the owners of technological deployment. This is because SME owners lack the right knowledge and skills to find a solution that meets their business requirements.

2.1.2 Payment systems associated with SMEs transactions

Due to the small market, which is normally local, many SMEs currently use cash transactions, contrary to the development trends in business transactions that encourage safer business (Rahman et al., 2022). The cash transaction approach has risks and challenges due to safety and limits some would-be customers who prefer to avoid inconveniences. As a result, it narrows the market because it is only convenient to those locally available customers. Xena and Rahadi (2019) explain that non-cash transactions can create a potential market for SMEs. This allows them to expand their customer base and create loyalty by giving their consumers the best experience. Business productivity can be improved through non-cash transaction tracking (Budiarto et al., 2022).

Online payment systems can be beneficial for businesses in that they can increase revenue through ease of transactions from different payment methods, improving the efficiency of their operations and possibly decreasing operating costs (Rahman et al., 2022). Additionally, they can reduce queues and the need for customers to have cash. Additionally, Prasanna et al. (2019) included that online payment systems can improve customer service and increase the speed of response between customers and sellers and between sellers and their suppliers. Payment gateways are a critical infrastructure component in online payment systems as they provide security for consumer transactions (Kyaw-Zay, 2019).

2.2 Payment gateways

Hassan et al. (2020) defines a payment gateway as “a service provider that offers equipment to facilitate a transaction between buyers and merchants, along with financial institutions over the World Wide Web.” Online shopping has changed how organisations conduct their business from traditional processes to online payment processes (Kyaw-Zay, 2019).

2.2.1 Benefits of payment gateways

Online payment systems are essential in e-commerce transactions since customers leveraging e-commerce platforms do not need to be physically around to conduct their business (Apasrawirote & Yawised, 2021). E-commerce is defined as the process of buying and selling products and services using technology and web browsers (Supriyati & Nurfiqo, 2019). Developed countries have been using e-commerce platforms for years, whereas the use of e-commerce in developing countries is just exploding (Hassan et al., 2020).

Rahman et al. (2022) highlights that one of the benefits of online payment systems is that they have been designed to handle multiple requests and transactions simultaneously. A payment gateway can process transactions from different bank accounts and efficiently channel the payments to one account owned by a business; it allows a seller to receive payments via debit and credit cards, EFT, and e-wallets, to name a few (Supriyati & Nurfiqo, 2019).

Hassan et al. (2020) state that online payment systems offer improved protection and ease of use and are increasing efficiency. Consumers can make payments without interacting with a seller, and transactions can occur anytime and anywhere (Supriyati & Nurfiqo, 2019). This supports Bayona and Rua (2019) regarding the benefits that payment gateways give international tourists who can make payments anywhere and anytime. Additionally, online payment systems can attract international tourists, increasing the travel and tourism sector’s

revenue (Nuryyev al., 2021). Furthermore, online payment systems make it easy to verify transactional details and can be used to decrease tax fraud risk (Bayona & Rua, 2019).

According to Nabil et al. (2023), there is a strong correlation between the perception of benefits with security of online payment systems and customer satisfaction. Online transactions safeguard customers from moving around with huge sums of money that could attract risks, including physical loss of money, theft, assault, and many others. In many developing countries, businesspeople have lost lives in the process of moving physical cash, whereas others have remained with permanent disabilities (Rumney, 2018). These challenges will be avoided if business owners, as well as their customers, adapt to the use of online payment systems.

2.2.2 Challenges associated with manual payment systems versus payment gateways

Manual payments, including cash and cheques, are not dependent on technology or the Internet (Singh & Gupta, 2019). The study further highlights that these payments can only take place during working hours and do not offer security features compared to online payments. Some other issues with manual payments are that cash can be falsified, cheques can bounce, and signatures can be forged (Khan et al., 2017).

The main problem that payment systems and online authentication have on the consumer and business side has been security. Consumers are concerned about payment card confidentiality because of the rise of fraudulent transactions using stolen card details (Kyaw-Zay, 2019). Online payment systems are replacing manual payments by allowing transactions to happen over the Internet, and these platforms have security measures that ensure consumer safety (Matekenya & Moyo, 2022). A digital economy benefits the consumer and the government by

offering convenience through making payments anytime and anywhere and saving the environment because less cash is printed (Singh & Gupta, 2019).

2.2.3 Factors influencing the effective use of payment gateways

Several studies, such as (Budiarto et al., 2022; Hassan et al., 2020), have highlighted various factors that influence the use of technology in business. These authors indicate that the acceptance, adoption, and use of technology and its innovations have been influenced by various factors ranging from technology characteristics and organisation aspects to individual characteristics (Ziółkowska, 2021). Online transactions have been cited to be influenced by factors including but not limited to individuals' perceptions and self-efficacy, behaviour intention, organisational support, security as well as trust (Kikawa et al., 2022).

Top management plays a role in the effective use of payment gateways (Yusof et al., 2018). Their skills, knowledge, and experience in technology have an impact (Apasrawirote & Yawised, 2021). Furthermore, SMEs gain knowledge by observing others in their sectors and emulating and adapting based on their business needs. The owner's age and lack of experience can pose a challenge when it comes to adopting and implementing online payments.

Users' perception of technology as being easy or difficult has also been attributed to be the major antecedent of the use of technology in online business transactions (Venkatesh et al., 2003; Venkatesh et al., 2012; Muchandigona & Kalema, 2023). The ease of use of an online payment system plays a role in the rate of adoption. Consumers are more inclined to use online payment systems when they are direct and clear. Additionally, convenience, simplicity, and ease of use play a critical role in the adoption of online payments as users will confidently be sure that they will not make mistakes that may lead to financial loss during the transaction (Apasrawirote & Yawised, 2021). Furthermore, privacy and security are other two factors that play a role in the adoption of online payment systems, and most consumers may not feel comfortable using online systems if they are

not sure that the privacy and security of their banking details are protected (Lukhele & Soumonni, 2020). This implies that businesses that implement security measures on their payment systems will yield positive customer feedback.

Much as various factors have been highlighted to influence online transactions, Muchandigona and Kalema (2023) emphasize that due to users' different social-technical backgrounds and the heterogeneous challenges in developing countries, contextualisation of factors is paramount. This means that some factors may be salient in some cases, whereas they may not be influential in others, and such calls for a study to develop a framework for the effective use of payment gateways for SMEs in the South African travel and tourism industry.

Table 2.1 presents a summary of the factors that influence the effective use of payment gateways.

Table 2.1: Factors that influence the use of payment gateways

Payment gateways in previous studies	Technology	Organisation	Environment
(Budiarto et al., 2022; Hassan et al., 2020; Nabil et al., 2023)	technology characteristics, security	organisation aspects, individual characteristics, behaviour intention, organisational support	-
(Yusof et al., 2018).		Top management	-

(Apasrawirote & Yawised, 2021).	ease of use, convenience, simplicity, privacy and security		-

2.3. Related work

Bayona and Rua (2019) conducted a quantitative study on the importance of online payment for travel and tourism organisations. The study analysed how the implementation of internet use can influence the income from international travel and tourism to buy and sell goods and services and customer interaction. Their study used the Travel and Tourism Competitiveness Index (TTCI) to measure the factors and policies that make developing the Travel and Tourism sector in different countries attractive. The findings of their study indicated that eleven factors influenced the competitiveness of tourism and travel organisations. These factors were eleven items: opening a business, management of construction permits, obtaining electricity, property registration, obtaining credit, protection of investors, tax payment, cross-border trade, compliance with contracts, insolvency resolution, and regulation of the labour market. Much as their study leveraged the travel and tourism competitor index, it fell short of indicating the theoretical background on which competitiveness should be based. However, their study observed that a high level of international tourism revenue corresponded with the high level of business use of the Internet for customer transactions. Hence, they recommended further studies of the use of the Internet for transactions in the travel and tourism industry.

Hassan et al. (2020) conducted an experimental study to determine the efficiency of the secure electronic payment system for e-commerce. Their study reviewed the security standards of payment gateways and how they can be enhanced. In their experimental design, they emphasised that factors of confidentiality, integrity, non-repudiation, anonymity, availability, authorisation and

authentication play an essential role in enhancing the security of gateway systems. Their study recommended that future research should focus on utilising the proposed framework that comprises the suggested factors needed to enhance the security of not only payment gateway systems but of all systems used in online transactions. In comparison, their study forms a strong basis for explaining security aspects in the framework of utilising payment gateways in the case of this study.

Apasrawirote and Yawised (2021) conducted a qualitative study to determine the factors that influence SMEs' adoption of e-payment systems (EPS). Their study investigated how SMEs could adopt and develop the EPS process and the requirements that would help them with the adoption. The factors influencing the consumer usage of EPS included perceived usefulness, perceived ease of use, attitudes, cultural factors performance expectancy, perceived security, trust, social influence governance issues and consumer behaviour. The study highlights that the SME's intention of adopting EPS is unclear and made assumptions that the internal factors that could influence the adoption include age, gender, knowledge and experience, age of business operation and business context, and external factors include changes in consumer behaviours, changes in technology, and market and government forces. The study recommends further investigation with different levels of management and the customers.

Budiarto et al. (2022) conducted a qualitative study that explored whether digital marketing or a payment gateway is more important for an SME. The study explored whether digital marketing and payment gateways can impact SMEs' performance. The findings of the study were that digital marketing and payment gateways significantly impact SMEs' performance. The findings further show that digital marketing's beta coefficient is more powerful than payment gateways. The study asserts that digital marketing makes it easy for businesses and consumers because transactions and communication can take place anytime and anywhere because of the use of the internet; however, SMEs can face business

uncertainties by implementing a digital marketing strategy first and followed by a payment gateway.

Nabil et al. (2023) conducted a study to measure customer satisfaction with online payment gateway services applications on ValU. The researchers collected secondary data to gather more information about the topic and primary data to measure the relationship between variables using a qualitative method. The study has independent variables, which included perceived benefits, namely ease of use, software security, and software performance, as well as perceived security, which included safety, privacy, and trust. The study also had dependent variables, which included customer satisfaction constructs, namely, customer word of mouth, customer feedback, customer emotions, and customer recommendation. The researchers recommend further investigation into a different area to gain new insights on the subject, further study of other variables such as the application features and design and the impact on satisfaction, and further research on the impact on customer loyalty that online payment gateways can have.

2.4. Theoretical foundations

Based on the extensive review of related work, it became apparent that this study should be underpinned by several theoretical frameworks and models. These frameworks would also influence and shape the conceptual framework for the research, providing a robust foundation for understanding the effective use of payment gateways.

2.4.1. Technology Acceptance Model (TAM)

The technology acceptance model (TAM) was developed by Davis (1989) to inform the acceptance and use of technology within organisations. TAM had three major constructs, namely Perceived Ease of Use (PEU), Perceived Usefulness (PU), and Behaviour Intention (BI). The model was later modified to include

external factors, which modification has made TAM to be popularly used in the acceptance, adoption, and use of technology (Davis et al., 1989). TAM has been used, modified, and extended by various researchers to inform the acceptance and use of technology, and the model has been a basis of the development of many other theories and models (Venkatesh et al., 2003; Venkatesh et al., 2012, Rahim et al., 2022). TAMs construct perceived ease of use and perceived usefulness, which have been named and renamed differently in other theories and models but remain with the same explanation. For instance, PEU has been referred to as relative advantage, self-efficacy, and performance expectancy, whereas PU has been referred to as complexity and effort expectancy in theories like diffusion of innovation and the unified acceptance and use of technology (Davis et al., 1989; Venkatesh et al., 2003; Venkatesh et al., 2012). On the other hand, the external factors have been left open to be contextualised as research applies.

2.4.2. Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) was developed by Venkatesh et al. (2003) as an amalgamation of eight other models and theories. The UTAUT has four independent constructs, namely effort expectance, performance expectance, social influence, and facilitating conditions; one mediating variable, namely behaviour intention; four moderating factors, namely age, gender, experience, and voluntariness of use.

The UTAUT was later extended by Venkatesh et al. (2012) to inform the acceptance and use of technology in different organisation settings. Unlike TAM, UTAUT considered the aspects of social influence and facilitating conditions to bring out the idea that individuals and organisations where the technology is being used play a role. Additionally, the UTAUT also considered the influence of age, gender, experience, and the voluntariness of use as moderating factors.

Both TAM and UTAUT have been used extensively to inform the acceptance, adoption, use, and utilisation of technology. Because the influence of

technological aspects may include technological characteristics, users' perception towards technology, and organisation readiness towards technology which are not classified in TAM or UTAUT, many researchers have used the Technology, Environment, Organisation (TOE) model (De Pietro et al., 1990).

2.4.3. Technology, Organisation, Environment (TOE) model

The TOE model was developed by De Pietro et al. (1990) to emphasise the influence of technology aspects within organisations and the environment in which the organisations are operating. Because the TOE model does not define what is to be included in the technology, organisations, and/or environment has made it very popular as different researchers have used it to fit their studies (Kikawa et al., 2019; Muchandigona & Kalema, 2023; Rahim et al., 2022). Moreover, the TOE model is also suitable for the classification of technology aspects, namely technology characteristics, users' perceptions of technology, and organisation readiness towards technology. Additionally, the TOE model could allow extension to include individual characteristics left out in TAM and UTAUT. For this advantage, this study used the TOE model as the lens to underpin it.

2.5. Conceptual framework

From the theories discussed above, this study uses a composite framework where some constructs of TAM and UTAUT are embedded in TOE to develop a conceptual framework. Moreover, individual characteristics are introduced to explain the influence of attitudes, beliefs, and skills on individuals who are using payment gateways. Similarly, the technology factors are also categorised into two aspects: technology characteristics and users' perceptions towards technology.

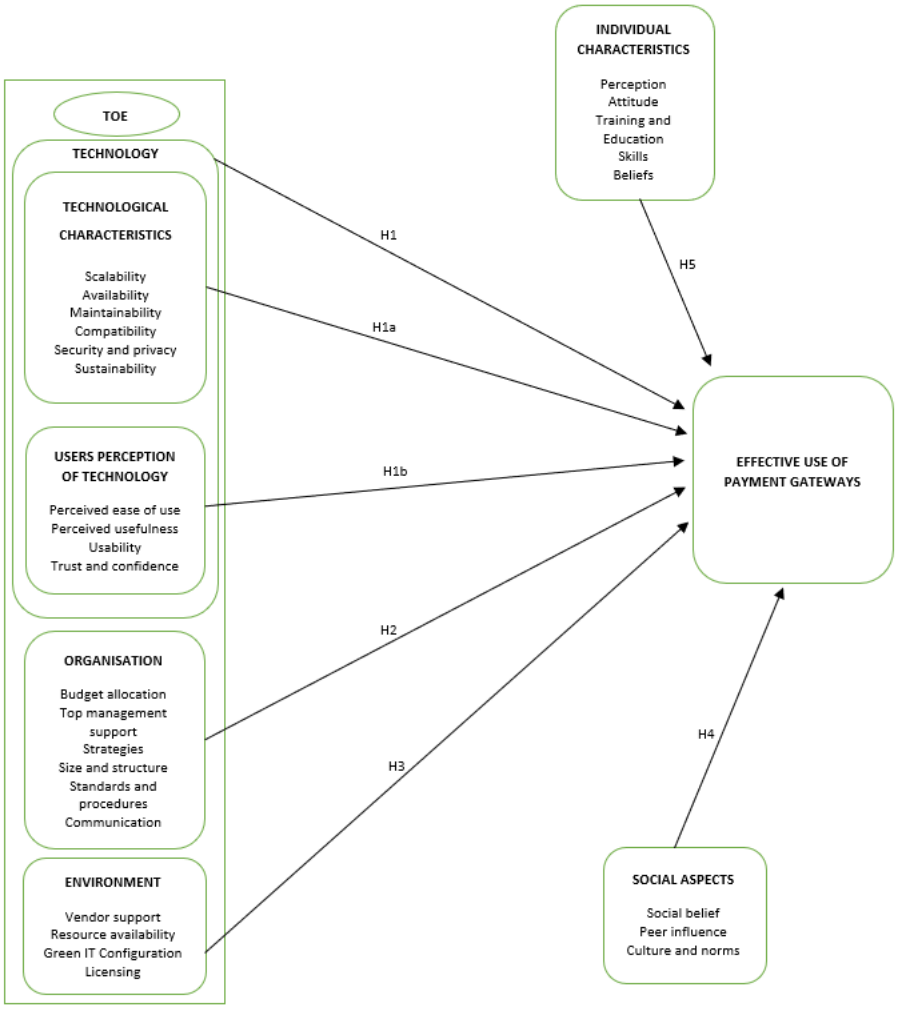

Figure 2.1: Conceptual framework

2.5.1. Hypothesis development

Various hypotheses are derived based on the conceptual framework, as presented below.

From technology factors, the following hypotheses were suggested:

H1: Technology factors influence the effective use of payment gateways

H1a: Technological characteristics influence the effective use of payment gateways

H1b: Users' perception of technology influences the effective use of payment gateways

From the organisation factors, the second hypothesis (H2) was suggested:

H2: Organisation factors influence the effective use of payment gateways

From the environmental factors, the third hypothesis (H3) was suggested.

H3: Environment factors influence the effective use of payment gateways

From the social aspects, the fourth hypothesis (H4) was suggested.

H4: Social aspects influence the effective use of payment gateways

From the individual characteristics, the fifth hypothesis (H5) was suggested.

H5: Individual characteristics influence the effective use of payment gateways

2.6. Summary

This chapter began with an overview of the SME landscape and the critical role they play in a country's economy. It then delved into payment systems and highlighted the shift from manual to online payment systems. It then discussed the benefits of payment gateways, the challenges faced by SMEs, and the factors that may influence the effective use of payment gateways. The theoretical foundations, TAM, UTAUT, and TOE, underpin the conceptual framework that was developed.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

This chapter describes the methodology that was followed to achieve the set objectives of the study. The chapter begins by presenting the research design, the research philosophy and paradigm, approach and strategy, data collection methods and analysis, reliability and validity, and finally the ethical considerations.

3.1 Research design

The research design is the overview of the whole study when looked at from a holistic perspective. It is the blueprint of the study that shows step-by-step what the research is all about, what is done, and how it is done (Yin, 2014). This study was motivated by the need for SMEs to use payment gateways to improve their competency. Hence, after identifying the research problem, the research study set objectives that were to be achieved in order to address the research problem. This was followed by a literature review to support the motivation and the justification of the study. The literature review helped identify factors that informed the design of the conceptual framework of the study, based on which a measuring instrument in the form of a close-ended questionnaire was developed. Data were collected from travel and tourism SMEs in the Gauteng province and were analysed quantitatively.

3.2 Research philosophy and paradigm

A paradigm is defined as the researcher's belief that is based on to determine the flow of research. The worldview of research contextualises the study into a given perspective (Lincoln et al., 2018). According to Creswell and Creswell (2018), in academic social science-based research, three paradigms are normally used: positivism, interpretivism/constructivism, and pragmatism. They indicate that the

choice of the paradigm to be used in the study depends on the researcher's background, study leader, and experience. Though this is true, Lincoln et al. (2018) allude that the nature of the research plays a role in determining the choice of a paradigm. This study followed a positivism paradigm since it intended to collect data based on SME entrepreneurs' perceptions of what would be the factors that influence the effective use of payment gateway systems. This implies that this study was more inclined to explain the understanding, perceptions, and influences rather than the feelings of the entrepreneurs. Hence, this study followed a positivism paradigm.

3.3 Research approach

A research approach explains how the researcher conducts the research, including methods of collecting data, how the population and sample sizes are selected, and how the collected data is analysed (Creswell & Creswell, 2018). Three common approaches are used, and these are quantitative, qualitative, and mixed methods (Yin, 2014). This study followed a positivism paradigm, which implies that it used a quantitative approach. A quantitative approach was suitable for this study since it intended to collect data from as many entrepreneurs and their employees as possible to have sufficient data from patterns relating to their perceptions towards the effective use of payment gateways. Another advantage of using a quantitative approach for this study was that SMEs dealing in travel and tourism were many and scattered; hence, collecting data from them using a close-ended questionnaire was more appropriate.

3.4 Research strategy

Research strategy is defined as how a researcher reaches out to the study's respondents (Salkin, 2017; Yin, 2014). The survey strategy was used since this study followed a positivism paradigm and a quantitative approach. The survey strategy was appropriate for this study because it would enable data collection from the many respondents targeted by the study.

3.5 Data collection methods

This study collected data using a close-ended questionnaire based on the conceptual framework.

3.5.1. Questionnaire development

The constructs of the conceptual framework formed the questionnaire sections, while the attributes of the constructs formed the questionnaire measuring items. The questionnaire was designed based on a 5-point Likert scale, and the choices were 1 and 5, presented strongly disagree and strongly agree, respectively; 3 represented neutral, whereas 2 and 4 were respective intermediate values (disagree and agree, respectively). The designed questionnaire was then uploaded on Qualtrics, and the link was distributed using the mailing lists provided by the different SMEs.

3.5.2. Questionnaire coding

After receiving the filled questionnaire from the respondents, the received datasets were exported to the Statistical Package for Social Scientists (SPSS v25). The exported datasets were screened and cleaned in preparation for data analysis. However, prior to analysis, the questionnaire was coded in such a way that the constructs and their attributes could be presented in a shorter form suitable for analysis. This was done in a manner that maintained the meaning and easy identification of the construct or its attribute, which, in quantitative analysis, is called coding. The six independent variables, namely technology characteristics, users' perception towards technology, organization factors, environmental factors, social aspects, and individual characteristics, formed the constructs of the conceptual model and their attributes as well as the dependent variable, effective online payment system usage where coded as follows:

- Technological Characteristics was coded as *TechChar* and its seven attributes as *TechChar1-7*
- Users Perception towards technology was coded as *UserPerc* and its five attributes as *UserPerc1- 5*
- Organizational Factors was coded as *OrgFac* and its seven attributes as *OrgFac1-7*
- Environmental Factors was coded as *EnvtFac* and its five attributes as *EnvtFac1-5*
- Social Aspects was coded as *SocAsp* and its four attributes as *SocAsp1-4*.
- Individual Characteristics was coded as *IndivChar* and its seven attributes as *IndivChar1-7*
- The dependent variable Effective Use of Online Payment System was coded as *PaySysUse* and its three attributes as *PaySysUse1-3*

3.5.3. Advantages of using a close-ended questionnaire

Depending on the nature of the respondents and the distances of the SMEs, and how they are scattered within Gauteng, using a close-ended questionnaire helped to achieve the following:

a) Close-ended questionnaires are regarded as simpler to answer and do not require a lot of time to complete. Regarding this study, the respondents were the many and scattered travel and tourism SMEs within Gauteng; hence, using a close-ended questionnaire was the right choice for these respondents because the survey was shared during the period leading up to their peak period of the December holidays. This enabled them to complete the survey in a short time.
b) Close-ended questionnaires reduce the researcher's cost. For this study, a link generated from Qualtrics was shared using the mailing lists provided by the different SMEs scattered within Gauteng. If this was not the approach, the researcher would have had to conduct face-to-face or

telephonic interviews with the many SMEs, which would have resulted in escalated costs.

c) Close-ended questionnaires are deemed to be simpler for respondents to answer as they are only required to choose their responses that are as close to their views as possible from a list. Regarding this study, this resulted in a good response rate even though some SMEs responded during the festive season, which is their busiest period.

3.6 Population and Sampling

Data for this study were collected from travel and tourism SMEs in Gauteng, where two municipalities, namely, the City of Johannesburg and Ekurhuleni, were selected. According to the Small Enterprise Development Agency (SEDA) March 2022 statistics report, there are 314 103 SMEs in the Trade and accommodation sector and 75 585 SMEs in transport and communications. The report further indicates that in Ekurhuleni, the SMEs, specifically in travel and tourism, are 835, whereas in the City of Johannesburg, there are 528. Based on this understanding, the study population was selected from 1,363 (Small Enterprise Development Agency, 2021).

3.6.1 Population

According to Cohen et al. (2018), the study's population is the probable number of participants who can participate in research. As indicated, this study's population was the owners or entrepreneurs of 1,363 SMEs. In the event that the owner is not available, his/her assistant or CEO is expected to participate.

3.6.2 Sampling of the participants

Since not every owner of the 1,363 SMEs could not be able to participate in the study, a statistical sample size was selected. According to Salkind (2017), the study's sample size is the number of objects or individuals that can be selected

from the population to participate in a study. In quantitative research, this number was selected statistically to avoid bias. In the case of this study, the Krejcie and Morgan (1970) tool for selecting a sample size of a finite population, demonstrated in Figure 3.1, was used.

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Figure 3.1: Krejcie and Morgan tool

Based on the Krejcie and Morgan (1970) tool demonstrated in Figure 3.1, the sample size of the population 1 363 was 297. This sample size was the number of respondents to whom the close-ended questionnaire was distributed. However, since these SMEs are scattered in some areas, especially in the City of Johannesburg, the respondents who participated were selected using simple random sampling.

3.7 Data Analysis

Data analysis is a process of determining the meaning of the selected data (Creswell & Creswell, 2018). In the case of this study, data was analysed statistically using the Statistical Package for Social Sciences (SPSSv25), and

descriptive and inferential statistics such as correlation and regression were used. The analysed data are reported in the tabular and graphical format in the proceeding chapter of this dissertation. To answer the set research objectives, the consistency table presented in Table 3.1 highlighted the methods or a combination of methods used to achieve these objectives.

Table 3.1 Consistency table: research questions, propositions, data collection and data analysis

RO #		State Research Objective	Prop/hyp #	State Hypothesis	Data collection detail	Data analysis method
1		The main objective of the quantitative study was to formulate a framework for the effective use of payment gateways by SMEs in South Africa. The study took the case of travel and tourism in Gauteng, with an emphasis on the creation of a competitive advantage through customer satisfaction.	1		Literature review and questionnaire	Literature search and quantitative analysis of descriptive and inferential statistics

RO #		State Research Objective	Prop/hyp #	State Hypothesis	Data collection detail	Data analysis method
1.1		To determine the specific benefits associated with the adoption of payment gateways in the South African travel and tourism industry for SMEs in Gauteng	1.1		Literature search	Content search
1.2		To conduct a quantitative analysis of the factors that influence the adoption and usage of payment gateways by Gauteng SMEs in the South African travel and tourism industry	1.2		Literature search	Content search and regression analysis
1.3		To quantitatively analyse the challenges and inefficiencies of the current payment	1.3		Literature search	Content search

RO #		State Research Objective	Prop/hyp #	State Hypothesis	Data collection detail	Data analysis method
		systems used by SMEs in the Gauteng travel and tourism industry				
1.4		To employ the statistically identified factors to formulate a quantitative framework for the effective use of payment gateways by Gauteng SMEs in the travel and tourism industry	1.4		Quantitative data analysis	Descriptive and inferential statistics

3.8. Validity and Reliability

When conducting research, it is essential that the study's findings and the instrument that led to those findings are evaluated. Validity and reliability are considered to be the most important and fundamental features for carrying out this evaluation and are considered the appropriate concepts for introducing a remarkable setting in research.

3.8.1. Validity

Validity is the process of ensuring that the measuring instrument measures what it is supposed to measure (Yin, 2014). It is intended to ensure that the questionnaire conforms to face, content, construct, and criterion validity before data collection (Cohen et al., 2018). In this study, these four forms of validity were ensured as follows:

a) Face validity: To measure the effective use of payment gateways, face validity was enforced to ensure that the questionnaire was measured logically. In this instance, the researcher, along with their supervisor, conducted an in-depth evaluation to determine the validity of the research and ensure that it measures what it claims. This included proofreading and correcting the semantic and syntactic errors.

b) Content validity: Internal validity seeks to create a causal link between the variables when one condition is thought to influence another (Yin 2014). This study ensured content validity by verifying that the measuring instrument is robust and relevant to the effective use of payment gateways. This process entailed a comparison of the measuring instrument against previous researchers who examined the effective use of payment gateways.

c) Criterion-related validity: External validity is linked to predictive or criterion validity, which relates to the extent to which an amount correlates with an external norm. To guarantee this form of validity, tests that consisted of correlation analysis to examine how each construct is associated with the other were conducted.

d) Construct validity: This pertains to whether a test or a scale can effectively evaluate challenging constructs (Yin, 2014). To ensure this form of validity, the constructs used to develop the measuring instrument were compared with alternative measures. Furthermore, this was reinforced by inferring the measurement of the relationship patterns through correlation and regression analysis.

3.8.2. Reliability

Reliability is intended to ensure that the measuring instrument consistently measures and produces the same results when applied in different settings or environments (Cohen et al., 2018). The internal consistency reliability was measured using Cronbach's Alpha (α) to determine the extent to which the questionnaire and its constructs conform to this consistency. Tables 3.2 and 3.3 present the reliability of the overall questionnaire and that of the independent constructs, respectively.

Table 3.2: Reliability of the overall questionnaire

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.966	.966	38

Additionally, the reliabilities of the constructs were also measured, and the results are as demonstrated in Table 3.3.

Table 3.3: Reliabilities of the constructs

Construct	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Technology Characteristics (TechChar)	.803	.803	7
Users' perceptions (UserPerc)	.797	.795	5
Organisation (OrgFac)	.854	.855	7
Environment Factors (EnvtFac)	.858	.859	5
Individual Characteristics (IndivChar)	.869	.871	7
Social Aspects (SocAsp)	.814	.814	4
Effective use of online payment system (PaySysUse)	.800	.802	3

Based on the results demonstrated in Tables 3.2 and 3.3, it can be deduced that both the overall questionnaire and the constructs had good reliability that is above the recommended threshold of 0.7 (Heale & Twycross, 2015).

3.9. Ethical considerations

Babbie (2016) explained that research ethics are the standards and norms of behaviour that guide moral decisions and the interaction with others while conducting research. It is imperative that the researcher demonstrates honesty, impartiality, confidentiality, and integrity. Respondents who participated in this study were informed about their privacy, voluntariness, and liberty to withdraw from research at any point when they felt discomfort. More still, there were no foreseen potential risks or disadvantages that could arise from participation in this research, and consequently, respondents were informed. The study followed the University of Witwatersrand's ethical standards; hence, before data collection, ethical clearance was sought from the University's Ethical Committee.

3.10. Summary

This chapter outlined the research design and methodology used for this study, which is aimed at giving SMEs a competitive advantage using effective online payment systems. Driven by the need to address the identified problem, the chapter identified the research paradigm, approach, strategy, and methods used for data collection and analysis. The chapter also discusses the study population and the techniques used to select the sample involved in the study. The chapter further discusses how the validity and reliability, as well as the ethical issues, were handled.

CHAPTER 4: ANALYSIS AND PRESENTATION OF RESULTS

This chapter presents the study's results based on the collected data. It begins by presenting the demographics and situational variables of the respondents. The chapter then presents the correlation and regression analysis, which explains the contribution of each construct. The chapter concludes by presenting the results of the hypothesis tests.

a. Frequencies of respondents' demographics

The respondents were asked to complete a close-ended questionnaire that provided demographic and situational variables such as gender, age, level of education, nature of business, position in the organisation, and whether they had a payment gateway. The respondents' demographic information is presented in Table 4.1 below.

Table 4.1: Respondents demographics

Factors	Items	Percent (%)	Valid percent (%)	Cumulative percent (%)
Gender	Male	27,78	27,78	27,78
	Female	69,44	69,44	97,22
	Non-binary	0,00	0,00	97,22
	Prefer not to say	2,78	2,78	100,00
	Total	100,00	100,00	
Age	18-29	11,11	11,11	11,11
	30-39	44,44	44,44	55,56
	40-49	19,44	19,44	75,00
	50-59	0,00	0,00	75,00
	60 and above	25,00	25,00	100,00
	Total	100,00	100,00	

Level of education	Grade 12	8,33	8,33	8,33
	National Certificate	8,33	8,33	16,67
	National Diploma	22,22	22,22	38,89
	Btech/ Degree	41,67	41,67	80,56
	Mtech/ Masters	5,56	5,56	86,11
	Other	13,89	13,89	100,00
	Total	100,00	100,00	
Nature of business	Accomodation	50,00	50,00	50,00
	Food & beverage	11,11	11,11	61,11
	Transportaion	5,56	5,56	66,67
	Travel agency & tour operators	22,22	22,22	88,89
	Recreation & entertainment	11,11	11,11	100,00
	Total	100,00	100,00	
Position in organisation	Owner/ Executive	63,89	63,89	63,89
	Senior management	11,11	11,11	75,00
	Middle management	13,89	13,89	88,89
	Supervisory level	5,56	5,56	94,44
	Entry level	5,56	5,56	100,00
	Total	100,00	100,00	
Payment gateway	Yes	70,83	70,83	70,83
	No	29,17	29,17	100,00
	Total	100,00	100,00	

i. Age and gender

The results of the demographic and situational variables shown in Table 4.1 indicate that 69.44% (n=58) of the respondents were female, while 27.78% (n=23) were male. 2.78% (n=2) preferred not to say their gender, while 0.00%

(n=0) did not choose the non-binary option. Most of the respondents, 44.44% (n=37), were between the ages of 30 and 39. This was followed by those above the age of 60 with 25% (n=21), followed by those between 40 and 49 with 19.44% (n=16), and finally, those between 18 and 29 with 11.11% (n=9). No respondents were between 50 and 59 (0.00% (n=0)). Researchers like Venkatesh et al. (2012) have highlighted the significance of age and gender being a positive influence in the acceptance, adoption and use of technology. This implies that in terms of SMEs making use of payment gateways, mature individuals are more likely to observe security rules and guidelines and observe measures and controls of technology. Subsequently, this implies that the questionnaire was answered by mature and responsible people who work in SMEs in the travel and tourism sector. Below is the graphical representation of the summary of the respondents by age.

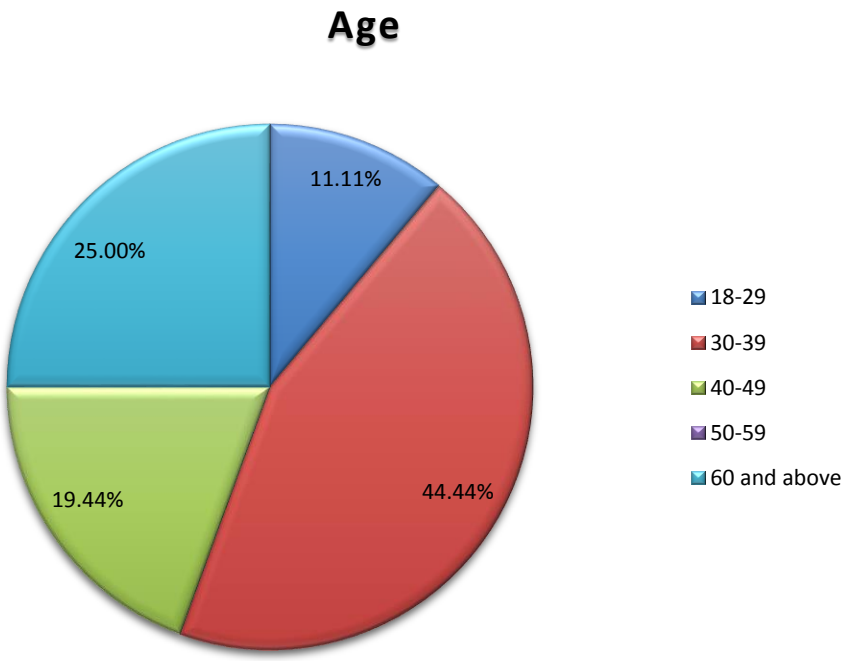

Figure 4.1: Respondents' age

ii. Level of education

The results demonstrated in Table 4.1 indicate that 41.67% (n=35) of the respondents have a BTech/ degree, 22.22% (n=18) have a national diploma, 8.33% (n=7), have a grade 12, 8.33% (n=7) have a national certificate and 5.56% (n=5) have an MTech/ Masters. The results also show that 13.89% (n=12) of the respondents chose the “other” option; however, they did not specify what it was even though there was space given to do so. These results further demonstrate that since most of the respondents have a degree or higher, the findings of this study can be reported with high confidence. Below is the graphical representation of the level of education.

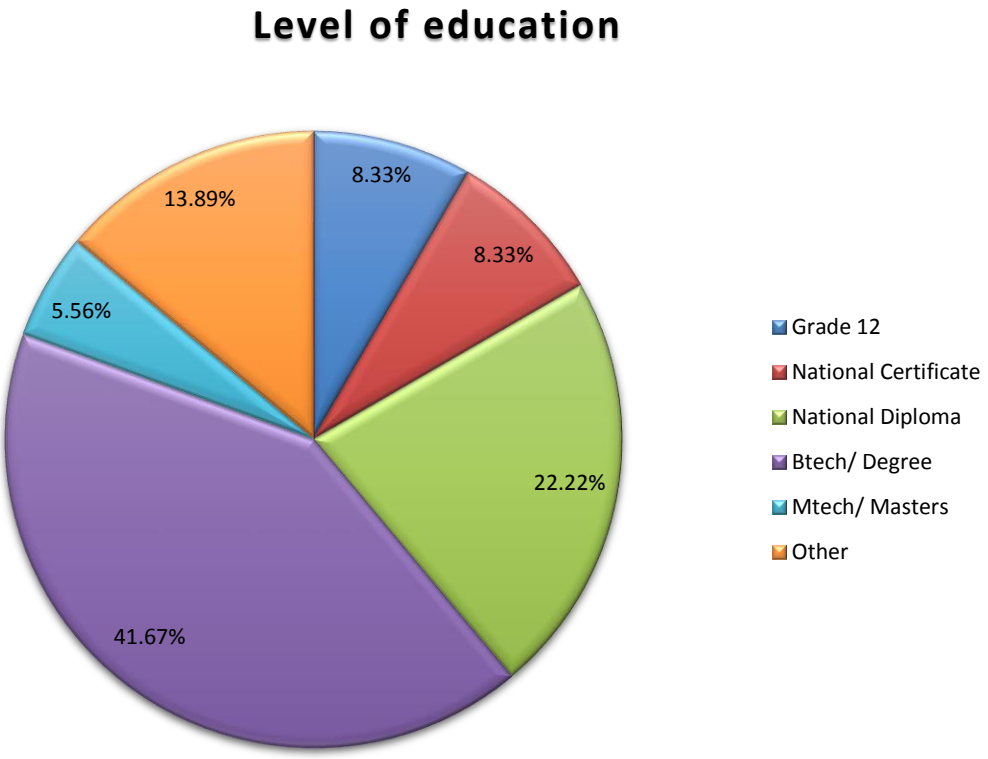

Figure 4.3: Respondents’ level of education

iii. Nature of business and position in organisation

The results demonstrated the nature of business in Table 4.1 indicates that 50% (n=42) of the respondents are in accommodation, 22.22% (n=18) are in a travel agency and tour operators, 11.11% (n=9) are in food and beverage, 11.11% (n=9) are recreation and entertainment, and 5.56% (n=5) are in transportation.

The results also indicate that 63.89% (n=53) of the respondents held the position of executive or owner in the organisation, 13.89% (n=12) were in middle management, 11.11% (n=9) were in senior management, 5.56% (n=5) were in supervisory level, and 5.56% (n=5) were in entry-level. The individual's level plays an imperative role in the use of payment gateways. Below is a graphical representation of the results on the nature of business and the position of the respondents in the organisation.

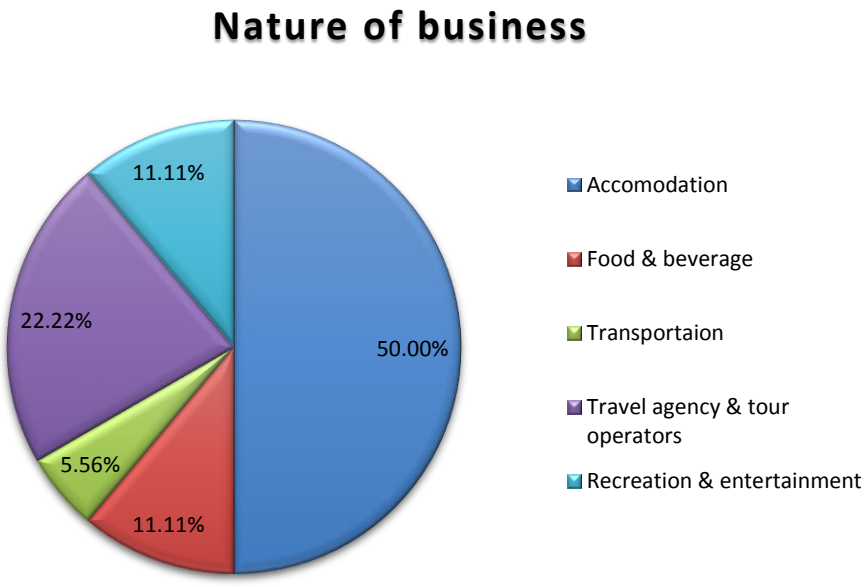

Figure 4.4: Respondents' nature of business

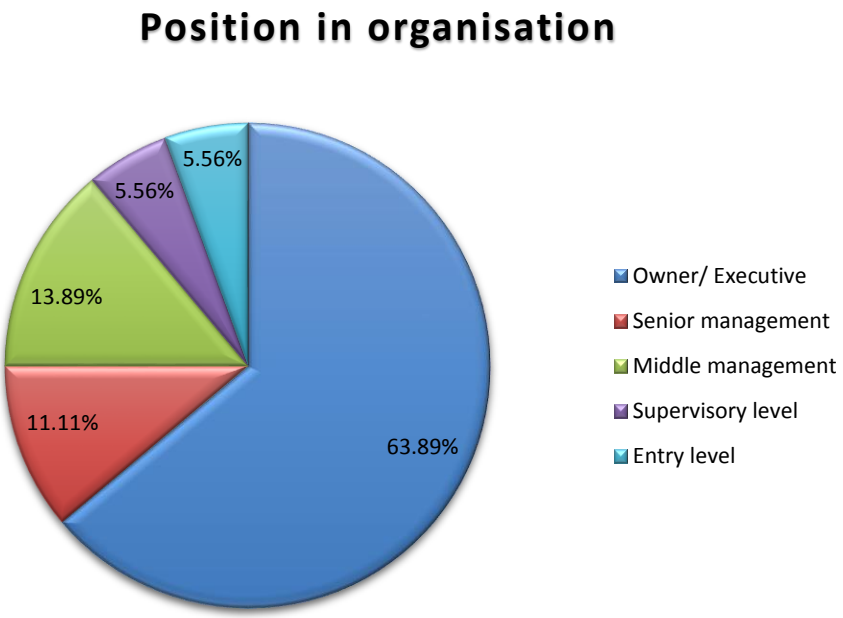

Figure 4.5: Respondents' position in organisation

iv. Payment gateway usage

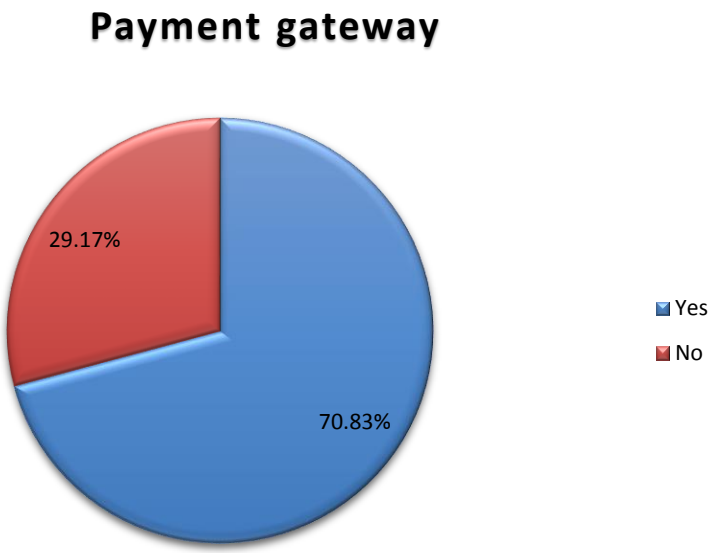

Figure 4.6: Payment gateway usage

Figure 4.6 shows that even though 29.1% (n=24) of the respondents do not use a payment gateway, 70.83% (n=59) use a payment gateway. When users use technological innovation, it becomes easier for the overall organisation to accept, adopt, and use payment gateways.

b. Correlation Analysis of Constructs

In a quantitative study, it is essential to evaluate the relationship between two variables and show how one variable changes with a change in the other and whether the relationship is weak, strong, positive, or negative. This relationship between variables is known as correlation, and it ranges between -1.00 and +1.00 (Heale & Twycross, 2015). Pearson correlation was carried out, and the results are as demonstrated in Table 4.2.

Table 4.2: Correlation of Constructs

		TechChar	UserPerc	OrgFac	EnvtFac	IndvChar	SocAsp	PaySysUse
TechChar	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	83						
UserPerc	Pearson Correlation	.845**	1					
	Sig. (2-tailed)	.000						
	N	83	83					
OrgFac	Pearson Correlation	.848**	.804**	1				
	Sig. (2-tailed)	.000	.000					
	N	83	83	83				

	Pearson Correlation	.831**	.839**	.830**	1			
EnvtFac	Sig. (2-tailed)	.000	.001	.000				
	N	83	83	83	83			
	Pearson Correlation	.849**	.822**	.822**	.821**	1		
IndvChar	Sig. (2-tailed)	.000	.030	.000	.010			
	N	83	83	83	83	83		
	Pearson Correlation	.785**	.752**	.727**	.721**	.810**	1	
SocAsp	Sig. (2-tailed)	.000	.000	.000	.000	.000		
	N	83	83	83	83	83	83	
	Pearson Correlation	.473*	.512**	.532**	.445**	.481*	.255*	1
PaySysUse	Sig. (2-tailed)	.001	.002	.000	.000	.000	.020	
	N	83	83	83	83	83	83	83

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

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

Results presented in Table 4.2 indicate that all constructs had a good correlation with each other at the 0.01 level of significance. On the other hand, the dependent variable, effective use of online payment system (PaySysUse), showed a correlation at the 0.05 level of significance with TechChar, IndivChar, and SocAsp. Much as the correlation indicates a good correlation, hence, it is paramount to test for multicollinearity during regression analysis.

c. Regression Analysis

Muchandigona and Kalema (2023) note that correlation and regression analyses are related, whereas correlation is used to measure the relationship between variables as well as the degree of their strength and direction of the relationship regression, on the other hand, depends on this relation to predicting the outcome of the dependent variable. Through regression analysis, it is possible to establish the contribution of each variable to the overall prediction of the model. Muchandigona and Kalema (2023) further indicate that this contribution of each variable to the overall prediction of the model is significant if the critical ratio, also known as the *t-value,* of such a variable is equal to or greater than ± 1.96 with a probability *p-value* ≤ 0.05.

Table 4.3 presents the model summary, whereas Table 4.4 presents each construct's contribution to the overall prediction of the model.

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.737[a]	.543	.358	.72634	.543	8.631	6	76	.000

a. Predictors: (Constant), SocAsp, EnvtFac, OrgFac, UserPerc, IndvChar, TechChar

As demonstrated in Table 4.3, the overall prediction of the model is 54.3% (R^2 = .543), which shows that the suggested model for the effective use of online payment systems has a good prediction and could be used to inform SMEs' decisions towards the use of online payments. Table 4.4 presents the regression analysis that demonstrates each construct's prediction to the model's overall prediction. Table 4.4 also presents the test for multicollinearity using the tolerance

and variance inflation factor (VIF). According to Frost (2020), multicollinearity exist if the value of VIF > 10.

Table 4.4: Regression Analysis of Constructs

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.242	.460		2.704	.008		
	TechChar	.098	.287	.074	.343	.733	.170	5.888
	UserPerc	.475	.230	.400	2.063	.043	.208	4.798
	OrgFac	.509	.230	.422	2.212	.030	.215	4.656
	EnvtFac	-.209	.222	-.182	-.938	.351	.208	4.804
	IndvChar	.670	.252	.341	2.659	.002	.185	5.398
	SocAsp	.658	.190	.555	3.468	.001	.306	3.273

a. Dependent Variable: PaySysUse

The results in Table 4.4 show that, with the exception of technology characteristics and environmental factors, all other constructs have a positive significant contribution to the overall prediction of the model. Social aspects (SocAsp) have the highest contribution of 55.5% with a critical ratio (t= 3.468) at p =.001. This is followed by individual characteristics with a contribution of 34.4% (t= 2.659) and p =.002. Technology characteristics had the least and non-significant contribution of 7.4% at p= .733. The discussion of these findings is elaborated in the next chapter. More still, the testing for the existence of multicollinearity using the variance inflation factor indicates that it does not exist since all VIF values are less than 10 (VIF<10).

d. Testing for the Hypotheses

This study hypothesized seven relationships that were set to be tested. Based on the results of Table 4.3 and those of the t-test presented in Table 4.4, the findings in relation to these set hypotheses of the study are reported and presented in Table 4.5.

Table 4.5: Regression Analysis of Constructs

Construct	**Hypothesis**	**Significance value (P value)**	**Action**
Technology factors	H: Technology factors influence the effective use of payment gateways	P = .000 < .05	Accepted
Technological characteristics	H1a: Technological characteristics influence the effective use of payment gateways	P = .733 > .05	Rejected
Users Perception of Technology	H1b: Users perception of technology influence the effective use of payment gateways	P = .043 < .05	Accepted
Organization Factors	H2: Organisation factors influence the effective use of payment gateways	P = .030 < .05	Accepted

Environment factors	H3: Environment factors influence the effective use of payment gateways	P = .351> .05	Rejected
Social aspects	H4: Social aspects influence the effective use of payment gateways	P = .002 < .05	Accepted
Individual characteristics	H5: Individual characteristics influence the effective use of payment gateways	P = .001 < .05	Accepted

The set hypotheses were all accepted, with the exception of Technology characteristics and environmental factors.

e. Summary

This chapter outlines the results of the analysed data by presenting the frequencies of the demographics and situational variables of the respondents. This is followed by the analysis of the inferential statistics, which included the correlations and regressions. The chapter then concludes with the results obtained from the suggested hypothesis testing.

CHAPTER 5: DISCUSSION, INTERPRETATION, CONCLUSION, AND RECOMMENDATION

This chapter discusses the study's findings. It begins with an overview of the study, highlighting the lessons learned and the relevance of the methodology used. This is then followed by a discussion of the findings in relation to the study's goal and objective.

5.1. Overview of the study

The study sought to determine SMEs' effective use of payment gateways within the travel and tourism sector in Gauteng, South Africa. SMEs play a critical role in the economic growth of a country by contributing to poverty reduction, employment creation, and GDP. Technological innovations have been a key component that contributes to the success of SMEs. These innovations have bridged the gap between SMEs and their customers. This can be seen with the introduction of payment gateways. Customers did not have to wait to get to the SME to make a payment. They could book their service online to get to the SME location and consume their product or service.

One of the benefits of payment gateways is that SMEs do not need to always transact with cash, which can be a high risk for their business and their customers. Within their business, they will likely experience theft from employees or thieves. The benefit for their customers is reduced theft from, for example, pickpockets. One of the other benefits of a payment gateway for SMEs is that it can reach customers that are a few kilometres away and those far away in other regions. This allows customers who are close and far from the SME to be able to pay for their products and services more easily. The increased use of technology by consumers might also be driving the adoption and use of payment gateways because customers expect the businesses they interact with to make use of technology that, in turn, makes their lives easier.

5.1.1. Lessons learnt from the study

COVID has accelerated the adoption and use of technological innovations, including payment gateways. Customers expect the businesses they interact with, whether big or small, to use technological innovations to make their lives simpler. These trends have influenced the adoption and use of payment gateways not only to retain existing customers but also to reach new customers in other geographical areas.

With the increased use of the internet and smartphones, the fear of using technology is no longer a factor. This is highlighted in the hypothesis where the technological characteristics were rejected. Access to technology is no longer a barrier. Customers are adopting and using technology at fast rates and demand the same from the businesses they interact with.

5.1.2. Relevancy of the methodology used for the study

This study followed a quantitative approach where data were collected from various SMEs in the travel and tourism sector. It was imperative to have as many respondents as possible to design a model that encompasses all factors. This could only be achieved by utilising a quantitative approach that would have as many respondents as possible. An analysis of their perceptions was done descriptively and through inference statistics. From this point of view, it was clear that a quantitative approach was more appropriate for this study. A literature review was conducted to identify various factors as well as constructs from several theories. This indicated that statistical methods were required to analyse the correlation and regression as well as the hypotheses suggested to find the general perception for the effective use of payment gateways. This type of testing could only be achieved by utilising the quantitative approach.

5.2. Discussion and interpretation of findings in relation to the goal and objectives

The goal of the study was to determine the effective use of payment gateways by travel and tourism SMEs in Gauteng, South Africa, and the specific objectives were:

1. To determine the benefits associated with the use of payment gateways in the South African SMEs of the travel and tourism industry.
2. To determine the factors influencing the effective use of payment gateways by travel and tourism SMEs in South Africa.
3. To analyse the challenges of the current payment systems used by travel and tourism SMEs.
4. Using the identified factors to design a framework for travel and tourism SMEs to effectively use payment gateways.

5.2.1. Discussion of the findings in relation to the first objective

The first objective was to determine the benefits associated with the use of payment gateways in the South African SMEs of the travel and tourism industry. To achieve this objective, a review of the literature was conducted to determine the benefits associated with the use of payment gateways and sub-Section 2.1.1 of this dissertation report was dedicated to finding these benefits. As observed by Rahman et al. (2022), one of the benefits of online payment systems is the ability of the systems to handle multiple transactions and requests simultaneously since a payment gateway can receive payments through multiple methods such as e-wallets, EFT, debit and credit cards, etc., and can allow multiple transactions from multiple banks (Supriyati & Nurfiqo, 2019). This versatility allows for multiple customers to make multiple transactions at any time and from anywhere in the world.

5.2.2. Discussion of the findings in relation to the second objective

The second objective was to determine the factors influencing the effective use of payment gateways by travel and tourism SMEs in South Africa. To achieve this objective, this study conducted a literature review to understand the factors that influence the effective use of payment gateways. Thus, this study dedicated Section 2.2 to discuss the factors influencing the effective use of payment gateways. The factors identified in Section 2.2 were presented in Table 2.1. Additionally, the regression analysis showed that all the constructs, with the exception of technology characteristics and environmental factors, have a significant positive contribution to the overall prediction of the model. These factors are technology factors, users' perception of technology, organisation factors, social aspects, and individual characteristics. In addition, the factors obtained from theoretical and conceptual frameworks lead to correlation and regression analysis in Section 4.2 and 4.3, respectively.

5.2.3. Discussion of the findings in relation to the third objective

The third objective was to analyse the challenges of the current payment systems used by travel and tourism SMEs. To achieve this objective, literature related to the challenges with the current payment systems was reviewed in Section 2.2. The literature highlights the inconvenience of manual payments, which can only be processed during working hours and do not offer the benefits that online payment has. It further states the risks associated with manual payments, such as forged signatures on cheques, fake cash and cheques bouncing (Khan et al., 2017).

5.2.4. Discussion of the findings in relation to the fourth objective

The fourth objective was to use the identified factors and design a framework for the effective use of payment gateways by travel and tourism SMEs. The factors identified were used to develop a conceptual framework for effective use of

payment gateways. Based on these factors, there was a discussion of the theoretical foundations, which led to the design of the conceptual framework. The conceptual framework was used for the quantitative data collection, which was analysed by using the regression analysis illustrated in Table 4.4. The Beta (β)-values were presented in the regression analysis and ranked the factors according to the contribution to the model's overall prediction. The critical t-value ratio ranked the factors according to their level of implication to the prediction of the model.

5.2.5. Discussion and implications of the findings in relation to the goal

The goal of this study was to determine the effective use of payment gateways by travel and tourism SMEs in Gauteng, South Africa. In order to achieve this, a section of the literature was dedicated to the discussion of the factors in Section 2.4, which led to the development of a conceptual framework, as illustrated in Figure 2.1. This led to the development of the hypotheses, which were tested according to the significance of the contribution of the construct to the overall model. The analysis led to the results illustrated in Tables 4.4 and 4.5, which indicated that some constructs were rejected and could not be shown in the final model shown in Figure 5.1.

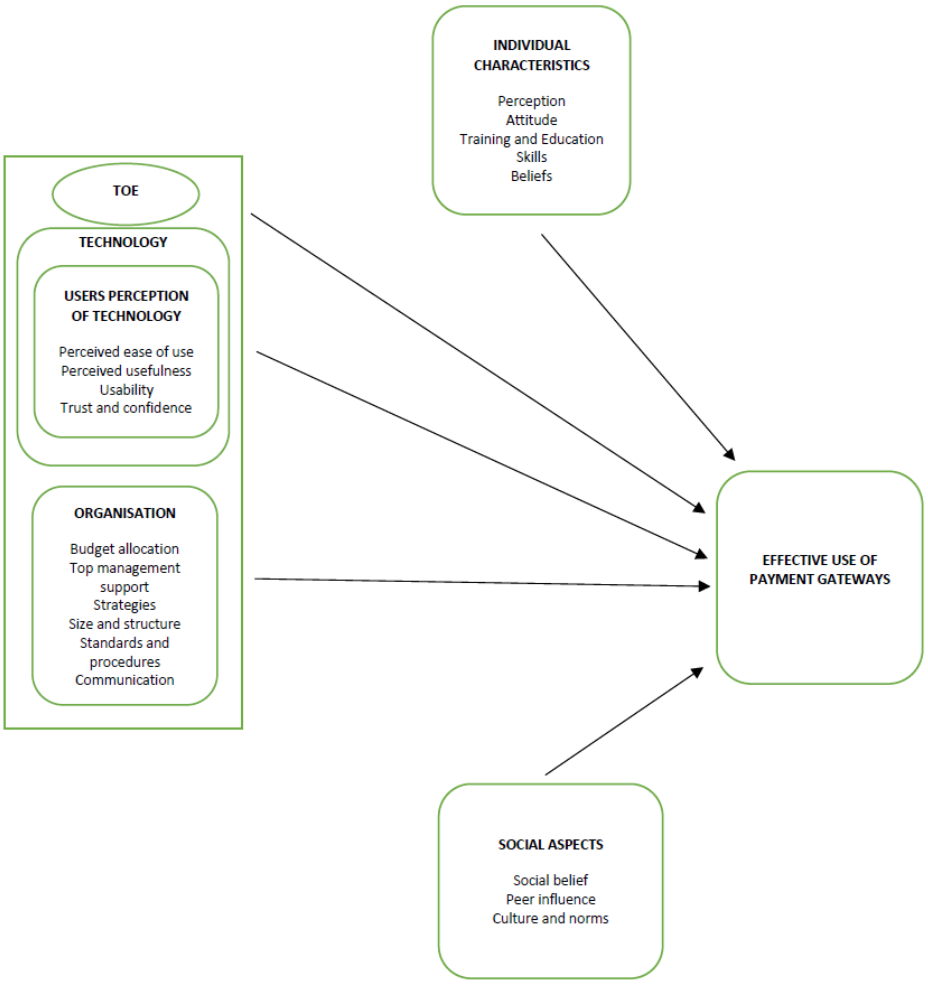

Figure 5.1: A model for effective use of payment gateways for SMEs

5.3. Discussion and Interpretations of the findings in relation to the hypotheses

Five hypotheses were suggested from the conceptual model. The following section discusses the findings and their implications for theory and practice.

H1: Technology factors influence the effective use of payment gateways: The hypothesis was **accepted**. The results of this study indicate that technological factors influence the effective use of payment gateways. Researchers have highlighted the critical role that SMEs play in a country's economic growth and that the sustainability of SMEs is essential. This

sustainability can be obtained by attracting more customers and offering innovative solutions by making use of technological innovations such as payment gateways. The hypotheses being accepted indicate that SMEs are aware of the value and contribution that technology plays in their sustainability and growth.

H1a: Technological characteristics influence the effective use of payment gateways: The hypothesis was **not accepted**. The results of this study indicate that the technological characteristics do not influence the effective use of payment gateways. Even though this is the case in this study, technological characteristics are still an important factor. The characteristics included scalability, availability, maintainability, compatibility, security and privacy, and sustainability. The results indicate how technology has become more available and less complex to use. With an increase in the use of Internet services, customers have embraced businesses that make use of technological innovations.

H1b: Users' perception of technology influences the effective use of payment gateways: The hypothesis was **accepted**. The results of this study indicate that the users' perception of technology influences the effective use of payment gateways. The perception that users have when it comes to technology being easy or difficult to use has contributed to the adoption of technological innovations (Venkatesh et al., 2003; Venkatesh et al., 2012; Muchandigona & Kalema, 2023). Consumers are more likely to use payment systems that they perceive to be clear, direct and easy to use. The results of this study indicate that users perceive payment gateways to be easy to use and, therefore, are more likely to make online payments.

H2: Organisation factors influence the effective use of payment gateways: The hypothesis was **accepted**. The results of this survey indicate that Organisation factors influence the effective use of payment gateways. Top management plays a critical role in the effective use of payment gateways in their organisation (Yusof et al., 2018). Their level of skills, knowledge and experience have an impact on the adoption of technological innovations. The results from the

frequencies of demographics and situational variables indicated that the majority of respondents were owners or were in top management, and they had a BTech/degree or higher.

H3: Environment factors influence the effective use of payment gateways: The hypothesis was **not accepted**. The results of this study indicate that the environment factors do not influence the effective use of payment gateways. Even though this is the case in this study, environmental factors are still an important factor. The characteristics included vendor support, resource availability, green IT configuration and licensing. These characteristics play a role in which payment gateway an SME will implement but may be overshadowed by the technological factor of the system they implement. This may be because the ease of use of technology for consumers is more significant than the environmental characteristics listed. It must be highlighted that a digital economy is beneficial for the consumer because of the convenience it creates in making payments online (Singh & Gupta, 2019).

H4: Social aspects influence the effective use of payment gateways: The hypothesis was **accepted**. The results of the study indicate that the social aspects influence the effective use of payment gateways. Msomi and Olarewaju (2021) highlight that South African SMEs are encouraged to find innovative solutions that will solve social challenges that will create more job opportunities, improve inequality, and contribute positively to economic growth. This can be achieved through social interactions, either internally or externally, to support knowledge sharing and encourage the flow of information regarding the effective use of payment gateways. External social aspects may include collaboration with other SMEs to gain knowledge and support, and internal social aspects may include staff accepting, trusting, and using payment gateways for transactions.

H5: Individual characteristics influence the effective use of payment gateways: The hypothesis was **accepted**. The results of the study indicate that individual characteristics influence the effective use of payment gateways. Kikawa et al. (2022) highlighted that some of the factors that influence online

transactions are individuals' perceptions, security and trust, behaviour intention and self-efficacy, which implies that these characteristics are crucial to the effective use of payment gateways by internal staff and external customers. Another factor is the benefits that come with the usage of payment gateways in that they allow multiple payments from different banks simultaneously, which improves operational efficiency and possibly decreases operational costs.

5.4. Limitations, recommendations, and direction for future studies

This section will discuss the limitations, the recommendations and the areas that were not covered due to some constraints.

5.4.1. Limitations of the study

Due to the time constraints, this study only focused on travel and tourism SMEs in the Gauteng region. The respondents from whom the data were collected from were employers and employees in SMEs in the travel and tourism sector. There are many SMEs across South Africa in the travel and tourism sector which could have participated in the study. The findings of this study may lack a comprehensive view of payment gateways across the country. This may imply that the respondents from other regions may have had a perspective of the effective use of payment gateways, which could have led to different perceptions and results.

More studies are needed to be conducted on SMEs, specifically those in the travel and tourism sector. Besides the fact that SMEs play a critical role in the growth of an economy, it is important to understand the use of technological innovations in this sector. It is essential that SMEs understand how technological innovations can increase their revenue and grow their customer base. In addition, it is clear how online payments offer security and efficiency for both the customer and the organisation making use of online payment systems. The exponential

growth of the use of internet services has contributed to this and the shift to the Fourth Industrial Revolution (4IR). However, online transactions also present challenges, such as online theft and fraud for consumers and organisations.

This study only descriptively analysed the respondents' demographics and situational variables. This study was also limited by only designing but not validating the effective use of payment gateways for the SME model. This study recommends that the model be validated to fully develop an effective use of payment gateways for the SME model.

Due to the period in which the study had to take place (from October leading up to December), many of the participants were not available to respond, which was a disadvantage to the study. In terms of the questionnaire responses, the study could have received more responses and a higher completion rate. A high response rate is significant because it ensures that the survey performs as initially planned and that the results reflect the sampled target. A high response rate also ensures that the data reflected is reliable and unbiased. However, the responses received were satisfactory enough for this study to gain insights into such findings.

5.4.2. Recommendations and future studies

Since the data collected by this study only focused on the Gauteng region, it cannot be generalised to other regions in South Africa. Therefore, this study recommends that studies done in future should broaden their scope to other regions. Another limitation of this study is that the effective use of the payment gateway model was only designed and not validated. Thus, the recommendation is to validate it as a fully developed model. Additionally, future research should conduct a validation of the model developed in this study with a combination of two or more approaches. Finally, future research must target a higher response rate to ensure that the results are unbiased, accurate and reliable.

5.5. Conclusion

In conclusion, this study highlighted the critical role of payment gateways in creating a competitive advantage and sustainability for travel and tourism SMEs in South Africa. The analysis conducted highlighted the significant contribution of SMEs to economic growth, emphasising the need for these organisations to leverage technological innovations such as payment gateways in order to attract and retain more customers.

This study addressed the challenges faced by SMEs when adopting an online payment system by developing a comprehensive framework for the effective use of payment gateways. Through a comprehensive analysis of the benefits, influencing factors, and challenges associated with the adoption of payment gateways, the research provides practical insights for SMEs seeking to enhance their customer satisfaction and operational efficiency.

Furthermore, the results highlight the critical role that top management plays in successfully implementing and using an online payment system. Support and positive engagement from this level are critical to fostering a culture of efficiency and innovation with SMEs, thereby enabling seamless integration of online payment systems into their operational processes.

In light of these findings, it is recommended that SMEs in the travel and tourism sector in South Africa embrace and use the proposed framework to reap the rewards offered by payment gateways. This may mitigate risks associated with manual payment systems.

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7. APPENDICES

7.1. APPENDIX A: ETHICS CLEARANCE

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg

Wits Business School

Wits Business School Ethics Committee
Constituted under the University Human Research Ethics Committee (Non-Medical)

Ethics Clearance Certificate

Ethics protocol number: WBS/DB0609202j/200

This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below)

Project title	Effective use of payment gateways by travel and tourism SMEs in Gauteng
Investigator / Researcher	Ms Vulani Sithole
Nature of Project	MM (Digital Business)
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed anonymity and confidentiality.
Issue Date of Certificate	2023/10/17
Expiry date	Date of submission of the project / research report
Chairperson	Dr Pius Oba ☎ +27 11 717 3976 +27 82 733 6587 pius.oba@wits.ac.za

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Declaration by Researcher

One copy must be signed by the Researcher and returned to the Chairperson of the Wits Business School Ethics Committee.

I fully understand the conditions under which I am authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I undertake to resubmit the protocol to the Committee.

DocuSigned by:
Vulani Sithole

Signature

2023-10-19

Date:

7.2. APPENDIX B: QUESTIONNAIRE

Section 1	Demographic Information
	1.1. Demographic Information Some demographic information will be required to understand the makeup of the overall research feedback; however, it is generic and anonymous
	1.2. Age 18-29 30-39 40-49 50-59 60 and above
	1.3. Gender Male Female Non-binary Prefer not to say
	1.4. Level of education Grade 12 National Certificate National Diploma Btech/ Degree Mtech/ Masters Other, please specify
	1.5. Nature of business Accommodation Food & beverage Transportation Travel agency & tour operators Recreation & entertainment
	1.6. Position in organisation Owner/ Executive Senior management Middle management Supervisory level

	Entry level
	2. Payment gateway A payment gateway is defined as a platform that allows customers to pay for products and services using the Internet. This can be in the form of EFT, debit and credit cards, e-wallet, etc. This allows the organisation to receive payments from different bank accounts.
	3. Does your business make use of a payment gateway? Yes No
Section 2	**Technological characteristics**
	2.1. Technological characteristics This section is about which technology factors will influence the effective use of payment gateways. The factors covered are scalability, availability, maintainability, compatibility, security and privacy, and sustainability.
	2.2. Our technological system is scalable enough to allow the expansion so as to include more stakeholders Strongly disagree Disagree Neutral Agree Strongly agree
	2.3. Our network is reliable enough for the payment system to be used whenever it is needed Strongly disagree Disagree Neutral Agree Strongly agree
	2.4. Our online payment system was designed in such a way that it is easily maintainable Strongly disagree Disagree Neutral Agree Strongly agree
	2.5. The online payment system we use is compatible enough to be used on different platforms and operating systems

	Strongly disagree Disagree Neutral Agree Strongly agree
	2.6. The online payment system we use within our organisation is secure enough to be trusted by ourselves and our stakeholders Strongly disagree Disagree Neutral Agree Strongly agree
	2.7. We have enough capacity to sustain the online payment system Strongly disagree Disagree Neutral Agree Strongly agree
Section 3	**Users' perception of technology**
	3.1. Users perceptions of technology This section is about the user's perception of technology that will influence the effective use of payment gateways. The factors covered are the perceived ease of use, the perceived usefulness, the usability, and the trust and confidence.
	3.2. Our online payment system is easily usable by our stakeholders Strongly disagree Disagree Neutral Agree Strongly agree
	3.3. Our stakeholders find the use of our online payment system beneficial Strongly disagree Disagree Neutral Agree

	Strongly agree
	3.4. It is easy to navigate and use our online payment system Strongly disagree Disagree Neutral Agree Strongly agree
	3.5. We have confidence and trust in our online payment system Strongly disagree Disagree Neutral Agree Strongly agree
Section 4	**Organisation**
	4.1. Organisation This section is about the organisational factors that will influence the effective use of payment gateways. The factors covered are budget allocation, top management support, strategies, size and structure, standards and procedures, and communication.
	4.2. Our organisation finances and supports IT budget Strongly disagree Disagree Neutral Agree Strongly agree
	4.3. The top management in our organisation supports and buy-in IT innovation and activities Strongly disagree Disagree Neutral Agree Strongly agree
	4.4. Using an online payment system forms part of our business strategy Strongly disagree Disagree

	Neutral Agree Strongly agree
	4.5. The size and structure of our organisation influenced the implementation and the use of online payment system Strongly disagree Disagree Neutral Agree Strongly agree
	4.6. We have proper standards and procedures in our organisation that are followed when using technological innovations Strongly disagree Disagree Neutral Agree Strongly agree
	4.7. We have standard communication procedures within our organisation where all stakeholders are informed of new developments Strongly disagree Disagree Neutral Agree Strongly agree
Section 5	**Environment**
	5.1. Environment This section is about the environmental factors that will influence the effective use of payment gateways. The factors covered are vendor support, resource availability, green IT, configuration, and licensing.
	5.2. The vendors of our online payment system offer aftersales support Strongly disagree Disagree Neutral Agree Strongly agree

	5.3. The technological equipment and human resources are available to support the maintenance of our online payment system Strongly disagree Disagree Neutral Agree Strongly agree
	5.4. I believe that the use of an online payment system is a major way to support the conservation of the green environment Strongly disagree Disagree Neutral Agree Strongly agree
	5.5. The license of online payment systems is affordable Strongly disagree Disagree Neutral Agree Strongly agree
Section 6	**Social aspects**
	6.1. Social aspects This section is about the social aspects that will influence the effective use of payment gateways. The factors covered are social belief, peer influence, and culture and norms.
	6.2. Our stakeholders believe that using online payment systems is useful to them Strongly disagree Disagree Neutral Agree Strongly agree
	6.3. I believe that many of our stakeholders are influenced by others to use online payment systems Strongly disagree Disagree Neutral

	Agree Strongly agree
	6.4. Using technology like online payment systems has become a norm in the travel and tourism industry Strongly disagree Disagree Neutral Agree Strongly agree
Section 7	**Individual characteristics**
	7.1. Individual characteristics This section is about the individual characteristics that will influence the effective use of payment gateways. The factors covered are perception, attitude, training and education, skills, and beliefs.
	7.2. Many of our stakeholders have a positive perception of using online payment systems Strongly disagree Disagree Neutral Agree Strongly agree
	7.3. Stakeholders with a good attitude toward technology find using online payment systems easy Strongly disagree Disagree Neutral Agree Strongly agree
	7.4. Stakeholders with enough education and training find it easier to use online payment systems Strongly disagree Disagree Neutral Agree Strongly agree
	7.5. Stakeholders with basic skills of using technology and electronic devices have confidence in using online payment systems

	Strongly disagree Disagree Neutral Agree Strongly agree
	7.6. Stakeholders with positive beliefs towards technology find it easier to use online payment system Strongly disagree Disagree Neutral Agree Strongly agree
Section 8	**Perception**
	8.1. Perception In your view, experience and beliefs, how do you perceive the improvement of the effectiveness of using online payment systems?

	Extremely impossible	Impossible	Fairly possible	Possible	Highly possible
From the Technological perspective					
From the Organisation perspective					
From the Environment perspective					
From the Individual perspective					