THE INFLUENCE OF SMART TOURISM ON TOURIST'S DESTINATION CHOICE IN THE CITY OF TSHWANE, SOUTH AFRICA

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A Master's thesis submitted in partial fulfilment of the requirements for the Degree of **MASTER OF COMMERCE IN BUSINESS MANAGEMENT** in the School of Management Sciences, Department of Business Management **UNIVERSITY OF VENDA**

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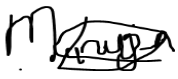
Signature:  Date: 15/09/2020

DECLARATION

I Munei Nengovhela, hereby declare that this thesis titled "*The influence of smart tourism on tourist's destination choice: Case Study of city of Tshwane*" submitted at University of Venda, for a Master of commerce in Business Management degree has not been previously submitted as a degree in this or any other university, and that it is my own work in design and execution and that all reference material contained therein has been duly acknowledged.

Signed:  **Date: 15/09/2020**

DEDICATION

"*To my uncle Solomon Maloth Nengovhela, I will forever cherish the moments you shared with me"*

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ABSTRACT

Countries across the globe are relying on tourism growth and development for creation of employment and contribution to the country's GDP. Societies have always been subject to change. Modern society has been increasingly changing and the changes are being brought about by the growth, development and innovation within the ICT sector. Such growth and development of ICT has created the birth of the Fourth Industrial Revolution of which has resulted in the proliferation of the word 'smart'. Technology has thus successfully penetrated people's communication patterns, consumption habits, lifestyles and work place relations, moreover it has also impacted the context of travel and tourist behavior. The concept of smartness gained its popularity in early 2000s and has somehow resulted in the creation and usage of concepts such as smart city, smart planet, smart tourism and smart tourist. The growth of ICT has therefore resulted in the growth of Smart Tourism Technologies which are developed to meet smart tourist's demands. The city of Tshwane has been making strides to become an African World-class Smart City. Such then offers the city of Tshwane to position itself as a smart tourism destination that can meet the demands of smart tourists. Prior to such positioning efforts, research needs to be conducted to ascertain if tourists visiting the city use smart tourism technologies to make travel the decision to visit the city, such was the core problem of the study. To investigate the influence of smart tourism technologies on tourist's decision to visit the city of Tshwane, the study adapted and made revisions to the Elaboration Likelihood Model of persuasion as a conceptual theory that can explain attitude changes of tourists through the usage of Smart Tourism Technologies. The study adopted a quantitative approach wherein a questionnaire with 29 seven-point Likert scales was used. Data was analyzed through SPSS Amos® Version 25. A total of 341 questionnaires were collected and Structural Equation Modelling was used to investigate the influence of smart tourism technologies on tourist's decision. The findings of the study revealed that Information relevance and interactivity of smart tourism technologies significantly influence the decision of tourists to visit the city of Tshwane, which therefore critically suggest that the decision to visit the city of Tshwane is greatly influenced by consulting smart tourism tools that are interactive and carries relevant tourist information. It is envisaged that the findings of the study could be consulted when designing smart tourism tools that could be used in positioning the city as a smart tourism destination.

Key words: *Tourist behavior, smart tourism, smart destination, tourism, technology*

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LIST OF ABREVIATIONS

SA	South Africa
STT	Smart Tourism Technology
ST	Smart Tourism
CFA	Confirmatory Factor Analysis
SEM	Structural Equation Modelling
UNWTO	United World Tourism Organization
ICT	Information Communication Technology
IT	Information Technology
ELM	Elaboration Likelihood Model
IoT	Internet of Things
RFID	Radio Frequency Identification
QR	Quick Response Code
UNIDO	United Nations Industrial Development Organisation
WTTC	World Travel and Tourism Council
ITU	International Telecommunications Union
VIF	Variance Inflation Factor
RMSEA	Root Mean Square Error of Approximation
GFI	Goodness of Fit Index
RFI	Relative Fit Index
CFI	Comparative Fit Index
NFI	Normed Fit Index
KMO	Kaiser-Meyer-Olkin
TLI	Tucker-Lewis Index
RMR	Root Mean Square Residual

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Tourism is considered as one of the largest industries worldwide, generating about 11% of global gross domestic product and employing more than 200 million people (UNWTO, 2018). The United Nations World Tourism report (2017) indicates that 2017 was a record breaking year for the global tourism industry due to the sustained growth of international travel, standing at a record breaking 1,323 million trips made in 2017/2018 (UNWTO, 2018). Furthermore, the World Travel and Tourism Council (2017) indicated that the South African tourism industry made a direct contribution of R127.9bn to the country's GDP in the 2015/2016 financial year whilst directly creating 716,500 jobs (4, 6% of total employment in the country). With such statistics that impact on the country's GDP and also place South Africa's tourism industry at par with other tourism sector players globally, there is a need to investigate South Africa's capital city—City of Tshwane's—smart tourism practices competitiveness. This is because the City of Tshwane is a major tourism destination.

There are a number of ways the term 'tourism' can be defined, and for this reason, the United Nations World Tourism Organisation (UNWTO) embarked on a project from 2005 to 2007 to create a common glossary of terms for tourism (BCCampus, n.d.). It defines tourism as 'a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (which may be either tourists or excursionists; resident or non-resident) and tourism has to do with their activities, some of which imply tourism expenditure' (UNWTO, 2008). Inferred from this definition, tourism is the movement of people for a number of purposes—whether business or pleasure. Lately, the growth of this industry has been fueled by advancements in technology, such as the industrial revolution and the usage of mechanical engines and so forth.

Economies and societies have always been subject to change. Inherently, Gretzel, Xiang, Koo & Hee (2015) describe the modern tourism industry as an information and data intensive industry which is dependent on different forms of Information and Communication Technologies (ICT). The existence of online business model which uses platforms such as websites, online bookings, emails, and instant messengers shows the natural propagation of traditional tourism towards smart tourism practices. E-tourism then stands as an alternative to conventional tourism. It is essential to point out that e-tourism is not relatively a new concept, as it is traceable to the times that the tourism industry started making use of central reservation

systems, online booking, and online marketing. Indeed, suppliers of the tourism industry such as airlines, hotels, and rental car companies already offer real-time online reservations (Zhou, 2004). With increased interest by travelers in online travel information research and booking, the tourism industry is continuously going through a period of restructuring and reorganization.

As a result, the 21st century has witnessed the proliferation in the usage of the word "smart" to describe the technological, economic and social developments fueled by technologies that rely on sensors, big data, open data, new ways of connectivity and exchange of information (Hojer & Wangel, 2015). Therefore, the word Smart Tourism has emerged as a new concept in academia and tourism practice. Smart tourism is fueled by a number of technologies. Al-Omari (2017) argues that such technologies include; Internet of Things (IoT), Radio Frequency Identification (RFID), Quick Response Code (QR), Cloud Computing, Geo Tagging, Virtual Reality, Augmented Reality and Near Field Communication, Web 2.0 are some of the tools and methods that are being used for transition to the smart tourism business model. Majority of cities including the City of Tshwane have started offering free Wi-Fi to the general public and tourists to cater for this interest.

Further, Al-Omari (2017) defines smart tourism as an expression that implies the usage of emerging forms of ICTs within the tourism industry, which allows for the interchange of massive data in order to improve tourism services. Wang, Li, Zhen & Zhang (2016:310) defines smart tourism as "an ICT-integrated tourism platform, which assimilate tourism sources and ICT, such as artificial intelligence, cloud computing and internet of things (IoT), to provide explicit information and satisfactory services to tourists, based on the development of innovative mobile communication technology". Wang et al. (2016) further assert that the development of smart tourism signifies efforts to improve tourist experiences and satisfaction. The tourism industry is one which is demand driven. This view is supported by Buahlis & Law's (2008) view that the new developments of ICTs in tourism is fueled by a new breed of tourists who are more sophisticated, demanding, liberal and harder to please because they are digital natives.

New trends in tourist behavior have also been identified by Sevrani & Elmazi (2008), who classified these behaviors as being resultant from: the ability to access more information through the internet; competition in the industry leading to requests for better services; demand for more specific offers; becoming more knowledgeable in market trends; mobile and digitally active; and critical and price sensitive. The modern tourists are therefore more dependent on information technology, self-service, and personal reservation tools, making them to be more interested on easier access to information technology, better value for their money and flexibility (Wang, Li, Zhen & Zhang, 2016:310).

1.2 MOTIVATION OF THE STUDY

The proliferation of ICTs is one of the most far-reaching changes of the 21st century These technologies have changed the ways in which consumer products and services are produced and delivered. The adoption of ICTs by all sectors of economies worldwide has enhanced productivity, enlarged market reach, and reduced operational costs for many organizations. Furthermore, the widespread adoption of ICT, combined with the rapid decline in price and increase in performance of these technologies, has contributed to the expansion of market reach and lowered costs, thus enabling the development of new products and services (Gretzel, Sigala, Xiang & Koo, 2015). In turn, consumers have developed a dependency on various forms of ICTs for acquiring information, making transactions and sharing information. As such, modern forms of ICTs have had great impact on consumer behaviour, giving rise to the use of the term “smart”. This concept has become a new buzzword to describe technological, economic and social developments fuelled by technologies that rely on sensors, big data, open data, new ways of connectivity and exchange of information.

The idea of Smart Cities has also emerged, fuelling the growth and adoption of Smart Tourism Practices (Gretzel, Werthner, Koo & Lamsfus, 2015). Furthermore, the growth of Internet access through smartphones and tablets has caused an increase in the frequency of use of online services. To demonstrate this trend, a study carried out by Kimty (2017) indicates that the mobile phone subscriptions had a remarkably increasing trend with the number of subscribers growing from 10,537,628 in 2010 to 20,850,543 in 2015. Additionally, of these number, 1.9 billion were found to be using smartphones. This data demonstrates that the mobile phones have become popular and readily available globally and the tourism sector can take advantage of this to popularize and market its services to prospective tourists, as smartphones are embedded with advanced ICT capacity which tourists can use during the lifespan of the tour to impact on their experience.

According to Huang, Goo, Nam & Woo (2017) majority of tourism information search, reservations and purchases are done through the internet using ICT tools, and after these purchases, consumption information sharing occurs yet again in online platforms. It must still be noted that African countries such as South Africa have been experiencing challenges in relation to adoption and usage of ICT tools that allows for consumption of commercial products and services. A report by the United Nations Industrial Development Organisation (UNIDO) indicated that South Africa in particular experiences challenges of lack of broad-band infrastructure, high cost of broad-band infrastructure and poor and expensive consumer end courier services and such challenges have created a negative growth in the adoption and

usage of Smart business ecosystems infrastructure from the consumers and service providers side (UNIDO, 2017).

According to the South African Local Government Association (2015), 10% of the world's population lived in cities in 1910, however these numbers have grown at an exponential rate, such that 50% of the world's population was thought to live in cities in 2014, with a projected rise to 75% of the population by 2025. The concept of a smart city was born out of the need to solve city challenges and problems. As Caragliu, Del Bo & Nijkamp (2009) indicate, the emergence of smart cities cannot be conceived as being tourism demand driven but rather as being driven by the urge to seek solutions to growing populations in urban areas. Caragliu, Del Bo, & Nijkamp (2009) further contend that problems that are brought about by increasing urbanization, are best solved by means of creativity, human capital, and cooperation among relevant stakeholders, most especially by incorporation of 'smart' solutions. An important remark was made by Weiss (2013), who pointed out that, for a city to be considered smart, it must demonstrate its ability to invest in an intelligent way in different activities such as the economy, mobility (transportation networks), environment, human resources and intelligent lifestyles.

Smart tourism platforms enable travellers to make destination choices, and decisions relating to providers of tourism products and services, such as lodges, restaurant, hotels and transportation, in their value versus cost using physical devices such as smartphones (Koo, Ricci, Cobanoglu & Okumus, 2017). Furthermore, such platforms can be accessed and realized in a connected smart city destination that has physical infrastructure such as Wi-Fi, Apps, social Media and websites that can turn data into on-site experiences with smart recommendations (Gretzel, Sigala, Xiang & Koo, 2015).

According to Gretzel et al. (2015), a smart destination is a tourism system that takes advantage of smart technology in creating, managing and delivering intelligent touristic services and is characterized by intensive information sharing and co-creation. Characteristics of smart tourism have been said to include, connectivity through web-based applications with location capabilities, tourist's as co-producers of destination content, enhancing experiences through new technologies (augmented reality), connecting and interacting with local communities and improving social and environmental sustainability (Dorcic, Kosmsic & Markovic, 2018; Molz, 2012).Earlier research by Pine & Gilmore (1999) had indicated that the competitiveness of entities in the experience economy is mostly based on engagement, collaboration and efficiency.

The City of Tshwane, formerly known as the City of Pretoria, has been making efforts to become a smart city. According to Tshwane Smart City Project (2007), the vision of Tshwane

smart city project is to continue sustained economic growth and a high quality of life for citizens, by aligning, integrating and developing a common vision between industry, research institutes, universities and local government. Through innovation projects, the city wants to create an environment that grows high technology cluster-based businesses, attracts creative people and deploy significant broadband connectivity within the city.

This study set out to investigate the role of smart tourism technologies towards tourist's decision to visit a specific destination. The context of the study will be in the City of Tshwane, South Africa. According to the South African Local Government Association (2015), the objective of smart city concept rolling out within South Africa is to provide efficient services that are easy to access and use (using technology as an enabler), being responsive in an open and transparent way, and ensuring financial, environmental and quality service-delivery sustainability. This study was motivated by the need to investigate the usage of Smart Tourism Tools by consumers. The findings of such a study may provide critical insight into the E-commerce behaviour of tourists visiting the city and recommendations can therefore be made in relation to strategic marketing, product development and destination marketing and positioning.

1.3 STATEMENT OF THE PROBLEM

The evolution and application of digital technologies are profoundly changing the way people live, work, travel and do business, and in the process, they are transforming and reshaping the tourism sector. The advancements in ICTs—cloud computing technologies in particular, motivates tourism destination governments and practitioners to leverage smart technologies, in order to optimize their decision making in business planning and enhancement of tourist experience. Furthermore, the recent developments in the field of ICTs have resulted in the creation of a new buzzword, 'smart/smartness'. According to Boes (2015), in order to make a tourism destination smart, the dynamic connection of stakeholders through technological platforms is a key factor. The main objective of these platforms is to create a quick information exchange regarding all tourism related activities (Buhalis & Amaranggana, 2014).

Recognising the need to turn the emerging technological revolution into an advantage, the City of Tshwane has been making efforts to become a smart city. According to Tshwane Smart City Project (2007), the vision of Tshwane smart city project is to enhance sustained economic growth and a high quality of life for citizens, by aligning, integrating and developing a common vision between industry, research institutes, universities and local government (Du Preez & Heath, 2009). Through innovation projects, the city wants to create an environment that grows

high technology cluster-based businesses, one that attracts creative people and, deploy significant broadband connectivity within the city (SALGA, 2015).

Moreover, innovation and development within the ICT sector prompts smart tourism—a term referring to the burgeoning phenomenon in which tourism destinations, practitioners, and tourists depend accumulatively on emerging ICTs that enable colossal data transformation into value proposition (Gretzel, Werthner, Koo & Lamsfus, 2015)—to be prioritized within the research arena as a promising research topic around which more models, tools and strategies may be research and developed (Buhalis & Law, 2008; Law, Buhalis, & Cobanoglu, 2014; Xiang, Schwartz, Gerdes, & Uysal, 2015, Neirotti, Raguseo, & Paolucci, 2016). From a tourism perspective, the adoption of smart tourism within cities is enabled by Smart Tourism Technologies STTs which are targeted for use by both local and international tourists. Before implementation of smart tourism, a city such as Tshwane and the cities' destination managers need to first investigate if current tourist's consumption decisions are influenced by some smart tourism tools, such as mobile applications, websites, and chat-bots and so on.

It is paramount to note that smart tourism and tourists' perceptions of technological acceptance has been of interest to researchers for a number of years, however tourists' perceptions and smart tourism has been studied as unrelated concepts whereas it is important to comprehend the perceptions held by tourists towards smart tourism initiatives. It can therefore be posited that a problem of ambiguity and lack of clarity exists to ascertain whether Smart Tourism Technologies (STTs) can influence a tourist's decision to visit a destination, more especially within the context of Tshwane. As such an alignment that considers tourist's real perceptions and uses of smart tourism technologies and the smart destination expectations still constitutes a major gap within literature (Femenia-Serra, Perles-Ribes & Ivars-Baidal, 2018). In order to gauge such perceptions, this study adopted a model of persuasion which was used to determine if tourists visiting the smart city of Tshwane are persuaded by smart tourism technologies.

Considering the afore mentioned, an opportunity exists for the City of Tshwane to position itself as a smart tourism destination and initiatives are currently being undertaken towards this initiative. Before such initiatives are fully rolled out, information is required that clarifies the role played by Smart Tourism Technologies with specific emphasis on tourist decisions to visit the city. A study by Usoro, Shoyelu & Kuofie (2010) found that smart tourism technologies play an important role in influencing tourist consumption intentions. From the organisational perspective, Wober, (2003) found that smart tourism technologies play an important role in supporting tourist decision making. Further, Dye and Shaw (2007) found that graphic user interface in smart tourism tools, assist tourists when choosing and planning their tours.

Because tourism is mainly service dominant, its success and development depends primarily on process innovation, in which information technology (IT) has played an important role in initiating services processes.

Currently, within the context of South Africa, there is paucity of research undertaken within the smart tourism concept. However, measures are being undertaken by the City of Tshwane to ensure that it becomes an excellent African smart city by the year 2025 and therefore, to make a contribution to this field, this study set out to ascertain how smart tourism technologies

1.4 RESEARCH OBJECTIVES

The purpose of this study is to determine the influence of smart tourism technologies in tourist decision making process in the City of Tshwane. To achieve this, the following objectives were formulated:

1. To determine the influence of smart tourism information quality on tourist's destination choice
2. To investigate the moderating effect of self-efficacy on tourist's peripheral route of persuasion towards destination choice
3. To explore the influence of smart tourism technologies' information relevance on tourist's destination choice
4. To investigate the influence of smart tourism technologies on tourist's destination choice

1.5 RESEARCH QUESTIONS

The following questions guided the study:

1. To what extent does smart tourism information quality influence to influence tourist's destination choice?
2. To what extent does smart tourism source credibility and tourist's self-efficacy influence tourist's destination choice?
3. To what extent does smart tourism information relevance influence tourist's destination choice?
4. What influence does smart tourism technologies have on tourist's destination choice?

1.6 RESEARCH HYPOTHESES

From the proposed conceptual framework, the following hypotheses have been framed to support the objectives of the study:

H1: Information quality has an influence on tourist's destination choice.

H2: Information relevance has an influence on destination choice.

H3: Source credibility has an influence on destination choice.

H4: Interactivity has an influence on destination choice.

H5: Accessibility has an influence on destination choice.

H6: Self-efficacy moderates the relationship between source credibility and destination choice.

H7: Self-efficacy moderates the relationship between interactivity and destination choice.

H8: Self-efficacy negatively moderates the relationship between accessibility and destination choice.

1.7 SIGNIFICANCE OF THE STUDY

The current industrial revolution is the fourth industrial revolution, in which the competitiveness of organisations is highly influenced by data. However, to device plans on how such data can be harnessed requires that tourism destinations comprehend the concept of smart tourism. Prior to such comprehension, it must first be investigated whether current smart tools such as websites and software applications are playing a role in tourist behaviour, more specifically, tourists' decisions to visit a destination. Since 2008, the tourism industry has witnessed incredible growth of STTs such as online travel distribution channels that allow tourists to make smarter travel decisions (Gretzel et al., 2015). According to Huang, Goo, Nam & Yoo (2017), the growth and adoption of technologies in tourism is influenced by the global adoption of technology of which in 2015, the number of smartphone users was at 1.9 billion, whilst the number of internet users was at 3.2 billion.

The concept of smart tourism can therefore be seen as a gradual evolution in tourism process innovation that is influenced by ICT development and widespread technological adoption (Wang & Xiang, 2012). The growth and development of smart tourism as a concept and

practice can be attributed to the accelerated trend of mobile technology adoption, the growing capabilities of embedded technologies, the use of sensors, the adoption of smartphone mobile applications, the growing prevalence of interactive mobile websites and online transaction capabilities (Sigala, 2015). In line with the City of Tshwane vision 2025 of establishing the city as a smart city (Tshwane Vision 2025, 2013), the opportunity exists for the city to market itself as a smart destination. This is possible if the City management and the tourism service providers to cater for tourists' demand for smart tourism.

Prior to such positioning, it must first be ascertained that tourists visiting the city value the smart tourism concept and currently use smart tourism technologies and tools in their travels. This study is therefore timely as it explores the concept of smart tourism; and seeks to identify the smart tourism factors that are important in persuading tourists to make destination choices through smart tourism platforms such as interactive websites, smartphone mobile applications and virtual reality. The findings of this study will significantly contribute to both research and tourism practice by adding to the African tourism research body of knowledge, since currently, there is insufficient research that addresses the influence of smart tourism technologies (STTs) on decision-making in relation to tourist destinations in the African region. Such an understanding will become critically useful in helping to define ways in which the City of Tshwane, in line with Tshwane Vision 2025, can be positioned as a smart destination.

1.8 DELIMITATIONS OF THE STUDY

The study was conducted in the City of Tshwane Metropolitan Municipality which is a Category A municipality situated in the Gauteng Province, South Africa. Gauteng Province is one of South Africa's 9 provinces, including: Western Cape, Eastern Cape, Northern Cape, North West, Free State, Kwa Zulu Natal, Limpopo, and Mpumalanga. Although each province has its own charm and attractions, the choice of Tshwane as a study location was due to its not only the administrative capital of South Africa, but is also the diplomatic capital of the country (Du Preez & Heath, 2009). Further, from a strategic perspective the City is ideally located as it is only 48km away from Africa's largest international gateway, the OR Tambo International Airport. It can also easily be accessed via three other airports (Wonderboom, Lanseria and Waterkloof), as well as several private landing strips. Furthermore, City of Tshwane has well-developed infrastructure, with the highway between Tshwane and Johannesburg being the busiest in the Southern Hemisphere and a high-speed train linkage—the Gautrain (Jacobs, 2008 in Du Preez & Heath, 2009).

Another reason for the choice of the City of Tshwane as a study location was due to the elaborate key tourism sector projections that an Integrated Strategic Tourism Development Plan which encompasses its tourism vision, strategic direction, objectives and critical success factors to develop tourism in the City, based on the City's comparative and competitive advantages.

1.9 RESEARCH METHODOLOGY

The research methodology section will provide insight into how the research was carried out and what forms of methods were used. The positivist worldview will be adopted, whilst the study will be quantitative in nature using the cross-sectional research design. Moreover, random sampling techniques will be used wherein cluster sampling and simple random sampling will be used and Structural Equation modelling will be used to analyze the data.

1.9.1 RESEARCH PARADIGM

Though hidden, a great deal of a research project is guided and influenced by the philosophical ideas and beliefs of the researcher. The philosophical ideas or worldviews are basic set of beliefs that guide action, such views are held by the student, faculty, and influenced by past research experiences and they further influence the choice of whether a research is to be quantitative, qualitative or mixed (Creswell, 2009, p5). Four different world views or paradigms exists and are normally used, and these include positivism, constructivism, pragmatism, advocacy and post-positivism (Creswell, 2009). The positivist tradition comes from the 19th century writings such as Newton, Locke, Smith and Comte's (Smith, 1983). The positivist worldview will be used in the quest of the study. It is also referred to as the scientific method of doing science research. The paradigm uses the quantitative approach to achieve its aims (Creswell, 2009). Quinlan, Babin, Carr, Griffin, & Zikmund (2015) further maintain that positivism is the framework within which science originally developed. Most of modern scientific studies are carried within such a worldview or framework. The adoption of the positivist framework was fuelled by the fact that the study will be observing social reality and the outcomes can be law like generalisations (Saunders, Lewis & Thornhill, 2009).

1.9.2 RESEARCH STRATEGY

Since the positivist framework is more scientific, inquiries within such a framework have tended to be more quantitative in nature (Creswell, 2009). The study will therefore be quantitative in nature. According to Bryman & Bell (2011), a quantitative study design emphasises quantification in the collection and analysis of data. Bryman & Bell (2011, p.31) further asserted that a quantitative approach to research involves undertaking a statistical analysis and relies on numeric evidence to draw conclusions about the subjects studied.

1.9.3 RESEARCH DESIGN

To achieve its objectives, the study is going to undertake a cross-sectional survey design. Creswell (2009, p.12) argues that a survey research provides a quantitative or a numeric description of attitudes, trends and opinions of a population by studying its sample. Quinlan et al. (2015) indicated that a survey study can either be longitudinal or cross-sectional, during which the data is mostly collected by the use of a questionnaire.

1.9.4 POPULATION AND SAMPLE

Bryman & Bell (2011, p.170) defined a survey population as a universe of units such as people, nations, cities, regions, firms, etc. from which a sample is selected. The population of the study will comprise of tourists who visit Tshwane. According to City of Tshwane (2013, p.176), the city received a total of 2 375 958 tourists between 2010 and 2011 financial year, whilst Gauteng Tourism Authority (2014, p.13) indicated that a total of 10, 3 million tourists visited Gauteng province, with the city of Tshwane getting 18, 3% of tourists (1 884 900). As such the total population of tourists visiting Tshwane is estimated to be 2 million. With regard to the population of 2 375 958 as per Gauteng Tourism Authority (2014:13), the sample size of 450 was chosen with reference to Israel (1992, p.3) who indicates that when one has a population size of more than 100 000 and seeking a 95% confidence interval, one should select a confidence interval of 95%, however to make room for response rate, the researcher used a sample size of 450.

A sample of 450 tourists will be selected for survey. Probability sampling techniques will be used, of which cluster sampling and simple random techniques will be used. The city of Tshwane will be divided into clusters. Within these clusters respondents will be selected using simple random means, Tshwane will therefore be divided into seven regions. Quinlan et al. (2015, p.178) defines simple random sampling as a sampling procedure that assures each

element in the population has an equal chance of being selected. Cluster sampling on the other hand is an efficient sampling technique in which a larger population is divided into clusters such as municipalities, districts or branches.

2.1.1 MEASUREMENT INSTRUMENT AND DATA COLLECTION

A questionnaire will be used for data collection. The questionnaire will be based on the study titled *"Improving travel decision support satisfaction with smart tourism technologies: A framework of tourist elaboration likelihood and self-efficacy"* written by Yoo, Goo, Huang, Nam & Woo (2016). The questionnaire will be composed of two sections. Section A is aimed at collecting demographical information of the respondents, whereas section B will deal with the awareness and perception of tourists towards smart tourism tools. Question 5 within section B of the questionnaire consists of 24 Likert scale items which relate to the role that STT technologies plays in influencing tourist decision to visit the city of Tshwane. Such likert items will be further used to determine the extent of smart technologies in influencing tourist decision making. Questionnaires will be handed out at tourist's hot-spot areas such as hotels and major tourist attractions in Tshwane.

2.1.1 RELIABILITY AND VALIDITY OF THE RESEARCH INSTRUMENT

Quinlan et al. (2015:258) indicated that reliability refers to the dependability of the research and the degree to which the research can be repeated whilst getting consistent results whereas validity refers to how valid the research is, its logic, its meaningfulness, reasonableness and robustness. Furthermore, Bryman and Bell (2011) argued that reliability is concerned with the question of whether or not the results are repeatable. In order to ensure validity and reliability, the study seeks to use a questionnaire as the measurement tool, developed with proper alignment to the research questions that guided the study. A pilot study is to be undertaken in order to identify any pitfalls and maintain the reliability and validity of the study.

The research instrument to be used for the study was also used by Yoo et al. (2016) *"Improving travel decision support satisfaction with smart tourism technologies: A framework of tourist elaboration likelihood and self-efficacy"*, therefore the instrument can be considered reliable. However, since smart tourism is relatively an emerging research area, the reliability in terms of producing similar results may be limited. In order to ensure validity, the sample of the study will be large enough and data will be managed ethically.

1.9.7 DATA ANALYSIS

The data will be captured through Excel and copied to SPSS Version 25 for analysis. The following statistics will be used:

- Structural equation modelling
- Descriptive statistics

2.1.1 ETHICAL CONSIDERATIONS

Ethical considerations are critical in the development of valid and reliable research studies. The following ethical issues will be observed by the researcher:

2..1 Confidentiality

The confidentiality of the respondents will be well protected. Respondents will be instructed not to provide any personal information such as their name or contact details. Reporting will not disclose any sensitive information with regard to the respondents and as such, confidentiality was protected.

2..2 Seeking Consent

Respondents will not be forced or induced to partake in the study. Written consent will be obtained before the data is collected.

2..3 Reporting the Findings

The findings of the study will be truthfully reported without any changes or manipulation.

1.11 OPERATIONAL DEFINITIONS

Tourist

International Recommendations for Tourism Statistics (2008) defines a tourist as “A visitor (domestic, inbound or outbound) is classified as a tourist (or overnight visitor), if his/her trip includes an overnight stay, or as a same-day visitor (or excursionist) otherwise”.

Tourism

The United World Tourism Organisation (2015) defines tourism as a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business purposes.

Smart Tourism

> *"Tourism supported by integrated efforts at a destination to collect aggregate/harness data derived from physical infrastructure, social connections, government/organizational sources and human bodies/minds in combination with the use of advanced technologies to transform that data into on-site experiences and business value propositions with a clear focus on effective, sustainability and experience enrichment."*

Tourism Destination

A tourism destination is referred to as an amalgam of tourism products that offer an integrated experience to consumer (Buhalis, 2000).

Destination choice

Destination choice refers to the psychological process followed by tourists when they make an informed decision to visit a specific destination (Nengovhela, Ochara, Madzunye, 2020).

1.12 FORMAT AND STRUCTURE OF THE STUDY

The study will be composed of the following chapters:

CHAPTER 1: The chapter will provide introduction and background which will then provide insight and background the context of the study and its intended aims, a shallow presentation of the methodology will be presented.

CHAPTER 2: Literature review of the study is presented in chapter 2. The review will focus on tourism, smart tourism and destination management and marketing; however, a critical insight will be created of which will focus on destination choice, tourism technologies and smart tourists.

CHAPTER 3: Research methods are presented in chapter 3. The chapter will therefore provide insight into how the objectives of the study will be achieved, a quantitative research methodology will be discussed and the data analysis procedures are also presented.

CHAPTER 4: Data analysis is presented in chapter 4, the analysis will be in two-fold wherein descriptive analysis will be presented first, followed by inferential analysis wherein structural equation modelling is used.

CHAPTER 5: Conclusions and recommendations are presented on chapter 5 of the study. The conclusions are based on the findings from chapter 4 as guided by the previous chapters.

1.13 SUMMARY

Chapter 1 has successfully provided insight and background to the study at hand, furthermore the chapter has briefly discussed the literature, the problem and the methodology that is to be followed in order to achieve the research objective.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview and review of various studies and empirical research findings relating to the concept of smart tourism, smart tourism destination and smart tourist. The section

2.2 The Tourism Sector

Since 2008, the tourism industry has witnessed incredible growth augmented by the influence of smart tourism technologies (STTs) such as online travel distribution channels, search technologies, virtual tourism communities and other social media channels that allow tourists to make smarter travel decisions (Gretzel et al., 2015). There are a number of ways the term 'tourism' can be defined, and for this reason, the United Nations World Tourism Organisation (UNWTO) embarked on a project from 2005 to 2007 to create a common glossary of terms for tourism (BCCampus, n.d.). It defines tourism as 'a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (which may be either tourists or excursionists; resident or non-resident) and tourism has to do with their activities, some of which imply tourism expenditure' (UNWTO, 2008). Inferred from this definition, tourism is the movement of people for a number of purposes—whether business or pleasure.

The tourism industry is touted as a formidable industry generating over 11% of the global GDP and creating over 200 million jobs globally (United World Tourism Organisation, 2018). World Travel and Tourism Council (WTTC) (2018:4) indicates that it is anticipated that by year 2028, the direct contribution of travel and tourism to global employment will rise to 150,139,000 jobs, with the total contribution to employment estimated to be rising to 413,556,000 jobs. Thus, the travel and tourism industry will serve as a strategic sector for inducing employment in many countries' economies. For this reason, understanding future travel behaviour will be of strategic value to future top leading tourism destinations.

It is currently envisioned that future travel consumers will be better educated, informed, digitally active and smart (Gardiner, Grace, & King, 2014:705). Huang, Goo, Nam & Yoo, (2016:757) indicate that most of the change in tourism consumer behaviour, is being

propagated by the proliferation of internet and Information Technologies. The role being played by Information Technology (IT) in shaping the nature of modern and future tourism demand and supply patterns is a lot more apparent, since vast majority of travel information search, reservations and payments are being done online via websites and mobile applications (Huang et al., 2016).

The impact of IT on tourism has resulted in the creation of a term “smart tourism” which refers to the concept of tourism supported by integrated efforts at a destination to collect and aggregate data derived from physical infrastructure, social connections, government sources and human minds in combination with the use advanced technologies to transform that data into on-site experiences and business value propositions with a clear focus on efficiency, sustainability and experience enhancement” (Gretzel, Sigala, Xiang & Koo, 2015:181). The practicability of smart tourism as a concept relies on Smart Tourism Technologies (STTs) which are tools and technologies that allows tourists to enjoy the benefits of smart tourism. Smart tourism technologies include; smart phone apps, websites for online travel agencies, destination smart infrastructure, virtual reality, augmented realities, all of which are deeply rooted in computerized devices working with sensors and GPRS (Yoo et al., 2016).

From the afore mentioned, it is clear and well established that Information and Communications Technologies (ICTs) and STTs are revolutionizing the tourism industry on a global scale. Consequently, the subject becomes of interest for researchers to investigate if such positions are true, especially in the context of African countries who have been described as being digitally divided (Minghetti & Buhalis, 2010). In the presence of a digital divide, it would be difficult for tourism destinations to position themselves as smart tourism destinations, able to compete on the online platforms with other global players.

2.3 Tourism in South Africa

Tourism is considered as one of the largest industries world-wide, generating about 11% of global gross domestic product and employing more than 200 million people (UNWTO, 2018). The United World Tourism report (2017) indicated that 2017 was a record breaking year for the global tourism industry due to the sustained growth of international travel, standing at a record breaking 1,323 million trips made in 2017/2018 (UNWTO, 2018:10). The World Travel and Tourism Council (2017) indicated that the South African tourism industry made a direct contribution of R127.9bn to the country’s GDP in the 2015/2016 financial year whilst directly creating 716,500 jobs (4, 6% of total employment in the country). Such statistics warrant a need to question the competitiveness of South Africa’s capital city in smart tourism practices

in line with the City of Tshwane's Vision 2025 to position itself as a smart destination, in search of the best practice to adopt within the tourism industry

Within the African tourism marketplace, South Africa is ranked number one in terms of ICT infrastructure and readiness, environmental sustainability, price competitiveness, natural resources and the prioritization of the industry (Department of Tourism, 2016:26). The tourism Act 9 (1993), mandates the existence of South African Tourism, which serves as a marketing arm of South Africa, and whose primary mandate is to market South Africa domestically and internationally. The goal of South African Tourism is to promote a sustainable economic and social empowerment of all South Africans guided by its international strategic marketing plans which project to generate over R124 Billion from the international markets (South Africa Year book, 2017:6).

The following table (Table 1), presents forms of tourism that are most prevalent in South Africa:

Table 1: Types of tourism in South Africa

Form of Tourism	Description	Attractions in South Africa
Business Tourism	Business tourism is a form of tourism that occurs when one travels for occupational commitments (Nengovhela, Tshipala & Nethengwe, 2016). Such travels are intended for attending events such as; conferences, meetings and exhibitions, trade affairs and incentive travel (Marias, Du Plessis & Saayman, 2017).	• City of Johannesburg • Sandton • City of Cape Town
Adventure Tourism	Refers to the sale of an adventurous trip that has some element of risk, uncertainty, and one that is physical in nature (McKay, 2016). Adventure can be further divided into soft adventure and hard adventure.	• Blyde River Canyon Nature Reserve • The Wild Coast • Kruger National Park • Table Mountain National Park • Addo Elephant National Park • Garden Route National Park • Tsitsikamma National Park

		• Bontebok National Park • Golden Gate Highlands National Park • Mountain Zebra National Park • Cango Caves
Cruise tourism	Cruise tourism is a form of travelling for leisure purposes, involving an all-inclusive holiday on a cruise ship for at least 48 hours, according to a specific itinerary in which the cruise ship calls at several ports or cities (Brida & Zapata, 2010). Cruise tourism can be further divided into high-river cruise and sea cruise.	• Durban • Cape Town • Richard's Bay • East London • Port Elizabeth • Mossel Bay • Saldanha
Cultural tourism	Cultural tourism is a form of tourism wherein a visitor is motivated to travel by the need to learn, discover, experience, and consume the tangible and intangible aspects of culture at a tourist destination (UNTWO, 2012). The growth of cultural tourism is being influenced by the experience economy.	• Cradle of Humankind • The Isandlwana battlefield • Mphebatho cultural museum • The McGregor museum • Basotho cultural village • Mapungubwe • Bo-Kaap district
Township Tourism	The emergence of township tourism as a concept and practice originated in South Africa, wherein tourists were interested in visiting townships and experiencing areas where apartheid took place (Aula, van Zyl & Ferreira, 2019). Cultural tourism may include aspects such as food, art, lifestyle, folklore, clothing and music (Nelson, 2013:60).	• Soweto • Langa • Ibhayi • Hector Peterson Memorial Site

Wine tourism	Wine tourism is based on the motivation to visit wine producing parts of the world (South Africa Tourism Yearbook, 2018). South Africa is known for its beautiful wineries and preferred wine.	• Camino Wine Tours • Cape Agulhas Wine estates • Constantia valley Wine estates • Durbanville Wine estates • Elgin valley Wine estates
Nature Based Tourism	Nelson (2013) referred to nature tourism as a product that represents a diverse set of activities set in or based on the appreciation of natural attractions. Nature based tourism and eco-tourism are terms used interchangeably.	• Kgalagadi Transfrontier Park • iSimangaliso Wetland Park • Addo Elephant National Park • uKhahlamba Drakensberg Park • Agulhas National Park • Richtersveld Transfrontier Park • Misty mountains of the Magoebaskloof • Bourke's Luck potholes of the Blyde River Canyon • Camdeboo National Park
Rural Tourism	Rural tourism has been expanding rapidly in recent years due to the growing will of urban dwellers to escape urban life and connect with rural traditions and lifestyles (Lopez and Ramos, 2015).	• Shangan cultural village • Lesedi cultural village • Dzata ruins • Kruger National park • Groot Constantia • Village museum

Source: Author's own creation (2020)

South Africa successfully cemented its position as a tourist destination with 10 million foreign tourists arriving in 2016, which was an increase of 13% compared to the previous year (Department of Tourism, 2017). This may be attributed to the intense marketing campaigns being carried out by South African Tourism which is mandated to market South Africa both nationally and internationally (ibid.). The next section will discuss South Africa's various provincial tourism regions.

2.3.1 Western Cape Province

Western Cape is a province of South Africa which lies at the Southern tip of Africa (South Africa Tourism Yearbook, 2018). Tourism in the province creates 204 000 jobs whilst contributing more than R17 billion worth of revenue. The province receives the highest share of international tourists and domestic tourism, as such it is the most visited province in South Africa (National Department of Tourism, 2017). Western Cape boasts of well-known tourism sub-regions. The Cape Town Metropolis is the main city of Western Cape; it lies at the foot of Table Mountain. Cape wine lands is considered the wine capital of Africa; the region has the highest potential for wine tourism development. The Garden Route is hailed for its natural un-spoilt beauty, the region ranges for about 200 km of the southern coast covering a coast line stretch that includes George, Mossel Bay, Knysna, Plattenberg Bay and Nature's valley whilst being home to the iconic Tsitsikama forest (South Africa Tourism Year Book, 2018).

Home to the Western Cape is 'The Little Karoo' with its fascinating landscape coupled by rivers and vegetation. While being considered the Ostrich-feathered capital of the world, it is also rich in culture and history (Brand South Africa, 2016). It is neighbored by the Central Karoo, which is a semi-desert area and a range of the Swartberg Mountains (South Africa Tourism Yearbook, 2018). A region of the Western Cape with outstanding beauty, is the West Coast which is endowed with un-spoilt beaches, the Fynbos, beautiful scenic views and unique Whale watching. The region is home to West Coast National Park, which is an internationally renowned wetland that houses about 60 000 water birds. In the southernmost east of Western Cape lies the Overberg of which is a popular holiday region endowed with areas ideal for whale watching (National Department of Tourism, 2017).

2.3.2 Northern Cape Province

The Northern Cape is one province that is rich in culture and heritage whilst surrounded by vast sunny, silent and warm spaces. According to Du Plessis & Saayman (2015) the province has six sub-regions; Diamond fields, Kalahari, green Kalahari, Namaqualand, Upper Karoo and Hantam Karoo. The largest diamond excavation site in South Africa is found in Diamonds fields of the Northern Cape, while the McGregor museum houses invaluable San art works (South Africa Tourism Yearbook, 2018). Extensive San paintings can be seen at the Wonderwerk Cave at Kuruman whilst the Orange River shows the peak of its power at the Augrabies falls in the Augrabies Falls National Park.

Housed at the Green Kalahari is the Tierberg Nature Reserve widely known for its spectacular views of the Orange River and Keimoes valley. The Kgalagadi Transfrontier Park which is one of the largest nature conservation areas is found in the Green Kalahari. It is at the Namaqualand where one can enjoy a spectacular view of flowers during spring and 4x4 trails at the Goegap Nature Reserve (South Africa Tourism Year Book, 2018). The Anglo-Boer/South African war can be relieved in the Upper Karoo whilst an astronomical observation can be seen at the Hantam Karoo.

2.3.3 Free State Province

Lying in the heart of South Africa is the Free State, stretching between the Vaal River in the north and the Orange River in the South. The province can be divided into four tourism regions which includes, Motheo, Xhariep, Thabo Mufutsanyama and Lejweleputswa region (Brand South Africa, 2016). The first parliament building built in 1849 still stands in the Motheo region of Free State. In the Gariep dam, visitors enjoy water activities whilst snowcapped mountains in the Thabo Mufutsanyama offers a beautiful scenery (South Africa Tourism Yearbook, 2018). Lejweleputswa is home to a sanctuary that offers unique birds whilst Jordaan River founded by the Vootrekkers in 1840s can still be seen.

2.3.4 Eastern Cape Province

With its beautiful coastline, the Eastern Cape has more than 60 state owned game reserves. It includes sub-regions such as the Amatola Mountain Region, East Griqualand, Sunshine Coast, Wild Coast, Karoo, Tsitsikama and N6 Route (South Africa Tourism Yearbook, 2018). Amazing beauty can be seen from East Griqualand with its living history. Whilst from the wild coast, the home village of Nelson Mandela can be viewed (Brand South Africa, 2016).

2.3.5 Limpopo Province

Being the Northernmost Province of South Africa, Limpopo is endowed with landscape made up of dramatic contrasts characterized by hot savanna plains and mist-clad mountains, age-old indigenous forests and cycads alongside modern plantations, ancient mountain fortresses and the luxury of contemporary infrastructure and modern-day facilities. Much of the land remain unspoiled (Limpopo Tourism, 2018). The province is sub-divided into five regions which include; Bohlabela District, Vhembe District, Mopani District, Capricorn District and

Waterberg District (South Africa Tourism Year Book, 2018). The province houses Kruger National Park, Mapungubwe National Park and Dzata ruins. Form the Capricorn district, Bakone Malapa Open-Air museum can be seen whilst Mopani District offers sight to the beautiful Modjadji Nature Reserve (Limpopo Tourism, 2018).

2.3.6 Northwest Province

North West Province has several cultural villages that entertain and enrich visitors. A number of game reserves have been established, including the Pilanesberg National Park, situated in the transition zone between the Kalahari and the Lowveld (Tourism Northwest, 2019). Home to the Big Five, the park offers a wide variety of accommodation and is close to popular attractions such as Sun City and only a two/three-hour drive from Johannesburg. The park has an area of approximately 550 km², making it the fourth largest park in South Africa supporting more than 7 000 head of game and 350 bird species (South Africa Tourism Yearbook, 2018).

2.3.7 Mpumalanga Province

Located in the north-eastern part of South Africa, the province is bordered by Mozambique to the east and the Kingdom of Swaziland to the south and east. The climate and topography vary from cool highland grasslands at 1 600 m above sea level, through the Middleveld and escarpment, to the subtropical Lowveld towards the Kruger National Park and many private game reserves (Mpumalanga Tourism and Parks Agency, 2019). Scenic beauty, climate and wildlife, voted the most attractive features of South Africa, are found in abundance in this province (Brand South Africa, 2016). Attractions range from game viewing and birdwatching to scenic drives across the valleys and peaks of the vast Drakensberg escarpment, and include agritourism, industrial and adventure tourism and cultural experiences (South Africa Tourism Yearbook, 2018). Historical sites and cultural villages, old wagon routes and monuments mark events and characters who passed this way in search of adventure and wealth. Ndebele bead work and wall-painting in the north-west, the arts and crafts of the Lowveld. The different traditional villages throughout the province offer a unique insight into the people's history and cultures.

2.3.8 Gauteng Province

Gauteng is the commercial house of South Africa, a large, well-established park surrounds Zoo Lake, which breeding bird colonies frequenlyt. Other attractions include jazz concerts, rowing boats for hire, a tea garden and a restaurant (Gauteng Tourism Authority, 2020). The James Hall Museum of Transport was founded in 1964 and houses an historical collection of various modes of land transport used in South Africa, dating back 400 years. The South African Museum of Military History holds an impressive collection of weaponry and uniforms from the two world wars. The two-bedroom house where Mandela lived before his incarceration has been declared a national monument and converted into a museum (South Africa Tourism Yearbook, 2018). The Walter Sisulu Square in Kliptown, Soweto, is the place where the Freedom Charter was signed in 1955. The Kliptown Project comprises a hotel, the Kliptown Museum, retail outlets, restaurants and offices. Soweto is a popular tourist destination. No tour of Soweto would be complete without a visit to the Hector Petersen Museum, which commemorates the people who died during the Student Uprising of 16 June 1976 (Brand South Africa, 2016).

The Nelson Mandela Foundation's Centre of Memory is open to the public as a place of memory-sharing and reflection on the life and times of Nelson Mandela. At the Lesedi Cultural Village in the Swartkops hills north of Johannesburg visitors can families of different cultural groupings. It features four traditional homesteads where visitors can spend the night with a family of their choice (South Africa Tourism Yearbook, 2018). The Phumangena Zulu Kraal is home to traditional Zulu people living and working there. The Melville Koppies in Johannesburg was once the site of a Stone Age African village and iron-smelting works. Flora include 80% of the species recorded on the Witwatersrand. It is open to the public from September to April (Gauteng Tourism Authority, 2020).

2.3.9 KwaZulu-Natal

The garden province of South Africa, KwaZulu-Natal, is a subtropical region of lush and well-watered valleys, washed by the warm Indian Ocean (Brand South Africa, 2016). One of the country's most popular tourist destinations, the province stretches from Port Edward in the south to the borders of Swaziland and Mozambique to the north. History-filled towns lead to adventure sports and game viewing, along with outlets for unique arts and crafts (Tourism Kazulu-Natal, 2016).

2.4 Tourism Destination

Tourism destination are a mix of tourism products, experiences, and other intangible items promoted to the consumer. At a general level, this concept of destination can be developed to represent geographically defined entities such as regions in a country, a resort, or a wide range of experiences created by tourism marketers (Du Preez & Heath, 2009). A tourism destination is referred to as an amalgam of tourism products that offer an integrated experience to a consumer (Buhalis, 2000). As such, tourism destinations are complex systems, which have been said to be difficult to manage due to the high number of varied stakeholders. Most destinations are found to be consisting of the six components which are referred to as the 6 A's of a destination, that is, Available packages; Accessibility; Attractions; Amenities; Activities; and Ancillary services (Cooper, Fletcher, Gilbert, Shepherd and Wanhill, 1998; Davidson & Maitland, 1997; Buhalis, 2000; Jamal and Jamrozy, 2006; Fyall 2011). These components are defined in Table 2.

Table 2: 6 A's framework for the analysis of the components of a tourism destination

Attractions	These includes natural, man-made, artificial, purpose built, heritage and special event
Accessibility	This refers to the entire transportation network comprising of routes, terminals, and vehicles
Amenities	Accommodation and catering facilities, retailing and other tourist supporting services
Available packages	These may include pre-arranged packages by intermediaries and principals
Activities	These includes all activities available at the destination and what consumers will do during their visit
Ancillary Services	These are services used by tourists such as banks, telecommunications, post, newsagents, hospitals, etc.

Source: Buhalis (2000:98)

The components in Table 2 show the fragmentation of the concept of tourism destination, which then makes management of the destination to be difficult and cumbersome. This is because, unlike most traditional industries and economic production sectors which are defined in terms of physical outputs, the production of a tourism commodity as a standardized process

seems questionable because the tourism product is inherently heterogenous and complex (Jonker, 2004). This statement insinuates that for tourism destinations to become successful, good relationships amongst destination stakeholders are critical for the growth and development of the destination. It has been established in literature that the success of tourism destinations is hinged on innovation that is inclusive of the local community and human resource development (Buhalis, 2000; Ritchie & Crouch, 2003; Prats, Guia & Molina, 2008).

2.5 Digital Divide in Africa

Digitalization has gained tremendous popularity on a global scale. Its growth in popularity is attributed to the advent in ICTs. Countries that have adopted digitalization as an industrial strategy have been reported to have experienced economic growth and development (Ward & Zheng, 2016). Further, it is indicated that the accrual of positive impacts of digitalization is related to the level of development within the country, and in this sense, comparatively to the level of economic development, it has been suggested that less developed countries such as African countries are digitally divided (Myovella, Karacuka, & Haucap, 2020). This is not to say that ICT adoption statistics have been spiraling down the slope in the African continent, contrary, in comparison to other countries on a global scale, it can be concluded that most of African countries including South Africa, remain digitally divided. The term digital divide refers to unequal access to ICT infrastructure and technologies. It was reported by the International Telecommunications Union (ITU) that the number of people using mobile phones and the internet globally increased to 24.4% in 2018 from 2.1 % in 2005, whilst only one in five people in Africa were using the internet , compared to the rest of the world in one in two people were using the internet (ITU, 2018). ITU further reported that major constraints inhibiting digitalization in Africa include higher cost of ICT basket, poorer infrastructure, poor logistic systems and unreliable power supply.

The phenomenon of digital divide has adverse impacts the economy of African countries. With the advent of e-commerce, African countries are currently not exploiting the benefits that e-commerce. Inhabitants of digitally divided societies have been described as having less adoption and usage of digital technologies. A study by Brown & Licker (2003) found that historical socio-economic exposure to ICTs affects the adoption and usage of ICTs. It can therefore be deduced that individuals residing in less developed countries have less ICT adoption propensity.

2.6 Smart Tourism

The 21st century is characterized by growth and development within the ICT sector, which has resulted in the emergence of the fourth industrial revolution. It is notable that the evolution of tourism has always been tied to the development in technology and communication (Buhalis, 2015). In this age of information and digitalization, the concept of smart tourism has emerged, both as practice and a research phenomenon. The emergence of this concept is being fueled by the adoption of smart technologies such as mobile applications, interactive websites, virtual reality devices and augmented reality by tourism service providers with a view to meeting tourists' demand for smart tourism. It therefore becomes clear that the development of ICTs, more specifically the internet, has created a new breed of tourists who exhibit a different behaviour from their predecessors. This demand is driven by Generation Y tourism consumers whose behaviour is less understood (Femenia-Sera & Neuhofer, 2018).

Wang, Li, Zhen & Zhang (2016:310) refer to smart tourism as an ICT-integrated form of tourism which integrates tourism sources with ICTs, such as artificial intelligence, cloud computing, internet of things and mobile applications to provide explicit information and satisfactory services to tourists, based on the development of innovative mobile communication technology. A comprehensive definition of smart tourism was provided by Gretzel et al. (2015) as 'tourism supported by integrated efforts at a destination to collect aggregate/harness data derived from physical infrastructure, social connections, government/organizational sources and human bodies/minds in combination with the use of advanced technologies, to transform that data into on-site experiences and business value propositions with a clear focus on effective, sustainability and experience enrichment'.

Moreover, Benckendorff, Sheldon & Fesenmaier, (2014) noted that smart tourism is a logical step of tourism evolution within ICT from its traditional e-tourism, in that the foundations of smart tourism had already been laid by the adoption of ICTs in tourism dating back to usage of global distribution and central distribution. Sigala, Christou & Gretzel, (2012) maintain that the adoption and widespread use of smart tourism is also fueled by the usage of social media by tourists and tourism providers. Smart tourists present digitally influenced demands that include: pursuing personal travelling preferences and schedules; valuing time and unwilling to wait or tolerate delays; searching for travel-related information through the internet; booking online tickets and making online reservations; making online purchases; conducting price comparisons on different websites; communicating in the virtual travel communities; participating in the e-complaint handling system; asking for multimedia services; and using mobile facilities and applications such as wi-fi, short message service and multimedia messaging service, tourists therefore want to collect and share information about travel trends

and make decisions based on information found in smart tourism platforms (Kontogianni & Alepis, 2020).

It is important to point out that smart tourism is distinctively different from e-tourism, specifically in reference to the definition of smart tourism given above. The major differentiating factor between smart tourism and e-tourism is that in smart tourism, technology is an infrastructure that encompasses different computing technologies integrating hardware, software and network technologies that aims at creating real time awareness of the world whilst analytics allows individuals to make informed decisions about what to consume (Washburn, Sindhu, Balaouras, Dines, Hayes, & Nelson, 2010). Further, smart tourism is driven by smartphone technology and sensors, whilst e-tourism, on the other hand, can be viewed as a form of tourism evolurion that was mainly digital, used during pre-travel and post-travel, driven by information and mainly served an intermediating purpose. The differences between smart tourism and e-tourism are conceptualized by Gretzel et al. (2015) as shown in Table 3 below. According to the Table, it can be clearly deduced that smart tourism is driven by sensors and smartphones whilst e-tourism is driven by websites, smart tourism is more of an ecosystem with stakeholders such as public-private-consumer's collaboration whilst e-tourism is more of a valure chain system driven by bits of information not big data.

Table 3: Smart tourism vs E-tourism

	E-Tourism	**Smart tourism**
Sphere	Digital	Bridging digital and physical
Core technology	Websites	Sensors and smartphones
Travel phase	Pre-travel and post travel	During trip
Life blood	Information	Big data
Paradigm	Interactivity	Technology mediated and co-creation
Structure	Value chain/intermediaries	Ecosystem
Exchange	B2B,B2C and C2C	Public-private-consumer collaboration

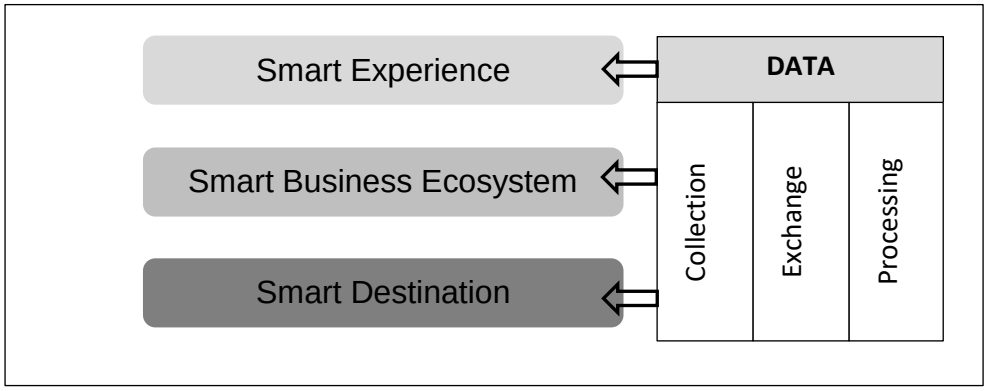
Source: Gretzel et al. (2015)

The progression of tourism towards smart tourism has resulted in new ways of creating tourist experience, exchanging of information and consumption of tourism products and services. ICT is key to the conceptualization and development of smart tourism. Information systems within ICTs are therefore critical in supplying more relevant information to tourism consumers and service providers, which then creates room for better decision making and ultimately results in more enjoyable tourism experiences (Sigala & Chalkiti, 2014). The information systems within the context smart tourism includes a wide range of technologies aimed directly at the

support of tourism. Such systems include tourism decision support system, recommender systems, context-aware systems, autonomous agents searching and web mining sources, ambient intelligence as well as recent augmented realities (Lamsfus, Wang, Alzua-Sorzabal & Xiang, 2014).

For smart tourism to work effectively, it requires the existence of layers, as shown in Figure 2, which allow for smart experience to be actualized. The figure indicates that the collection of data assists in creating smart experiences for tourism with the requirement of a smart business eco-system and a smart destination. It further illustrates how ICTs connectedness within a destination or ecosystem is a primary requirement for smart tourism to be in existence.

Figure 1:Components and layers of smart tourism



Source: Gretzel et al. (2015)

It is imperative to note that smart tourism is not such a complicated concept, rather it involves more of bringing innovative solutions to a smart destination in order to improve tourist experience. Examples of some notable smart tourism initiatives are, the City of Barcelona which offers travelers interactive bus shelters that provide touristic information and USB ports for charging mobile phones (Sigala & Chalkiti, 2014)., while South Africa rolled out Virtual touristic maps and Free-Wife in the City of Tshwane.

2.7 Smart Tourism Destinations

According to Boes (2015) a Smart Tourism Destination can be defined as a platform implementing ICTs such as Artificial Intelligence, Cloud computing and Internet of Things to offer the tourist personalized information and enhanced services established by mobile

end-user devices. Agreeable to this sentiment, Buhalis (2000) defines a tourism destination as an amalgam of touristic products and services; and according to Lopez de Avila (2015) built on an infrastructure of state-of-the-art technology guaranteeing the sustainable development of tourist areas, accessible to everyone, which facilitates the visitor's interaction with and integration into his or her surroundings, increases the quality of the experience at the destination, and improves residents' quality of life.

In order to make a tourism destination smart, the dynamic connection of stakeholders through technological platforms is a key factor. Literature notes that the success of a tourism destination rests primarily on innovation and human resources, coupled by extensive collaboration amongst destination stakeholders. The main objective of these platforms is to create a quick information exchange regarding all tourism related activities (Buhalis & Amaranggana, 2013). For the success of a tourist destination, collaboration and cooperation is critical (Zehrer, Raich, Siller & Tschider, 2014). The implementation of Smart Tourist Destinations requires collaboration, cooperation and leadership to be able to turn the challenges of the 6A's as well as the emerging technological revolution into advantages. Such a move will assimilate and use the positives of (1) Technology embedded environments; (2) Responsive processes at micro and macro levels (3) End-user devices in multiple touch-points; and 94) Engaged stakeholders that use the platform dynamically as a neural system (Buhalis & Amaranggana, 2013).

Smart tourism destinations are viewed as touristic geographic areas that utilizes available technologies and techniques in order to enable value co-creation, pleasure and experiences for tourist whilst improving profitability and wealth for tourist organisations. From the definitions we have reviewed, it becomes clear that smart tourism is implemented to increase destination competitiveness by improving tourism experiences and satisfaction while improving the sustainability of the destination.

2.8 Smart City

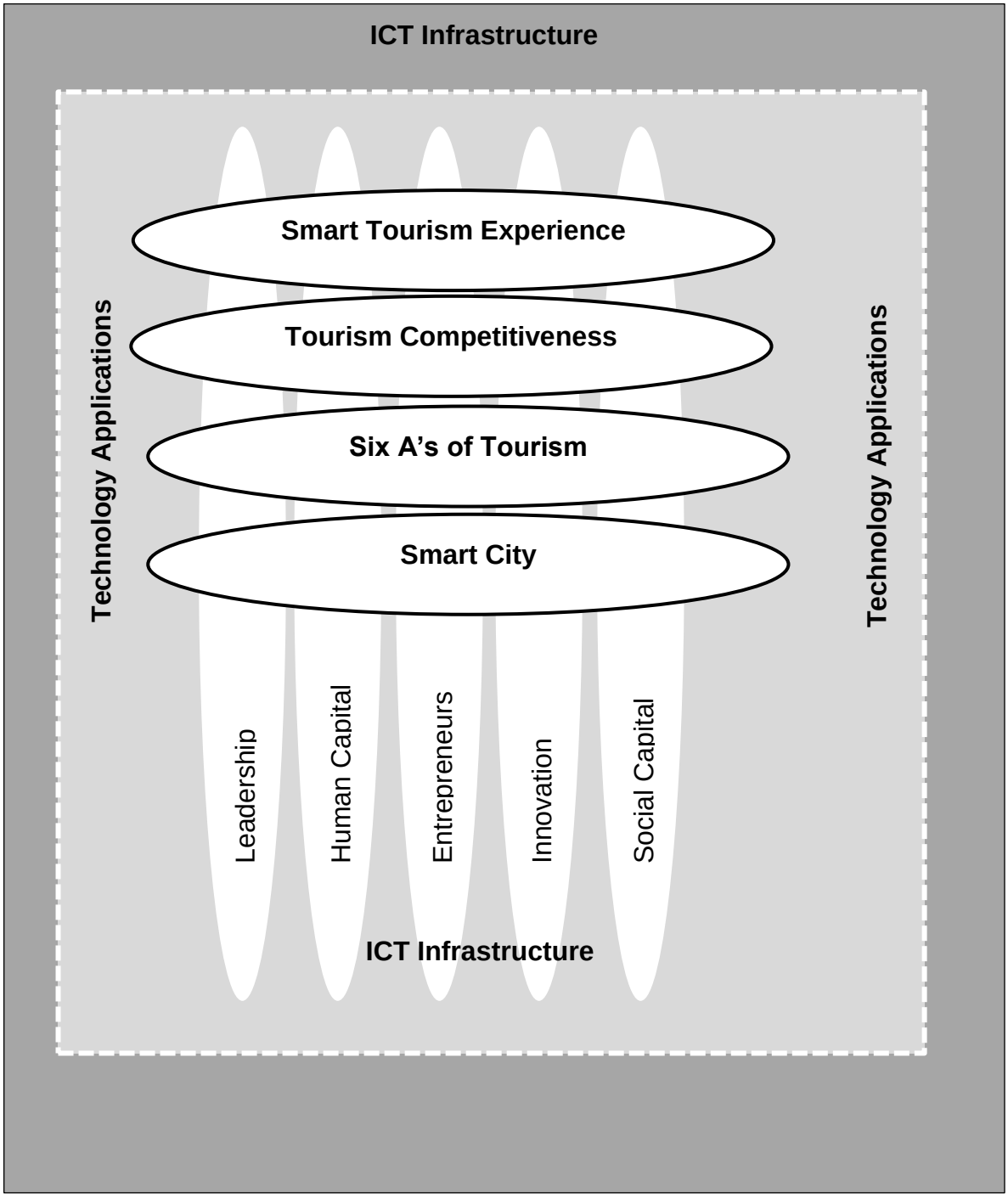
For smart tourism to be realized, the city in question should have in place the infrastructure to support the project—as a smart city. Dameri (2013:2549) defines a smart city as a well-defined geographic area in which high technologies such as ICT, logistics, energy production, transport and innovation cooperate to create benefits for citizens in terms of well-being, inclusion, environment quality and intelligent development. Caragliu, Del Bo & Nijkamp (2011), argue that cities are smart when investments in human and social capital, ICT and modern transport are made coupled with leadership and participatory governance.

Cohen (2011) conceptualized a smart city wheel which identified six smartness dimensions important for the development of a smart city and these dimensions includes, (a) smart governance, (b) Smart environment, (c) Smart Mobility, (d) Smart Economy, (e) Smart people and (f) smart living. Using Cohen's smart city wheel, we can deduce that a smart city builds from the theory of regional/geographic competitiveness brought by social and human capital, ICT infrastructures and economics. Furthermore, Boes, Buhalis & Inversini (2015:395) indicate that the development of smart cities is dependent on four fundamental constructs which includes; (1) Leadership, (2) Entrepreneurship and innovation, (3) Social Capital and (4) Human Capital. All these constructs contained in Boes et al. (2015) are supported and enabled by technology and ICT infrastructure.

As shown in Figure 2, a holistic framework for the dimensions of a smart tourism destination, it is therefore clearly demonstrated that destinations develop their smartness by aligning the fundamental dimensions of a smart city whilst using ICT to facilitate co-creation of smart experiences for tourists at the same time improving the competitiveness of the destination. Smart city is therefore an organic whole, where citizens and visitors can enjoy smart experiences. Smart tourism destinations are therefore to be built on the constructs of a smart city. From figure 2, one can comprehend that, when a smart city is in place, the 6 A's of tourism are then going to be influenced by the available ICT infrastructure and technological applications, thereby creating a smart tourism destination eco-system wherein business, government and visitors experience smart tourism and enjoy its benefits.

Further, from Figure 2, it becomes clear that firstly the success of a smart city critically depends on its leadership, innovation and entrepreneurship which then leverages the city's human and social capital (Skinner, Sarpong, & White, 2018). The city of Tshwane launched free Wi-Fi in the city, upgraded its transportation network to improve mobility, houses three higher education institution and two research houses, uses a smart railway system and uses smart resource management system such as smart water system and all these features qualifies the city as a smart city and as such position the city as a smart tourism destination. Another example of a smart city is the City of Brisbane in Australia, which mounted over 100 beacons onto points of interest in order to communicate with tourists who have downloaded the mobile application; while the City of Amsterdam uses beacons to translate signs to tourist's language, in Seoul City, free wi-fi is provided to tourists, while Barcelona offers USB ports for charging phones to tourists in buses. All these are smart tourism initiatives currently in place (Gretzel et al., 2015).

Figure 2: Framework for the dimensions of Smart Tourism Destination



Source: Boes, Buhalis & Inversini (2015)

2.9 Smart Tourist

Tourism service provider's adoption of smart tourism is fueled by the need to meet tourists' demand for smart tourism. The direction of demand is being driven by Generation Y tourism

consumers whose behaviour is less understood (Femenia-Sera et al. 2018). Buhalis & Law (2008) suggest that the development of ICTs is creating a new breed of tourists whom we can refer to as smart tourists. Such smart tourists have digitally influenced demands which includes; (1) Pursuing personal travelling preferences and schedules, (2) Valuing time, being less willing to wait or put up with delays, (3) Searching for travel related information through the internet, (4) Prefering to book online tickets and making online reservations, (5) Making online purchases, (6) conducting price comparisons on different websites, (7) Communicating in the virtual travel communities, (8) Offering e-complaint handling system, (9) Asking for multi-media services and (10) Using mobile facilities and applications such as Wi-Fi, Short messaging service and multimedia-messaging service. (Kontogianni & Alepis, 2020).

Likewise, Sevrani & Elamazi (2008) made similar observations by stating that the development of ICTs has created a new form of tourist behaviour which is characterized by accessing information through the internet, asking for better service (seeking smart experience), demanding specific offers, and being more knowledgeable, critical and price sensitive. Table 4 indicates some of the characteristics of smart tourists that are currently featured in the literature.

Table 4: Characteristics of smart tourists

Smart tourist characteristic	Author
Dependency on information technology	(Wang, Li, Zhen & Zhang, 2016)
They are self-service orientated	(Wang, Li, Zhen & Zhang, 2016)
Prefer to use personal reservation tools	(Wang, Li, Zhen & Zhang, 2016)
Value for their money and time	(Buhalis & Law, 2008)
Pursue personal travel preferences and schedules	(Buhalis & Law, 2008)
Book online tickets and make online reservations	(Buhalis & Law, 2008)
Search for travel related information through the internet	(Buhalis & Law, 2008)
Communicate in the virtual travel communities	(Buhalis & Law, 2008)
Use electronic complaint handling system	(Buhalis & Law, 2008)
Prefer communication via text or voice	(Skinner, Sarpong, & White, 2018)
Demand personalized services	(Buhalis & Amaranggana, 2015)

Source: Author's own creation (2020)

It therefore becomes clear from Table 4, that ICTs in tourism will directly influence the occurrence, or rather the development of Smart Tourism and are indeed changing the behavior of the modern tourists to be more orientated towards smart tourism.

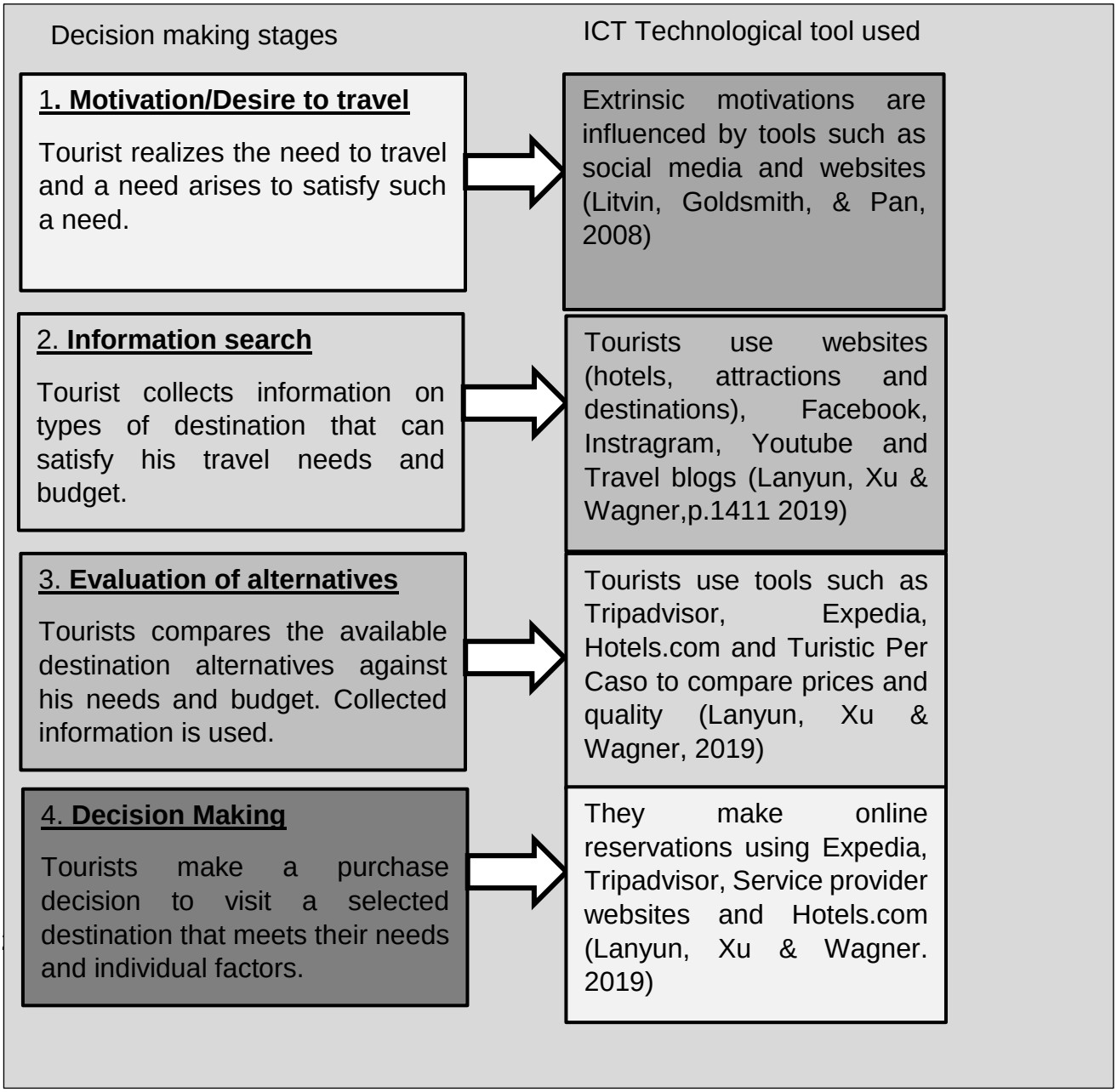
2.10 Tourist decision making process within the Smart tourism arena

The classical concept of decision making suggests that individuals collect and analyze information and then select an optimal solution from the available alternatives (Edwards, 1954; Von Neumann & Morgenstern, 1944; Smallman & Moore, 2010). Much work has been written within the tourism decision making context (Lew & Mckercher, 2006; Mansfeld, 1993; Mathieson & Wall, 1982; Schomoll, 1977, Litvin, Goldsmith & Pan, 2008; Middleton & Clarke, 2001; Sigala, 2010). Most of these models indicate that decision making in tourism is a staged process that usually involves four stages: motivation, information search, evaluation of alternatives, and decision making. The theory of Mathieson & Wall (1982) added two more stages: preparation and experience and evaluation of satisfaction. In the current digital age, a tourist's decision-making process has been subject to morphology due to the advent of extensive information available through ICT tools.

In order to fully comprehend the concept of tourist decision making, Figure 4 demonstrates the role that ICT plays in tourist decision making process. From the figure, there is indication that ICT plays a critical persuasive role when tourists make a decision to purchase a tourism product, which in the context of the current study, is the decision-making process to visit a destination.

It must be emphasized that in smart tourism, technology is more of an infrastructure embedded in a smart city, than an individual information system (Washburn et al. 2010). Within the smart tourism context, ICT is fundamental in supplying the promise of smart tourism benefits which includes; improved consumer decision making support, supply of more relevant information timely, greater mobility and more enjoyable smart experiences (Gretzel, 2011; Sigala & Chalkiti, 2014; Gretzel et al., 2015). On the tourist's side, smart tourism technologies sustain travelers in a variety of ways including 1) enabling to share their travel experiences so that they can help other travelers during their decision making process; 2) enhancing traveler's on-site experiences by providing relevant information; 3) Anticipating user needs and making relevant recommendations; and 4) enhancing tourist decision making process (Gretzel et al., 2015).

Figure 3: Tourist decision making process and communication technology used



Source: Author's own creation

To support the notion of mobile phone proliferation in the 21st century, Huang, et al. (2017) states that by 2015, the number of internet users had reached 3.2 billion, whilst 1.9 billion people were using smart phones. Moreover, majority of information search and reservations are currently being done online, which represents a point of internet usage saturation point (Xiang, Wang, O'Leary & Fesenmaier, 2015). Table 5 indicates the different forms of Smart tourism technologies and how tourists are using them.

Table 5: smart tourism technologies and tourist usage

Smart Tourism Technology	Usage from tourist perspective	Source
Internet (websites)	Travel related searches and transactions, also used for price comparisons.	Huang, et al., (2015); Xiang, et al., (2015); Lanyun, et al., (2019).
Mobile Applications	Used for making transactions and interacting with tourism service providers as well as accessing information.	(Xiang, Wang, O'Leary & Fesenmaier, 2015)
Geo-Tagging	Tourists use smart recommender systems in order to improve their experiences whilst at the destination	(Gretzel, 2011; Sigala & Chalkiti, 2014; Gretzel et al., 2015)
Social Media	Tourists use social media to search for information and to share information with the rest of society.	Xiang & Gretzel, (2010).
Internet of Things and Cloud computing	Though not a technology used by tourists directly, it is used by service providers in order to store, correlate and suggest products and services to tourists, which ultimately increases that usage of other tools and their satisfaction.	Xiang, et al., (2015)

Source: Author's own creation (2020)

2.11 Elaboration Likelihood Model

The focal point of this study rests in attitude and persuasion which has been a central focus of psychology from the early 1900s (Allport, 1935; Ross, 1908). Researchers were facing a challenge in reaching a conclusion whether attitudes were capable of predicting behaviour. Some earlier authors such as Langer & Abelson (1972) and Wicker (1971) even suggested abandoning the study of attitudes. As such, in 1981, Petty and Cacioppo came up with a model referred to as the Elaboration Likelihood Model (ELM) of Persuasion which provides a fairly general framework for organising, categorizing, and understanding the basic process underlying attitude change and persuasive communication (Petty & Cacioppo, 1986).

At the core of ELM is that the elaboration continuum is based on a person's motivation and ability to think about and assess the qualities of the issue relevant in the persuasion context (Petty & Cacioppo, 1986), therefore, when subjects have high motivation and high ability, the elaboration likelihood which is change in attitude will be high. Modern technologies such as the internet and mobile technology are prevalent within the travel industry, and as such they have authority on the consumption behavior of tourists (Wang, So, & Sparks, 2017). Such a paradigm shift can be comprehended through the analysis of ELM which is modified to accommodate attributes of smart tourism technologies as variables within the dual route of persuasion. An adopted theory of ELM was used by Yoo, Goo, Huang, Nam, & Woo (2016) and will thus also be adopted in this study to achieve the objectives of the study.

ELM illustrates that information processing for change inducement is not always a cognitive activity, sometimes it becomes a cue-based judgment. As such different types of information processing can be done through either a cognitive or peripheral processing route (Petty & Briñol, 2012). The central route involved in cognitive reasoning of the information that is presented, is more in-depth, and further focuses on assessment of information quality, source credibility and interactivity, in order to make a reasoned attitude; whereas the peripheral route to processes of cue-based judgement requires less cognitive efforts, and as such attitude changes through the peripheral route, are based on a simple decision criteria (Yoo et al, 2016). ELM recognizes that subjects or recipients of information have different motivations, abilities and personal interest to elaborate information presented, therefore, elaboration likelihood will vary within the same subject, based on aspects such as self-efficacy, issue involvement and temporal busyness (Yoo et al, 2016). ELM, therefore, is based on a dual route to persuasion, with some attitudes necessitating high extents of cognitive reasoning and others requiring less (Chen, Yang, Zhang & Yang, 2018). This is demonstrated by the study by Yoo et al (2016) that adopted the ELM model aimed at asserting if smart tourism technologies create some form of travel decision support for tourists.

This study has adopted the conceptual framework that was used by Yoo et al (2016), which used attributes of smart tourism technologies as factors within the central and peripheral route. Within the conceptual framework, travel decision is regarded as one of the main functions of STTs and is thus adopted as the persuasion construct. Theoretical variables of the elaboration likelihood model are as follows:

2.11.1 Information quality

Within the online business environment, information quality assists users to compare products and services, thereby assisting in decision making or influencing users to make purchase decisions in relation to products and services (Ghasemaghaei & Hassanein, 2015). Petty & Cacioppo (1986) refer to a strong message/information as one containing arguments which when considered by a subject, that subject thinks of such an argument agreeably and consequently they generate predominantly favourable thoughts towards it, whereas poor information quality are messages that when subjects think about them, they generate unfavourable thoughts about the information.

In their study, Petty & Cacioppo (1986:133) indicate that a message can be classified into two groups, that include strong and weak messages that relates to a specific issue. In their study, they referred to a topic of raising tuition fees at a university, then, they subjected respondents to rating the strength of two messages that relates to the topic (Message 1: We should raise tuition so that more books can be purchased for the library; Message 2: We should raise tuition so that more trees can be planted on campus). From their analysis, they found that respondents viewed message 1 to be of a strong nature and thus more persuasive. The authors further found that respondents rated message 1 as being strong because it raised predominantly positive thoughts. Furthermore, messages demonstrating poor information quality generate unfavourable thoughts about the information.

Yoo et al. (2016) indicated that information quality encourages rational and cognitive judgement rather than emotional judgement, therefore judgement of information quality by readers is more of a cognitive process through the central route of attitude change than through the peripheral route of attitude change. Moreover, the quality of information depends on its persuasiveness and completeness. In this context, persuasiveness is defined as the extent to which the reader views the argument contained in the information as convincing (Luo, Luo, Schatzber & Sia, 2013). Therefore, the message and its appeal have to be persuasive in order to influence a consumption or purchase decision.

Previous work has also shown that strong argument in information weakens the possibility of the reader developing unfavourable thoughts towards information presented (Kim and Benbasat, 2003). The quality of information presented in smart tourism technologies is determined by its completeness, accuracy, and timelines. Therefore, if information contained in STTs is considered to be inaccurate, incomplete and outdated, tourists may experience dissatisfaction with STTs and consequently, would not consider the positive influence of such an STT when making travel decisions (Yoo et al. 2017).

2.11.2 Information relevance

Information relevance directly ties with information quality (Yoo et al, 2017). The relevance is however influenced by the motivation of tourists. If persuasive information presented to a tourist does not relate to their travel motivation, it is less likely that such a tourist may experience attitude. When a prospective consumer believes that retrieved information relates to their information needs, or that a connection exists between the acquired information and internal needs of such information, the information is considered relevant (Chen, Shang & Li, 2014). However, the relevance of information is often judged from a social perspective in the sense that hedonic impacts such as pleasure in reading a set of information can make such information more relevant to a prospective user.

Xu & Chen (2006) indicated that users judge the relevance of information based on understandability, novelty, topicality, and reliability. Novelty addresses the newness of information and acts in contrast to familiarity. When a user is presented with information which is relatively new such information is then considered more relevant. Whilst understandability is mainly influenced by background information other factors such as presentation, use of jargon and graphics determine the ease of understanding. When a user finds information difficult to understand such information would be considered less relevant. The reliability of information addresses its accurateness, trueness and believability of such information, therefore when presented information is considered credible, accurate, and trustworthy, such information is viewed as being reliable and thereby considered relevant.

2.11.3 Source credibility

Source credibility can be referred to as a reader's perception of the expertise and trust worthiness of the information source. Source credibility therefore assesses the expertise of the communicator, in relation to the information that is being communicated, thereby addressing the issue of trust on the end of the information receiver (Yoo et al., 2017). Studies have shown beyond doubt that users/readers respond with positive thoughts to credible sources of information, and conversely respond negatively to information sources with lower credibility (Eagly & Chaiken, 1975; Eagly, Wood, & Chaiken, 1978).

When recipients of information trust the credibility of the communicator, a less effortful persuasion occurs through the peripheral route of persuasion, wherein positive attitude change occurs without necessary cognitive efforts. The credibility of STTs will therefore reduce the doubt of tourists when making purchase decision in relation to available tourism products. The credibility of STTs does not entirely depend on the communicator and the message

communicated, but also depends on other factors such as image of the product, its reputation, and the word-of-mouth recommendations (Bhattacherjee and Sanford, 2006).

Therefore, a highly persuasive argument and a credible source will have a stronger influence and attitude change on the subject, whereas a highly persuasive information with less credibility will have a lessened impact (Eagly & Chaiken, 1975; Eagly, Wood, & Chaiken, 1978). This therefore reiterates the fact that STTs with positive source credibility known to potential tourists has a higher likelihood of positively influencing tourist's decision to consume a certain touristic product or service.

2.11.4 Interactivity

Within the realm of E-commerce, interactivity is considered as the most important aspect in influencing the purchase decision of consumers (Yoo et al., 2017). Interactivity therefore addresses the reciprocity and responsiveness of an STT. Tan, Lee, Hew, Ooi & Wong (2018), refer to interactivity as a high level of consumer and buyer engagement. Interactivity is, therefore, a psychological state of mind experienced by users of STTs during the interaction process. The dimensions of interactivity include two-way communication, synchronicity, and active control (Hackel, 1998). Jensen et al. (2014) argue that interactivity should include a degree of information exchange, responsiveness to the consumer's request and the consumer's ability to control the available information. Modern interactive websites and mobile applications determine the degree of information exchange by including chatbots in websites and smartphones, such chatbots can generate reports on information exchange in the platform. Literature indicates that users of STTs perceive smart tourism tools and systems as collaborating when they are reciprocal, responsive, and speedy in response. Cyr et al. (2018) indicate that the creation of online interactivity and connectedness of technological tools aids business organisations in converting users of technological tools into customers.

2.11.5 Accessibility

Accessibility refers to the degree to which tourists can easily access information from STTs (Huang et al, 2017). Highly interactive STTs allow for ease of use, which then positively facilitates tourists' search for information and comparisons, in addition to their purchase choice and expression of post purchase behaviour (Li & Huang, 2013; Huang et al, 2017). Thus, STTs accessibility positively influences the tourist's decision purchase decision.

2.11.6 Self-efficacy

Within the conceptual framework, self-efficacy serves as the elaboration likelihood moderator since the usage of STTs is voluntary. Self-efficacy, therefore, moderates the effects of central and peripheral cues for the travel decision choice. From a psychological viewpoint, self-efficacy refers to an individual user's perceived ability of performing an activity to acquire expected outcome (Bandura, 1997). Within the context of the current study, self-efficacy refers to the perceived ability of tourists to use STTs in order to make travel choices and arrangements.

2.12 Summary

Chapter 2 provided a critical insight into nature of tourism, tourism in South Africa, Smart City, Smart tourism, Smart Tourism Destination, Tourist decision making process and the elaboration likelihood model, it therefore became clear that though being a relatively new concept, smart tourism is changing tourist behavior and such should be studied and understood by tourism providers and planners.

CHAPTER THREE: RESEARCH METHODOLOGY

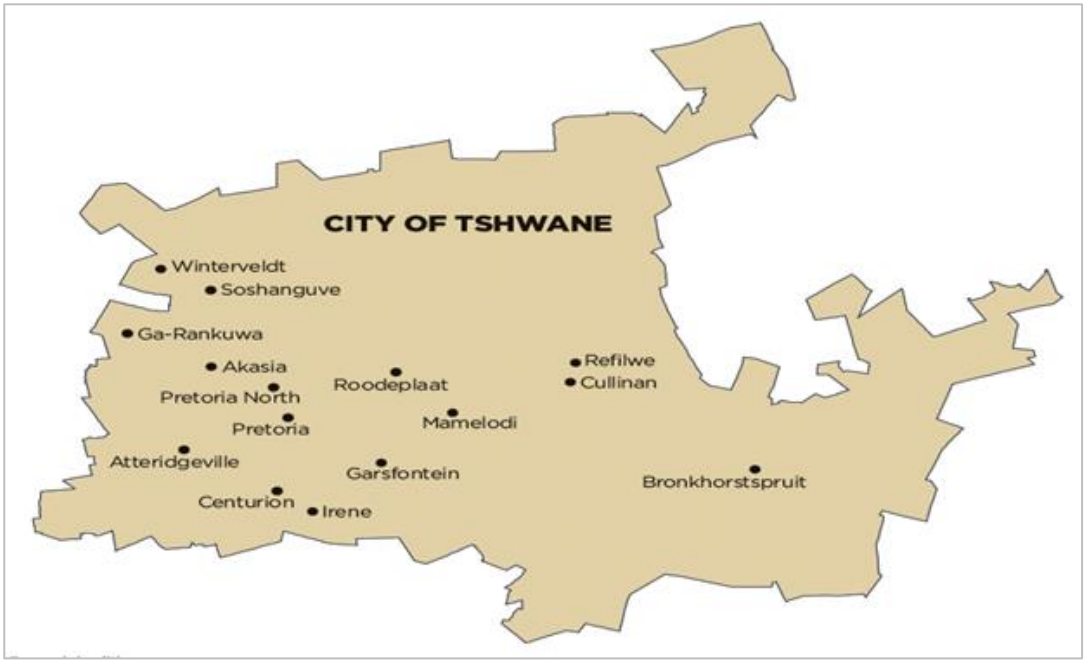
3.1 Introduction

Chapter three provides critical insight into the methodological aspects of this study. It is an outline of the entire research framework with specific emphasis on the paradigm, tools and techniques, research questions and theoretical framework. A positivist research paradigm is adopted for the study whilst being quantitative in nature. The Elaboration likelihood model will be used as a theoretical framework for the study. The chapter ends with a summary.

3.2 Study Area

The study was conducted in the City of Tshwane. Tshwane is the capital city of South Africa and the second city in the world to host the highest number of municipalities (Municipalities South Africa, 2019). The City of Tshwane Metropolitan Municipality is a Category A municipality situated in the Gauteng Province. It merged with the Metsweding District, which was a consequence of the Gauteng Global City Region Strategy to reduce the number of municipalities in Gauteng to at least four by 2016 (Municipality of South Africa, 2019). Figure 5 shows the City of Tshwane.

Figure 4: Map of the City of Tshwane, South Africa



Source: Municipalities (2019)

3.3 The Study Population

The population of the study comprised of tourists who visit Tshwane. According to City of Tshwane (2013), the city received a total of 2 375 958 tourists between 2010 and 2011 financial year, whilst Gauteng Tourism Authority (2014) indicated that a total of 10,3 million tourists visited Gauteng province in 2012/2013 financial year, out of which the City of Tshwane got 18.3% of tourists (1 884 900). As such the total population of tourists visiting Tshwane is estimated to be 2 million. With regard to the population of 2 375 958 as per Gauteng Tourism Authority (2014), the sample size of 250 was chosen with reference to Israel (1992) who indicated that when one has a population size of more than 100 000 and seeking a 95%

3.4 Research Problem

The evolution of ICTs and their use within the context of the tourism sector, has led to the emergence of the term Smart Tourism which refers to a form of tourism development that heavily relies on smart technologies such as smartphone applications, websites, Virtual Reality, augmented reality, cloud computing, etc., to cater for modern smart tourists needs (Buhalis & Law, 2008; Law, Buhalis, & Cobanoglu, 2014; Xiang, Schwartz, Gerdes, & Uysal, 2015). Because tourism is mainly service dominant, its success and development depends primarily on process innovation in which information technology (IT) has played an important role in initiating services processes. Advancements in ICT has innovated tourism processes that have led to the birth of the concept of smart tourism and smart cities.

The City of Tshwane fits the category of a smart city dues to its smart infrastructure such as Open WIFI, smart transport system, knowledgeable workforce, innovation and leadership. This therefore means that City of Tshwane can be positioned as a smart tourism destination. However, before such positioning can be pursued, it is imperative to first ascertain if current tourists visiting the City of Tshwane are influenced by smart tourism technologies when they make the decision to visit the city. It therefore becomes clear that the city of Tshwane faces the problem of establishing the role that smart tourism technologies do play when tourists make a decision to visit the city.

In response to the above identified problem, the current study intends to investigate if smart tourism technologies play any form of persuasive role when tourists make a decision to visit the City of Tshwane.

3.5 Research Objectives

Following the articulation of the research problem, the study's objectives were:

1. To investigate the influence of smart tourism technologies information quality on tourist's decision to visit the City of Tshwane.
2. To explore the influence of smart tourism technologies information relevance on tourist's decision to visit the City of Tshwane.
3. To investigate the relationship between smart tourism technologies interactivity and tourist decision to visit the City of Tshwane.
4. To determine the influence of smart tourism technologies source credibility on tourist's decision to visit the City of Tshwane.

3.6 Research Questions

The following research questions were formulated to guide the study in relation to the above research objectives:

1. To what extent do smart tourism technologies information quality influence tourist's decision to visit City of Tshwane?
2. To what magnitude do smart tourism technologies source credibility influence tourist's decision to visit the City of Tshwane?
3. To what extent do smart tourism technologies information relevance influence tourist's decision to visit the City of Tshwane?
4. To what degree do smart tourism technologies interactivity influence tourist's decision to visit the City of Tshwane?

3.7 Research Theory and Research Hypothesis

The theoretical framework adopted for the study is the Elaboration Likelihood Model (ELM) of persuasion which was originally developed by Petty & Cacioppo (1981) as a framework for organizing, categorizing, and understanding the principles of attitude change. Modern technologies such as the internet and mobile phone technology are prevalent within the travel industry, posing an impact on the consumption behavior of tourists (Wang, So, & Sparks, 2017). Such a paradigm shift can be comprehended through the analysis of ELM which this

study modified to accommodate attributes of smart tourism technologies as variables within the dual route of persuasion. ELM was adopted and used by Yoo, Goo, Huang, Nam & Woo (2016) in their study whose primary objective was to determine if smart tourism technologies provide some form of support when tourists make travel decisions.

The conceptual framework of this study is based on that of Yoo et al. (2016), which used the attributes of STTs as factors within the central and peripheral route of the Elaboration Likelihood Model (ELM) of persuasion. The core of the ELM is that the elaboration continuum is based on a person's motivation and ability to think about and assess the qualities of the issue that is relevant in the persuasion context (Petty & Cacioppo, 1986). To achieve the objectives of this study, we modified the ELM to accommodate the attributes of STTs as variables within the dual route of persuasion. Information relevance was added as a variable because although information may be of good quality, if the information is not relevant, it will not induce a positive behavioural intention.

Within the conceptual framework, travel decision is regarded as one of the main functions of STTs and thus was adopted as the persuasion construct.

The figure below demonstrates the conceptual framework.

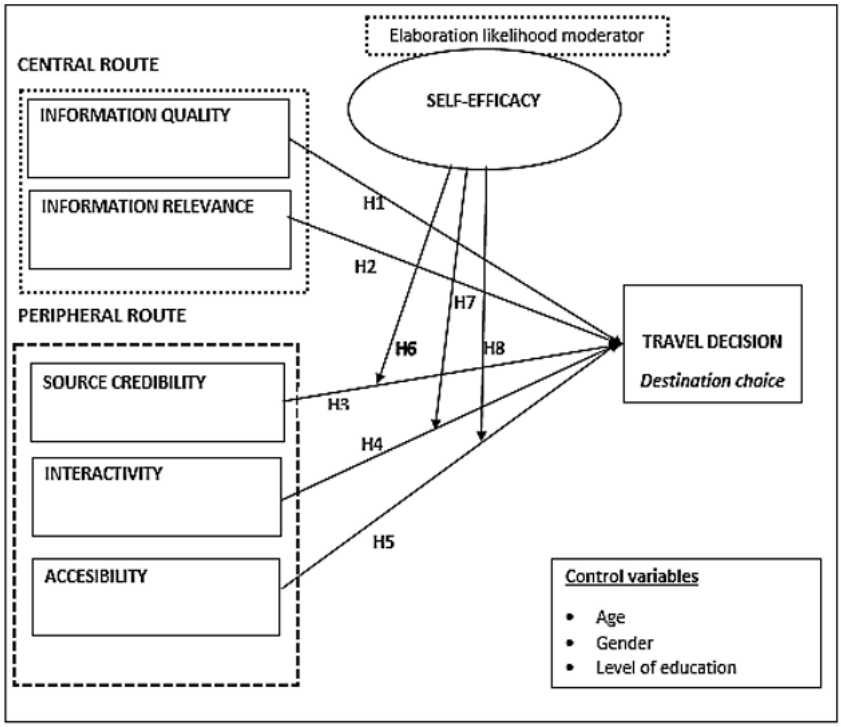


Figure 5: Conceptual framework

Source: Author's own creation (2020)

From the research theory above, the following hypothesis were developed:

H1: Information quality has an influence on tourist's destination choice

H2: Information relevance has an influence on destination choice

H3: Source credibility has an influence on destination choice

H4: **I**nteractivity has an influence on destination choice

H5: Accessibility has an influence on destination choice

H6: Self-efficacy moderates the relationship between source credibility and destination choice

H7: Self-efficacy moderates the relationship between interactivity and destination choice

H8: Self-efficacy negatively moderates the relationship between accessibility and destination choice

3.8 Research Strategy

A Quantitative strategy was selected for this study. According to Bryman & Bell (2011), a quantitative study design emphasizes quantification in the collection and analysis of data. Bryman & Bell (2011:31) further asserts that a quantitative approach to research, involves undertaking a statistical analysis and relies on numerical evidence to draw conclusions about the subjects studied. A quantitative approach was selected because it would best enable the analysis of the relationships between smart tourism technologies' attributes and tourism destination choice and findings could be generalized to the population.

3.9 Research Paradigm

A research paradigm can be referred to as a net that comprises the researcher's ontological, epistemological and methodological premises (Denzin & Lincoln, 2005:22). A widely cited definition of the term Paradigm, in the context of research, is that of Kuhn (1970:10) who defines it as a set of interrelated assumptions about the social world, which provides a

philosophical and conceptual framework for the systematic study of that world. The most widely used research paradigms are positivism, post-positivism, interpretivism, constructivism and critical theory.

The positivist tradition comes from the 19th century writings of philosophers such as Newton, Locke, Smith and Comte's (Smith, 1983). The positivist worldview was employed for this study. Positivism is also referred to as the scientific method of doing research. Through a positivist paradigm, a deductive logic approach is used with empirical observations of individual behaviour, in order to confirm and predict causal laws and patterns of human activity (Neuman, 2014:97). It therefore becomes clear that the aim for positivism is to verify certain assumed hypotheses to posit certain general laws. The positivist research paradigm therefore appears to be the most fitting paradigm for this study. Furthermore, the adoption of the positivist framework was fueled by the fact that the study embarked on an observation of social reality and the outcomes were law like generalizations (Saunders, Lewis & Thornhill, 2010).

3.10 Research Design

The determination of interrelationships among certain variables within a population is at most times achieved by the usage of survey research designs (Tanner, 2018). Creswell (2009, p.12) argues that a survey research provides a quantitative or a numeric description of attitudes, trends and opinions of a population by studying its sample.

Surveys therefore gather data that describe and explain characteristics, behaviour and attitude of society in order to make future predictions. Quinlan et al. (2015) indicated that a survey study can either be longitudinal or cross-sectional, during which the data is mostly collected by the use of a questionnaire. To achieve its objectives, the study is going to undertake a cross-sectional survey design. Its selection was based on its ability to determine possible correlations between variables, at one time without repeating the study (Tanner, 2018). The survey mode to be used is the personal-interview mode wherein the researcher will personally interview respondents using a questionnaire.

3.11 Sampling Strategy

A population under study can be referred to as an aggregate or collection of units within a specific geographic area, from which a sample is selected (Arnab, 2017). Probability sampling technique has been selected for the study. Probability sampling posits that sampling units are selected by chance, though a researcher may still pre-specify the sampling unit (Malhotra & Birks, 2006, p.362).

The probability sampling techniques to be used are, cluster sampling and simple random sampling. The city of Tshwane will therefore be divided into 7 clusters after which from these clusters respondents will be selected using simple random selection, therefore a two-stage cluster is to be used. Cluster sampling was selected due to Tshwane being large. The number of elements will be uniform across the 7 clusters.

3.12 Research Population and Sample

Bryman & Bell (2011, p.170) defined a survey population as a universe of units such as people, nations, cities, regions, firms, etc. from which a sample is selected. The population of the study will comprise of tourists who visit Tshwane. According to City of Tshwane (2013, p.176), the city received a total of 2 375 958 tourists between 2010 and 2011 financial year, whilst Gauteng Tourism Authority (2014, p.13) indicated that a total of 10, 3 million tourists visited Gauteng province, with the city of Tshwane getting 18, 3% of tourists (1 884 900). As such the total population of tourists visiting Tshwane is estimated to be 2 million. With regard to the population of 2 375 958 as per Gauteng Tourism Authority (2014:13), the sample size of 450 was chosen with reference to Israel (1992, p.3) who indicates that when one has a population size of more than 100 000 and seeking a 95% confidence interval, one should select a confidence interval of 400, however to make room for response rate, the researcher used a sample size of 450.

A sample of 450 tourists will be selected for survey. Probability sampling techniques will be used, of which cluster sampling and simple random techniques will be used. The city of Tshwane will be divided into clusters. Within these clusters respondents will be selected using simple random means, Tshwane will therefore be divided into seven regions. Quinlan et al. (2015, p.178) defines simple random sampling as a sampling procedure that assures each element in the population has an equal chance of being selected. Cluster sampling on the other hand is an efficient sampling technique in which a larger population is divided into clusters such as municipalities, districts or branches.

3.13 Measurement Instrument and Data Collection

A questionnaire will be used for data collection. The questionnaire will be based on the study titled “Improving travel decision support satisfaction with smart tourism technologies: A framework of tourist elaboration likelihood and self-efficacy” written by Yoo, Goo, Huang, Nam

& Woo (2016). The questionnaire will be composed of two sections. Section A is aimed at collecting demographical information of the respondents, whereas section B will deal with the awareness and perception of tourists towards smart tourism tools. Question 5 within section B of the questionnaire consists of 29 Likert scale items which relate to the role that STT technologies plays in influencing tourist decision to visit the city of Tshwane. Such Likert items will be further used to determine the extent of smart technologies in influencing tourist decision making. Questionnaires will be handed out at tourist's hot-spot areas such as hotels and major tourist attractions in Tshwane.

3.14 Reliability and Validity of the Measurement Instrument

Quinlan et al. (2015:258) indicated that reliability refers to the dependability of the research and the degree to which the research can be repeated whilst getting consistent results whereas validity refers to how valid the research is, its logic, its meaningfulness, reasonableness and robustness. Furthermore, Bryman and Bell (2011) argued that reliability is concerned with the question of whether or not the results are repeatable. In order to ensure validity and reliability, the study seeks to use a questionnaire as the measurement tool, developed with proper alignment to the research questions that guided the study. A pilot study is to be undertaken in order to identify any pitfalls and maintain the reliability and validity of the study.

The research instrument to be used for the study was also used by Yoo et al. (2016) *"Improving travel decision support satisfaction with smart tourism technologies: A framework of tourist elaboration likelihood and self-efficacy"*, therefore the instrument can be considered reliable. However, since smart tourism is relatively an emerging research area, the reliability in terms of producing similar results may be limited. In order to ensure validity, the sample of the study will be large enough and data will be managed ethically.

3.15 Data Analysis

The data will be captured through Excel and copied to SPSS Version 25 for analysis. The following statistics will be used:

- Structural equation modelling
- Descriptive statistics

3.16 Ethical Considerations

Ethical considerations are critical in the development of valid and reliable research studies. The following ethical issues will be observed by the researcher:

3.16.1 Confidentiality

The confidentiality of the respondents will be well protected. Respondents will be instructed not to provide any personal information such as their name or contact details. Reporting will not disclose any sensitive information with regard to the respondents and as such, confidentiality was protected.

3.16.2 Seeking Consent

Respondents will not be forced or induced to partake in the study. Written consent will be obtained before the data is collected.

3.16.3 Reporting the Findings

The findings of the study will be truthfully reported without any changes or manipulation and that will improve the ethical conduct of the research.

3.17 Summary

In this chapter, the philosophical and theoretical assumptions of the study were critically discussed. Moreover, a discussion on the design of the research was studied as well as the conceptual framework and means to collect and analyze the data. The table below summarizes the discussions contained in chapter 3.

Table 6: Chapter 3 Summary

Items discussed	Description as per the study
Study Area	City of Tshwane
Research Strategy	Quantitative Research strategy
Research Paradigm	Positivist Research paradigm
Research Design	Survey Research design
Sampling Strategy	Two-stage probability sampling wherein Cluster sampling and simple random sampling will be used
Measurement Instrument	A questionnaire is to be used.
Data Analysis	Structural Equation Modelling

Source: Author's own creation (2020)

CHAPTER FOUR: DATA ANALYSIS

4.1. Introduction

Chapter 4 presents the analysis of the data that was collected. A sample size of 450 respondents was targeted for the study. Out of the 450 questionnaires that the researcher distributed to the respondents, the study received response from a total of 341 usable questionnaires, representing a response rate of 76 percent. The data presented is two-fold; firstly, the descriptive statistics is presented and secondly, inferential statistics is presented.

4.2. Descriptive statistics

Descriptive statistics will be presented in form of frequencies and percentages. Frequencies and percentages of respondents, age, gender, level of education and familiarity are to be presented first, followed by frequencies on the 29 Likert scale items that were used.

4.2.1 Age

Descriptive analysis of age distribution of the respondents indicates that 39.6 percent of the respondents were in the age range of 16-25 years, followed by those in the age range of 26-35 years who accounted for 34.9 percent of the respondents, those who were in the age range of 60+ only accounted of 5 percent whilst the remainder 20.5 percent of the respondents were between the ages of 36-50. When conducting Structural Equation Modelling, age range was used as a control variable within the model, therefore it was an important control variable in the conceptual framework.

4.2.2 Gender Profile

Out of 341 respondents, 195 were female, representing 57.18 percent of the respondents, while the male accounted for 42.8 percent of total respondents as indicated in the figure below. Within the model that was tested, the gender of the respondents was used a control variable in order to test if the data was affected by gender. Gender was therefore an important control variable within the study. The fact that majority of the respondents were females signals that the findings of the study are more skewed towards representations of females.

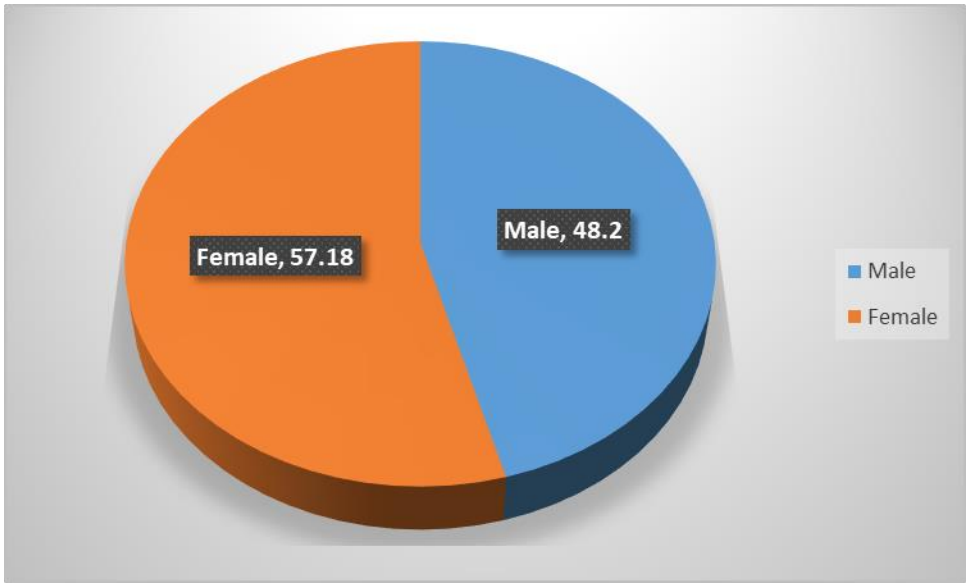


Figure 6: Gender distribution of respondents

Source: Author's Own Creation

4.2.3 Level of Education

Only 45.7 percent of respondents had a matric level of education as the highest educational qualification. This number accounted for 156 of the respondents, and it was followed by undergraduate degree holders who accounted for 32.8 percent of the respondents, while those who had a post-graduate qualification accounted for 17.3 percent. The remaining 4.1 percent of the respondents selected the 'Other' option, indicating that they had diplomas, certificates and vocational training qualifications.

4.3 Respondents' Familiarity to Tourism Tools

Respondents were asked to select the smart tourism tools that they were familiar with. Such tools included, Trip Advisor, Google maps, Hotels.com, Booking.com, Expedia.com, Google groups, mobile applications and websites. This question intended to gauge if the respondent (tourist) was familiar with current smart tourism technologies that are primarily aimed at inducing tourist's attitude change towards tourism products and induce/influence purchase decision.

Responses are indicated in the table below:

Table 7: Smart Tourism Familiarity

Smart tourism tool	Familiar (percent)
Trip Advisor	69.2
Hotels.com	30.2
Google Maps	89.7
Mobile Applications	59.5
Expedia.com	48.1
Booking.com	45.7
Google Groups	12
Websites	77.4
Other tools (Trivago)	0.9

Source: Author's own creation (2020)

Looking at the findings in Table 5, it becomes clear that the respondents were familiar with smart tourism tools that are currently available. Majority of the respondents were familiar with Google maps (89.7 percent) while many, were not familiar with google groups. From the table it can be deduced that respondents were familiar with majority of the listed tools. This result indicated for the researcher that respondents had some awareness about smart tourism tools and further statistical analysis revealed that these technological tools predetermined their choice of destination, which in this case was the City of Tshwane.

4.4 Ranking of Factors

The Likert scale items used in the study related to the attributes of smart tourism technology influenced tourists to visit a specific destination, which in the current study was the City of Tshwane. A total of 29 Likert Scale items were adopted from previous studies and these items were categorized into Information Quality, Information relevance, Source Credibility, Accessibility, Interactivity, Destination Choice, and Self-efficacy. A 7-point Likert scale (1= agree; 2= somewhat agree; 3= strongly agree; 4= neutral; 5= Disagree; 6=somewhat disagree and 7= strongly disagree). The frequencies of these Likert items are indicated in Table 8:

Table 8:Mean Scores of Likert Items

Category	Items	Mean	SD
Information Quality	Tourism websites and Mobile Applications provide accurate information of the destination and the trip.	2.56	.874
	Tourism website and Mobile Applications enable me to complete my travel because they provide detailed information.	2.60	.907
	Tourism website and Mobile Applications provide up-to-date information of the destination and the trip.	2.57	.870
Information Quality Average count		2.58	.883
Accessibility	I can easily access to the contents of the tourism website and Mobile Applications anytime and anywhere.	2.67	.846
	I can easily search the tourism website and Mobile Applications on the internet.	2.604	.849
	I always have enough time to use and consider information from tourism websites and mobile Applications.	2.68	.869
Accessibility average count		2.651	.855
Information Relevance	Tourism Mobile Applications and websites provides information that is relevant to my travel needs.	2.52	.842
	It is easy to relate tourism Mobile Applications and websites information to my travel motivations.	2.70	.855
	Tourism Mobile Applications and websites capture the needs of its prospective tourists.	2.64	1.148
	A lot of other users' questions and relevant answers can be found on the tourism website and Mobile Applications.	2.64	.804
Information Relevance average count		2.63	.912

Destination Choice	Smart tourism technologies improve my satisfaction with destination choice.	2.13	1.049
	Decision support provided by Smart tourism technologies improves destination satisfaction.	2.20	1.080
	My choice of a destination is highly influenced by smart tourism technologies.	2.19	1.075
	Mobile applications and websites help me choose a destination.	2.15	1.081
	I mostly visit destinations that I can find on websites and mobile applications.	2.20	1.042
Destination Choice average count		2.174	1.065
Interactive	The tourism website and Mobile Applications that I use is highly responsive to users.	2.55	1.222
	It is easy to share and find tourism information on the tourism website and Mobile Applications.	2.41	1.117
	The tourism website and Mobile Applications provides help for better travel planning.	2.41	1.159
	Tourism website and Mobile Applications provides helps for more effective destination choice making.	2.42	1.170
	Tourism website and Mobile Applications builds a foundation for prioritization when making a destination choice.	2.49	1.160
Interactive average count		2.46	1.165
Self-efficacy	I find the tourism website and Mobile Applications easy to navigate.	2.50	1.217
	I have necessary skills to use tourism website and Mobile Applications.	2.56	1.168
	I have knowledge of using tourism website and Mobile Applications.	2.55	1.262

	I am confident about using tourism website and Mobile Applications even if there is no one around to show me how to do it.	2.46	1.226
Self-efficacy average count		2.517	1.218

Source: Author's own creation (2020)

From table 8 above, it becomes clear that majority of the respondents agreed with the Likert scale items. The median of the scale was 3 which represents 'Strongly agree', therefore, the study inferred from the analysis of results on Table 8 that 55.17 percent of the mean score were tilted towards 'strongly agree', which then suggests that respondents strongly agreed with the Likert scale items. Field (2009) suggests the usage of standard deviations as a precise data describer. Further, he iterates that a lower standard deviation (relative to the mean) shows that data points are closer to the mean. The standard deviation in Table 8 further shows the closeness of the data towards the mean. Accessibility, information relevance and information quality had lower standard deviations (relative to the mean) and are therefore considered as the highest ranked constructs within the data set.

4.5 Cross tabulation of smart tourism tools familiarity and demographic profile

Table 9: Cross tabulation of smart tourism tools against demographic profile of respondents

Smart tourism Tool	Gender		Age Range				Level of education			
	Male	Female	16-25	26-35	36-50	+60	M*	D*	P*	O*
Google Maps	92.5	87.7	92.6	90.8	84.3	82.4	89.7	91.1	91.5	71.4
Trip-advisor	76.7	63.6	80.0	69.7	57.1	29.4	66.7	80.4	66.1	21.4
Expedia.com	50.7	46.2	49.6	48.7	45.7	41.2	48.1	56.3	39.0	21.4
Booking.com	50.7	42.1	52.6	40.3	47.1	23.5	41.7	50.9	55.9	7.1
Websites	78.8	76.4	86.7	78.2	62.9	58.8	72.4	89.3	74.6	50.0
Mobile Applications	58.9	60.0	68.1	63.0	40.0	47.1	59.6	59.8	69.5	14.3
Hotels.com	34.9	26.7	29.6	35.3	24.3	23.5	24.4	32.1	44.1	21.4
Google groups	13.0	11.3	11.9	11.8	12.9	11.8	13.5	9.8	11.9	14.3
Other	1.4	0.5	0.7	0.8	1.4	0.0	0.6	1.8	0.0	0.0

Source: Author's own creation (2020) *M*= Matric, D*= Degree, P*= Postgraduate, O*= other*

Table 9 above indicates the familiarity percentages of the respondents against demographic variables towards smart tourism tools. The figures therefore contained in Table 9 shows the percentages of respondents that are familiar with smart tourism tools. Such familiarity percentages are cross tabulated in terms of demographic variables of the respondents. Table 9 clearly indicates that males were more familiar with google maps, whilst respondents in the age range of 16-25 had highest familiarity with google maps while those with post-graduate degrees had the highest level of familiarity.

From Table 9 it can be concluded that 60 percent of females were familiar with smart tourism mobile applications, while the age range with the highest familiarity of smart tourism mobile applications was that of 16-25. Furthermore, within level of education category, post-graduate holders had the highest level of 69.5 percent.

Degree holders had the highest level of familiarity with smart tourism websites, which stood at 89.3 percent, whilst respondents of the age range 16-25 had the highest level of familiarity with smart tourism websites. In terms of gender, 78.8 percentage of male respondents had familiarity with smart tourism websites. It further appears that degree holders were most familiar with Trip Advisor as a smart tourism tool, while those in the age range of 26-35 were most familiar with booking.com as a smart tourism tool.

4.6 Inferential Statistics

The second part of the analysis will focus on inferential statistics which will centre on Structural Equation Modelling (SEM). The SEM analysis was carried out in a four-step sequence.

Step 1 Reliability analysis: prior to conducting any form of inferential statistical testing, reliability analysis had to be conducted on the Likert scale items that are subjected to dimension reduction for ease of further analysis. Reliability analysis informs the researcher how reliable that constructs are.

Step 2 Factor analysis: which is carried out to ensure that the constructs are reliable for analysis. Factor analysis was carried out using the maximum likelihood method with Varimax rotation and the extraction method was based on Eigenvalue and the scree plot, of which a factor with an Eigenvalue of > was extracted.

Step 3 Multicollinearity testing: The third step was to assess the assumption of multicollinearity. Due to the need to carry out multiple regression, multicollinearity had to be assessed, the assessment was based on the assessment of Variance Inflation Factor (VIF) of which, if the average VIF is greater than 1 biasness problems may exist within the data. However, in order to ensure preciseness, multicollinearity diagnostic—a Tolerance statistic which is reciprocal and uses the formula of $\frac{1}{VIF}$ was carried out, and as a rule of thumb such analysis revealed values that are > 0.1 as recommended by (Menard, 1995; Bowerman & O'Connell, 1990).

Because the assumption of multicollinearity was not violated, the third step of the analysis was to determine model fitness. In order to determine the fitness, absolute fit indices were used due to their ability to fundamentally indicate how a proposed theory fits the data set (McDonald and Ho, 2002), followed by incremental fit indices as suggested by Miles & Shevlin (2007). The indices that were used includes Goodness of Fit (GFI), Root mean square error of approximation (RMSEA), Normed-fit index (NFI), Comparative fit index (CFI) and Relative Fit Index (RFI). The reporting of the fit indices was also directed by the suggestion of McDonald and Ho (2002); Crowley and Fan (1997); Kline (2005), who suggested the reporting of CFI, GFI, RMSEA and NFI in order to avoid biasness.

Step 4 Regression analysis: Once the model fitness was established, the fourth step was to undertake regression analysis. The objective of regression analysis was to predict the influence of one variable onto another variable. Firstly, the influence of the moderating variable (Self-efficacy) was determined followed by secondly inputting control variable (gender, age, level of education) on the overall model and lastly determining path analysis.

4.6.1 Reliability analysis

Prior to conducting Factor Analysis, reliability analysis was carried out as a strategy to ensure that a measure is consistently measuring the construct that it is supposed to measure. By observing the Cronbach's Alpha and following the recommendation by Cortina (1993), the seven constructs indicated in Table 7 show the constructs that were found reliable.

Table 10:Reliability Statistics

Construct	Cronbach's Alpha	N of Items
Information quality	0.671	3
Source Credibility	0.776	5
Information relevance	0.819	4
Interactivity	0.828	5
Accessibility	0.845	3
Self-efficacy	0.814	4
Destination Choice	0.936	5

Source: Author's own creation (2020)

Table 10 provides reliability statistics for construct used in the study. It is clear that Cronbach's alpha for Information quality is 0.671, for source credibility is 0.776, for Information relevance is 0.819, for Interactivity is 0.819, for Accessibility is 0.845, Self-efficacy 0.814 and Destination choice is 0.936, which indicates high level of internal consistency for the scale used in the study with this specific sample.

Table 11:KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**0.856**
Bartlett's Test of Sphericity	Approx. Chi-Square	5591.728
	df	406
	Sig.	0.000

Source: Author's own creation (2020)

Table 11 shows two tests that indicate the suitability of the data for structure detection. The Kaiser-Meyer-Olkin Measure of sampling adequacy (KMO) is a statistics formula indicating the proportion of variance in the variables that are caused by underlying factors. High values close to 1 indicate that a factor analysis may be useful to the data, but if the value is less than 0.5 then the results of the factor analysis probably will not be very useful. In this case, the KMO is 0.856 which is a good indication. The Bartlett's test of sphericity test access the hypothesis that the correlation matrix is an identity matrix, implying that the variables are unrelated and therefore suitable for structure detection. Small values, less than 0.05, of the significance level indicate that a factor analysis maybe useful with the data. From Table 2, the significance level is 0.000 which is less than 0.05.

4.6.2 Factor Analysis

Upon establishing the reliability of the constructs, Confirmatory Factor Analysis (CFA) was carried. CFA was used because the measurement instrument used in the study adopted from previous research. A total of 29 Likert scale items were subject to CFA using Principal Component Analysis extraction method. The extraction method used was that of Kaiser (1970), who indicated that a factor ought to have a minimum of an Eigenvalue of >1. However, prior any extraction Kaiser Meyer Oklin test of sphericity was carried out of exceeded the recommendation of .7 as per Kaiser (1970). A total of seven factors as expected was extracted, explaining a total variance of 67.71 percent.

Table 12:Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	percent of Variance	Cumulative percent	Total	percent of Variance	Cumulative percent	Total	percent of Variance	Cumulative percent
1	8.569	29.549	29.549	6.128	21.130	21.130	5.142	8.569	29.549
2	3.006	10.366	39.914	3.202	11.040	32.170	4.689	3.006	10.366
3	2.363	8.147	48.062	2.745	9.466	41.636	5.121	2.363	8.147
4	1.957	6.748	54.810	1.656	5.711	47.347	5.187	1.957	6.748
5	1.397	4.816	59.626	1.147	3.955	51.302	5.117	1.397	4.816
6	1.208	4.165	63.791	1.192	4.110	55.411	4.824	1.208	4.165
7	1.136	3.919	67.710	0.885	3.052	58.464	2.573	1.136	3.919
Extraction Method: Principal Component Analysis.									

Source: Author's own creation (2020)

In Table 12, the leftmost section of the table shows the variance explained by the initial solution. We see that 7 factors have eigen values greater than 1. Together they account for almost 67 percent of the variability in the original variables. This indicates that 7 latent theoretical variables of the Elaboration Likelihood Model (ELM) influences are associated with destination choice. The extraction sums of squared loadings show the variance explained by the extracted factors before rotation. The cumulative variability explained by these 7 factors in the extracted solution is about 58 percent, which is almost 10 percent difference from the initial solution. Hence, this implies that about 10 percent of the variation explained by the initial solution is lost due to latent factors unique to the original variables and variability that simply

cannot be explained by the factor model. The rotated sums of squared loadings indicate the variance explained by the extracted factors after rotation

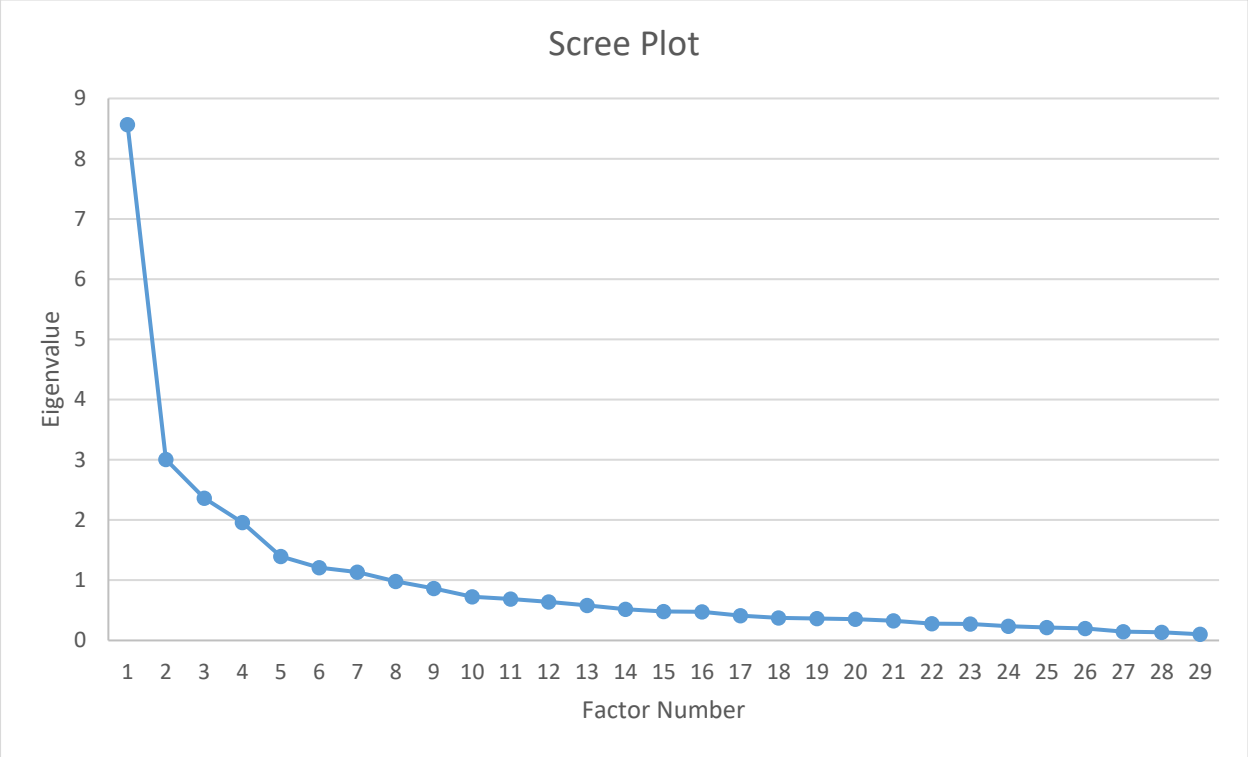


Figure 7:scree plot

Source: Author's own creation (2020)

The scree plot confirms the choice of the 7 factors. There are 7 factors with value greater than 1. The extraction method used was that of Kaiser (1970), who indicated that a factor ought to have a minimum of an Eigenvalue of >1 and have a minimum of three variables.

Table 13: Rotated factor Matrix

Items	Factors						
	1	2	3	4	5	6	7
INFORMATION QUALITY							
S1 Information Accuracy							0.855
S2 Information Detail							0.409
S3 Information up-to-date							0.441
SOURCE CREDIBILITY							

S4 Trust Worthiness			0.664				
S5 Reliable			0.840				
S6 Established (experienced)			0.684				
S7 Professional			0.551				
S11 Known and Reliable			0.423				
INFORMATION RELEVANCE							
S8 Relevant to travel needs				0.800			
S9 Related to travel motivation				0.916			
S10 Captures needs				0.634			
S12 Relevant EWOM				0.481			
INTERACTIVITY							
S13 Responsive						0.520	
S14 Easy to share						0.417	
S22 Better Planning						0.712	
S23 Easy to retrieve						0.854	
S24 Product prioritization						0.635	
ACCESSIBILITY							
S15 Easy access					0.706		
S16 Easy search					0.851		
S17 Time Availability					0.685		
SELF EFFICACY							
S18 Easy to Navigate		0.463					
S19 Skills		0.573					
S20 Knowledge		0.785					
S21 Confidence in using		0.761					
DESTINATION CHOICE							
S25 Improves satisfaction	0.793						
S26 Decision Support	0.878						
S27 choice influenced by STTs	0.966						
S28 Help choose destination	0.864						
S29 visit destination found on STTs	0.826						

Extraction Method: Maximum Likelihood. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Source: Author's own creation (2020)

Table 13 shows loadings on the rotated factors, wherein Varimax Rotation was used. Factor 1 seems to measure Destination choice because it is most highly correlated with S25, S26, S27, S28 and S29. Factor 2 is most highly correlated with self-efficacy (S18, S19, S20,S21), thus measuring Self-efficacy, factor 3 measure source credibility, factor 4 measure Information relevance, factor 5 measure Accessibility, factor 6 measure Interactivity and factor 7 measure Information quality. The Maximum Likelihood method was used for extraction and Varimax method was used for rotation.

Table 14: Factor Correlation Matrix

Factor	1	2	3	4	5	6	7
1	1.000	0.267	0.365	0.360	0.339	0.323	0.139
2	0.267	1.000	0.414	0.501	0.388	0.424	0.352
3	0.365	0.414	1.000	0.390	0.473	0.592	0.258
4	0.360	0.501	0.390	1.000	0.633	0.338	0.355
5	0.339	0.388	0.473	0.633	1.000	0.397	0.320
6	0.323	0.424	0.592	0.338	0.397	1.000	0.247
7	0.139	0.352	0.258	0.355	0.320	0.247	1.000

Extraction Method: Maximum Likelihood.

Rotation Method: Varimax with Kaiser Normalization.

Source: Author's own creation (2020)

In Table 14, a factor correlation matrix is illustrated, displaying that the rotation done is an orthogonal rotation, as can be seen, this factor is not highly correlated with other factors. Factor 2 is only moderately correlated with factor 4, while factor 3 is moderately correlated with factor 6. At the same time, factor 4 is moderately correlated with factor 5, and conversely factor 5 is moderately correlated with factor 4 and factor 6 is moderately correlated with factor 3.

4.6.3 The Assumption of multicollinearity

The assessment of multicollinearity is important for detection of biasness and un-biasness when conducting regression analysis. Similarly, Bowerman & O'Connell (1990) and Myers (1990) indicated that the VIF value be less than 10 and the Tolerance statistic values be >0.1. All VIF values in table 7 are well below 10 and the tolerance is >0.1 which then clearly indicates that the assumption of multicollinearity was not violated.

Table 15: Multicollinearity check

Construct and Indicators	VIF Values	Tolerance statistic
Information Quality	2.241	0.45
Interact-activity	2.520	0.40
Information Relevance	2.706	0.40
Source Credibility	1.963	0.51
Self-Efficacy	2.911	0.34
Accessibility	2.444	0.41
Destination Choice	2.241	0.45

Source: Author's own creation (2020)

In Table 15, a multicollinearity check was performed to establish the internal reliability consistency in the constructs. It is done to ensure indicators are not highly correlated. Using the Variance Inflation Factor (VIF) values for indicators were computed and all values greater than 10 are considered highly correlated. Since all VIF values are less than 10, then it implies that indicators are not highly correlated. Furthermore, we ran a cook's distance analysis to determine if any multivariate influential outliers existed. In no case did we observe a cook's distance greater than 1. Most cases were far less than 0.100.

4.6.4 Model fitting

The primary objective of Structural Equation Modelling (SEM) is explaining the correlative relations dependence of variables within a model, thereby denoting if systems within the model are supported by the collected data (Schermelleh-Engel & Moosbrugger, 2003). The lack of a single criterion in SEM for model fitting resulted in the development of a wide array of fit indices. Model fitting indices are important in order to make generalizations about the data set.

Model fitting is therefore important in determining what way the model that best represents the data reflects an underlying theory. In order to determine the fitness of the current model, absolute fit indices were used due to their ability to fundamentally indicate how a proposed theory fits the data set (McDonald & Ho, 2002), followed by incremental fit indices as suggested by Miles & Shevlin (2007). The indices that were used includes Goodness of Fit (GFI), Root mean square error of approximation (RMSEA), Normed-fit index (NFI),

Comparative fit index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Residual (RMR) and Relative Fit Index (RFI). The model was found to be fitting as indicated in the tables below.

Table 16: Model fit summary

Model	NPAR	CMIN	DF	P	CMIN/DF	RMR	GFI	AGFI	PGFI
Default model	91	.000	0	.000	8.377	.000	1.000		
Saturated model	91	.000	0			.000	1.000		
Independence model	13	2023.485	78	.000	25.942	.460	.448	.356	.384

Source: Author's own creation (2020)

The Goodness-of-Fit statistic (GFI) is a sensitive index that has been losing its popularity. Its loss of usage and popularity is due to its downward-bias which is caused by an existence of a large number of degrees of freedom in comparison to the sample size, some literatures often recommend that the GFI should not be used (Ridgton, 1996; Tabachnik & Fidell, 2007; Hooper, Coughlan, Mullen, 2008). The closer RMR is to 0, the better the model fit. The rule of thumb suggests that RMR should be less than 0.10, or 0.08, or, 0.05. The goodness of fit (GFI) value is 1 which indicates a perfect fit. An Adjusted GFI with value closer to 1 also reflects a good fit. The GFI in this case indicates that the model is not a good fit.

Table 17: Root Mean Square Error of Approximation (RMSEA) Model fit

Model	RMSEA	LO 90	HI 90	PCLOSE
Independence model	.271	.261	.281	.000

Source: Author's own creation (2020)

As an index of variance between the observed covariance matrix per degree of freedom and the hypothesized covariance matrix REMSEA is an absolute fit index which is considered as one of the accurate fit indices. It can be estimated as follows:

$$RMSEA = \sqrt{\max\left\{\left(\frac{F(\boldsymbol{S}, \sum(\boldsymbol{\theta}))}{V} - \frac{1}{n-1}\right), 0\right\}}$$

From the formula above *F* (***S, ∑(θ))*** indicates the minimization of the fit indices whilst *max* shows the maximum value, the degree of freedom is indicated by *v,* whilst *n* indicates sample

size. It can therefore be observed from the formula that sample size affects RMSEA estimations.

A RMSEA index smaller than 0.06 is considered as a fitting criterion and also an indication of convergence fit, whilst an index between 0.05 and 0.08 is considered to be close to good. However, an index of >0.10 is considered as neither good nor bad (Cangur & Ercan, 2015). A value of the RMSEA of about 0.05 or less indicates a close fit of the model in relation to the degrees of freedom. However, in this case RMSEA value is 0.271 which then means that as per Cangur & Ercan, (2015) the fitness is neither bad nor good.

Table 18: Baseline comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	1.000		1.000		1.000
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Source: Author's own creation (2020)

The Tucker-Lewis Index (TLI) is an incremental index which was developed due to the disadvantage of Normed Fit Index being affected by sample size. It is generally considered that the bigger the TLI, the better the model fit. A TLI value of 0.97 is considered a cut of value which means that TLI values of >0.97 are considered a good fit. Moreover, the advantage of TLI is that it is not largely affected by sample size (Cangur & Ercan, 2015).

TLI can be calculated as follows:

$$TLI = \frac{(\chi_i^2/v_i) - (\chi_i^2/v_t)}{(\chi_i^2/v_i) - 1} = \frac{(F_i/v_i) - (F_i/v_t)}{(F_i/v_i) - (1/(n-1))}$$

From the formula above, χ_i^2 addresses the independence model whereas χ_i^2 addresses the target model whilst v_t is the number of the independence model and the target model respectively. *n* denotes the sample size, whilst *F* indicates the value of appropriate fit function (Cangur & Ercan, 2015). The Comparative Fit Index (CFI) is an incremental fit index which evaluates the superiority of the tested model against the alternative model using the manifest covariance matrix (Cangur & Ercan, 2015; Chen, 2007). CFI values fall between 0-1, and a CFI value greater than 0.95 is considered good or acceptable. CFI is calculated using the equation below:

$$CFI = 1 - \frac{max[(\chi_t^2 - v_t), 0]}{[(\chi_t^2 - v_t), (\chi_i^2 - v_i), 0]}$$

From the equation above, *max* specifies the maximum value of the values within brackets, whilst χ_t^2 and χ_i^2 are test statistics of the target model and the independence model whilst v_t and v_i represents the degrees of freedom in relation to the chi-square of the independence model and the test model (SchermellehEngel and Moosbrugger, 2003). RFI, IFI, NFI are similar to CFI and TLI and falls within the same category, as per the rule of thumb, such indices should be greater than 0.95 or close to 1 in order to be acceptable (Ridgton, 1996). In this regard, NFI value is 0.988 which indicate a good fit, whilst CFI is 1.00 indicating a good fit and IFI equals to 1 which then reinforces the fitness of the model.

4.6.5 The effect of Moderating and Control Variables

In the Elaboration Likelihood Model, Self-efficacy was used as a moderator of the relationships. It was moderating the relationship between Source Credibility, Interactivity, Accessibility and Destination choice. Self-efficacy was used as a moderator due to the fact that the usage of was fitting in the sense that the usage of smart tourism tools by tourists may depend of their personal circumstances and factors and it was therefore fitting that such a variable be used as a moderator in the model.

Figure 8: Elaboration Likelihood Moderator

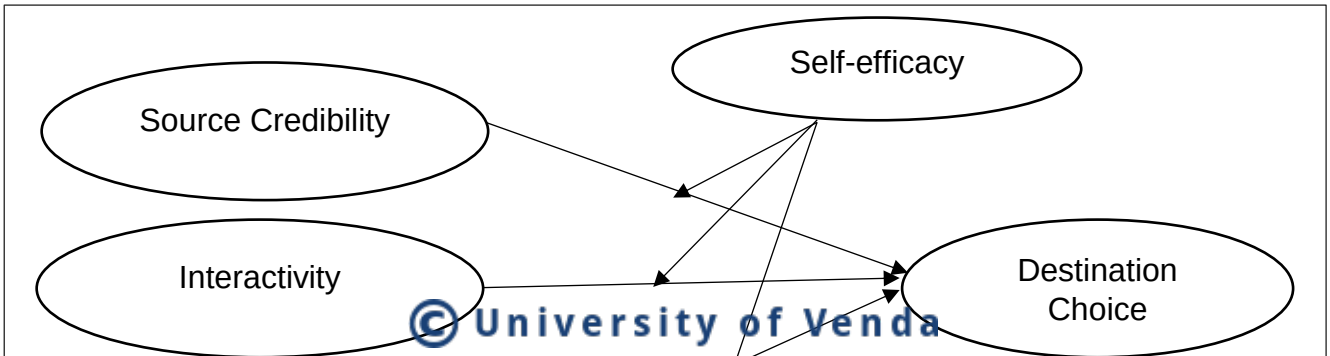


Table 19: Regression Weights

			Estimate	S.E.	C.R.	P
Self_eff	<---	Source_Cre	.122	.048	2.523	.012
Self_eff	<---	Interact	.798	.056	14.250	***
Self_eff	<---	Access	.295	.051	5.747	***
Self_eff	<---	Self_eff_x_Access	.045	.015	2.933	.003
Self_eff	<---	Self_eff_x_Interact	.010	.015	.644	.520
Self_eff	<---	Education	-.019	.028	-.686	.493
Self_eff	<---	Gender	-.061	.049	-1.253	.210
Self_eff	<---	Age	.032	.028	1.158	.247
Dest_Choice	<---	Self_eff	.141	.094	1.569	.346
Dest_Choice	<---	Info_Qual	-.125	.133	-.970	.346
Dest_Choice	<---	Info_Rel	.391	.118	3.333	***
Dest_Choice	<---	Gender	.100	.081	1.235	.217
Dest_Choice	<---	Education	-.058	.047	-1.248	.212
Dest_Choice	<---	Self_eff_x_Source_Cre	-.037	.048	-.764	.448
Dest_Choice	<---	Self_eff_x_Access	.098	.027	3.566	***
Dest_Choice	<---	Self_eff_x_Interact	-.062	.039	-1.584	.114
Dest_Choice	<---	Interact	.332	.118	2.811	.005
Dest_Choice	<---	Access	.094	.114	.830	.408
Dest_Choice	<---	Source_Cre	.035	.092	.373	.708
Dest_Choice	<---	Age	.095	.047	2.025	.043

Source: Author's own creation (2020)

When Source credibility goes up by 1, Self-efficacy goes up by 0.122 and this relationship is significant. When Interactivity increased by a unit, Self-efficacy increased by 0.798 and the relationship is significant. Looking at the significant values for the exogenous and endogenous variables, we see that the interaction between self-efficacy and interactivity of going to Destination Choice relationship is not significant. The standardised regression weights in table 13 shows that when Source credibility improve by unit standard deviation, Self-efficacy improve by 0.099 standard deviation. The increase in Interactivity by a unit standard deviation, increased Self-efficacy by 0.584 standard deviations. Education, gender, and age interaction with self-efficacy shows that there is no significance. At the same time, gender and education level and going to destination choice shows no significant relationship. However, age to destination choice is significant. Therefore, gender and education does not confound the relationship defined in the path diagram. The moderation and control relationship is summarized in Table 20 below.

Table 20: Summary of moderation and control effect

Relationship	Effect
Self-efficacy moderates the relationship between source credibility and destination choice.	Significant
Self-efficacy moderates the relationship between Interactivity and destination choice.	Not Significant
Self-efficacy moderates the relationship between Accessibility and destination choice.	Significant
Age confounds the path diagram relationships	Significant
Gender confounds the path diagram relationships	Not Significant
Level of education confounds the path diagram relationships	Not Significant

Source: Author's own creation (2020)

4.6.6 Paths Co-efficient

Table 21: Paths Co-efficient

Hypotheses	Path	Coefficient
H1	Information Quality → Destination Choice	-.006

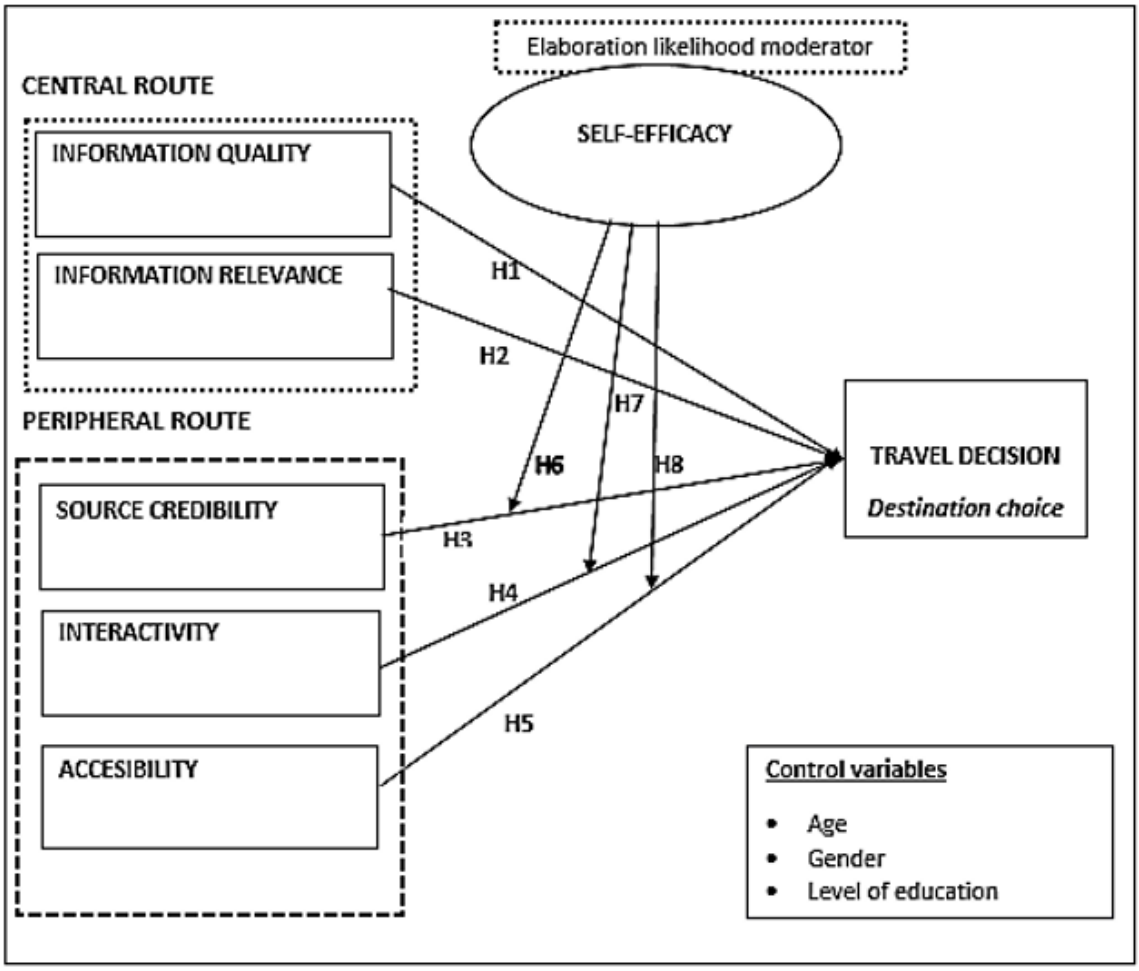
H2	Information Relevance → Destination Choice	.255
H3	Source Credibility → Destination Choice	.025
H4	Interactivity → Destination Choice	.212
H5	Accessibility → Destination Choice	.060
H6	Self-efficacy→ Source Credibility X Destination Choice	-.074
H7	Self-efficacy→ Interactivity X Destination Choice	-.148
H8	Self-efficacy negatively moderates the relationship between accessibility and destination choice	.218

Source: Author's own creation (2020)

4.6.7 Hypothesis testing

The study had a total of 8 hypotheses that were based on the proposed theory of Elaboration Likelihood Model (ELM). As indicated in the model, smart tourism attributes were tested to ascertain if they influenced tourist's destination choice to visit the City of Tshwane.
Figure 10 below indicates the theoretical hypothesis that informed the study.

Figure 9: Conceptual Framework



Source: Author's own creation (2020)

Table 22 shows the proposed hypothesis, the path, beta, probability value and the decision regarding the hypothesis. Observing the tabulations, we determine that out of the 8 hypotheses, only 2 were supported, for the remaining 6 there was not enough evidence to support the hypothesis. It was therefore found that interactivity of smart tourism tools has a significant relationship with tourist's destination choice. It was also found that the relevance of information contained in smart tourism tools has a significant relationship with tourist's choice to visit Tshwane as a destination.

Table 22: Hypothesis Validation

Hypothesis	Path	Beta	P	Decision
H1	Information Quality → Destination Choice	-.006	.346	Not Supported
H2	Information Relevance → Destination Choice	.255	***	Supported
H3	Source Credibility → Destination Choice	.124	.708	Not Supported
H4	Interactivity → Destination Choice	.212	.005	Supported

H5	Accessibility → Destination Choice	.060	.408	Not Supported
H6	Self-efficacy→ Source Credibility X Destination Choice	-.074	.448	Not Supported
H7	Self-efficacy→ Interactivity X Destination Choice	-.148	.114	Not Supported
H8	Self-efficacy negatively moderates the relationship between accessibility and destination choice	.114	0.03	Not Supported

Source: Author's own creation (2020)

H1: Information quality has an influence on tourist's destination choice
Evidence: Beta = -0.066 (p>0.05). Therefore, we conclude that the data does not support the view that information quality has influence on tourist's destination choice.

H2: information relevance has an influence on destination choice
Evidence: Beta = 0.255 p<0.001). The relationship is supported; hence the study concluded that information relevance has an influence on destination choice.

H3: source credibility has an influence on destination choice
Evidence: Beta = 0.124 (p>0.05) implying that the relationship is not supported by the data used. Hence, there is not enough evidence to support the idea that source credibility has an influence on destination choice.

H4: interactivity has an influence on destination choice
Evidence: Beta = 0.212 with p-value = 0.05. The interactivity has an influence on destination choice since p-value is significant which implies that the relationship is significant.

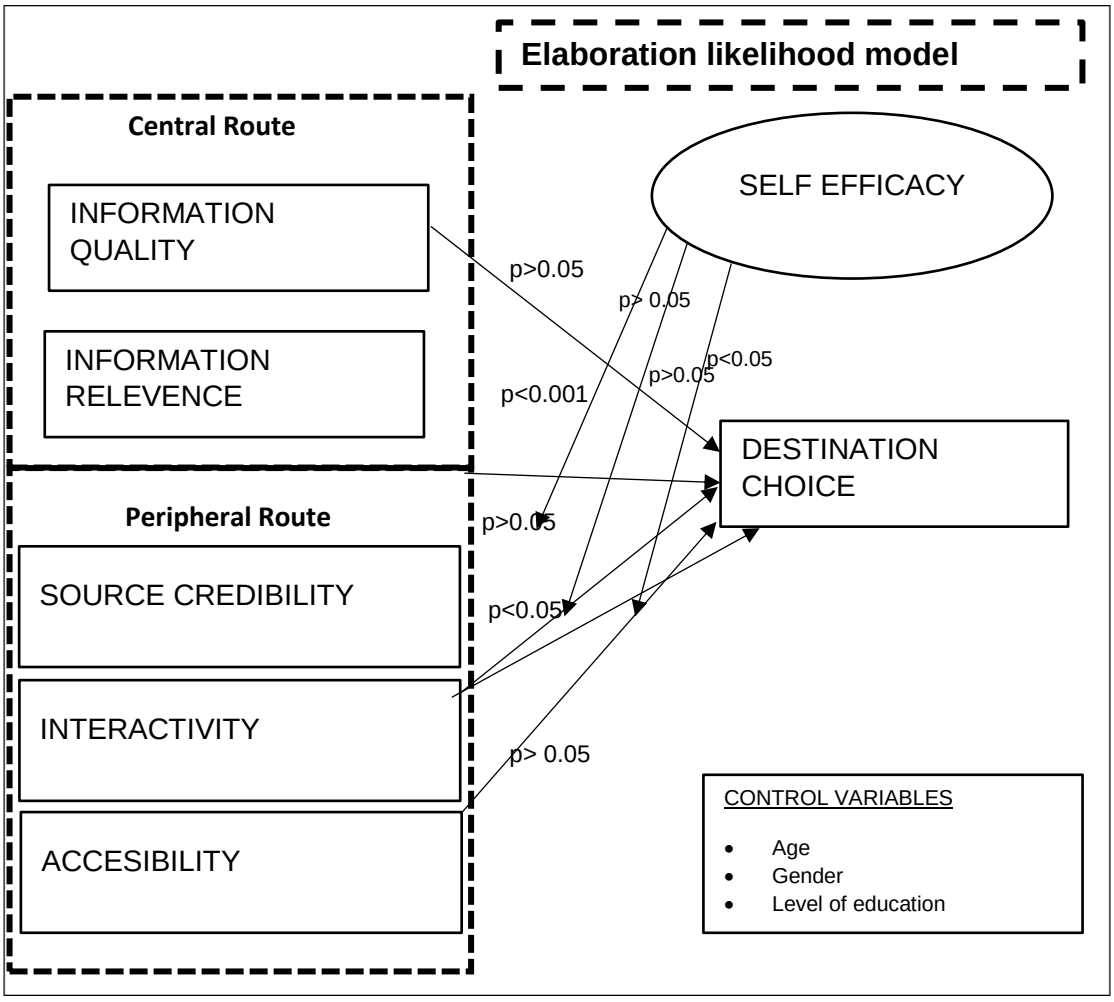
H5: accessibility has an influence on destination choice
Evidence: Beta = 0.06 with p-value > 0.05, which indicates that there is not enough evidence to support that accessibility has an influence on destination choice.
H6: Self-efficacy moderates the relationship between source credibility and destination choice
Evidence: Beta = 0.06 with p-value > 0.05. This indicates that the interaction of self-efficacy and source credibility does not significantly impact destination choice.

H7: Self-efficacy moderates the relationship between interactivity and destination choice
The interaction of self-efficacy and interactivity does not significantly impact destination choice since the Beta value = 0.027 and p-value = 0.520.

H8: Self-efficacy negatively moderates the relationship between accessibility and destination choice

The hypothesis that self-efficacy negatively moderates the relationship between accessibility and destination choice is not supported, since the Beta value is 0.114 and the p-value is 0.03. Therefore, the relationship is positive and significant.

Figure 10: Findings from the proposed Conceptual Framework



Source: Author's own creation (2020)

4.6.8 Discussions of the findings from the proposed Conceptual Framework

The primary objective of the study was to investigate the influence of smart tourism technologies on tourist destination choice as demonstrated in Figure 11. The Elaboration Likelihood Model of persuasion was used as a conceptual framework. A total of eight hypotheses were formulated in order to provide answers as to whether smart tourism technologies influenced tourists to visit a specific destination, which in this case was the City of Tshwane. Destination choice was set as the dependent variable whereas smart tourism technology attributes were set as the independent variables.

The study was composed of eight hypotheses and out of the eight, only two of the hypotheses were found to directly influence the choice of destination. Hypothesis number 1, termed **H1,** was to investigate if the quality of information contained in smart tourism technologies such as mobile applications, directly influence tourist's decisions to visit the City of Tshwane. Such a hypothesis was not supported by the data. Previous studies have however shown that information quality assists tourists when making visiting decisions (Delone & McLean, 2003; Yoo, Goo, Huang, Nam & Woo, 2017). However, previous studies have not tested the direct influence of smart tourism technologies on decisions to visit but rather look at providing decision support. By not supporting **H1,** this study confirms the findings of Cohen (1988); Crompton (1981); Nengovhela, Tshipala & Nyikana (2017); and Mutinda & Mayaka, (2012) who found that tourist decision to visit a destination is dependent on certain push and pull factors, which are not necessarily the quality of information marketing.

Nengovhela et al. (2017) indicated that when tourists make a decision to travel, they aim to align their push factors for example, boredom, escape, visiting friends and relatives, thrill seeking, discretionary time and income, with certain destination pull factors which included beauty and scenery, safety, flora and fauna, shopping, infrastructure, attractions, this then clearly posits that despite information provided by STTs (as assumed by **H1**) the decision to visit a particular destination is determined more by the tourist's intrinsic and extrinsic factors.

The researcher also considered the context of the study and its influence on smart tourism technologies adoption and usage. The United Nations Industrial Development Organisation (UNIDO) (2017) issued a report on South Africa's E-commerce activities. The report iterated that only 1 percent of retail sales are concluded online. The report further indicated that the major inhibiting factors to online purchasing has been access to the internet, lack of online transactional trust and lack of businesses that offer smart purchase services. This view further

supports the finding of **H1 by** the study, that the nature of South African Economic climate has not witnessed enough growth and adoption of online business transactions.

The second hypothesis, termed **H2,** investigated how the relevance of information contained in smart tourism technologies directly influenced tourists' decision to visit the City of Tshwane. The Hypothesis was supported and is consistent with the reviewed literature (Nengovhela, Tshipala & Nyikana, 2017; Crompton, 1981; Morrison, 2002) in the sense that information relevance is strongly related to tourists' travel motivations especially when the information contained in smart tourism technologies is relevant and related to tourism travel motivation, then, a decision to visit the tourism destination is made.

Information relevance refers to how relevant a piece of information is to an individual's needs and wants. In the context of tourism, when information provided is related to the tourist's intrinsic and extrinsic motivational factors, such information then plays a critical role in inducing the destination choice. The hypothesis (**H2**) therefore posits that if an 'adventure' tourist uses STTs for decision making and the STT has information about an adventure destination, such an STT will directly influence the tourism destination choice. As such, this hypothesis further suggests that STTs should be designed and developed for specific niche markets, rather than a 'one shoe fits all' approach. In this way, they will be in a position to motivate a Tourism Destination choice.

The third hypothesis, termed **H3,** was investigating whether the credibility of smart tourism technologies directly influences tourists' decisions to visit the City of Tshwane. Such a hypothesis was not accepted, meaning that, when tourists use smart tourism technologies that have credibility and are trustworthy, it does not necessarily result in them deciding to purchase or visit a destination. Yoo, Goo, Huang, Nam & Woo, (2017) made a similar finding that source credibility does not directly influence the decision to visit a particular destination, rather it only offers decision making support. By not supporting **H3,** the study concluded that the source credibility of tools used by tourist's visiting Tshwane was not a primary determinant when making a destination choice.

A report by the United Nations Industrial Development Organisation (2017), found that out of the 33 million adult population in South Africa, only 3.25 million people are active users of online shopping. Further, the report found that there is still lack of trust towards online shopping in general, meaning that users have not developed dependency and trust for online shopping, either using smartphone applications or websites. The rejection of the hypothesis (**H3**) therefore means that the question of whether the tourists' destination choice is influenced

by smart tourism technology, is not predetermined by the STTs, rather by a lack of credibility as per the report by UNIDO (2017). The lack of dependency on E-commerce in general, and also the perceptions by prospective tourists about South Africa's E-commerce platforms was also a contributing factor, therefore it does not matter how credible an STT is, society's lack of trust and dependency on E-commerce was a central factor leading to the rejection of hypothesis 3.

The fourth hypothesis, termed **H4,** tested if the interactivity of smart tourism technologies had an impact on tourist's decision to visit the City of Tshwane. The hypothesis was supported, and the findings are consistent with those of Yoo, Goo, Huang, Nam & Woo, (2017). Interactivity allowed tourists to have some form of experience co-creation and destination immersion prior to making the decision to visit. That ability created a positive attitude which ultimately re-enforced a tourist's purchase decision.

Pine and Gilmore (1999) had already forecasted that consumers in the future will be more interested in co-creation and immersion. Such a prediction is in line with the findings of **H4** because interactivity of STTs increases co-creation and immersion of tourists. By STTs being interactive they create prior purchase experiences, so that if the experience is a positive one, it positively influences tourist's attitude towards the decision to visit the City of Tshwane. Furthermore, UNIDO (2017) found that although 3.225 million people in South Africa go online, they have not translated into online consumers. The report attributed this finding to the fact that organisations in the online market sphere (mobile applications and websites) have not found ways to convert potential online customers into actual customers. Interactivity poses as an online strategy that STT providers can use in order to induce and promote online purchases.

The fifth hypothesis, termed **H5,** was investigating the effect of accessibility of smart tourism technologies on tourism destination choice or rather a tourist's decision to visit the City of Tshwane. The Hypothesis was not accepted, meaning that the study found that the accessibility to smart tourism technologies does not predetermine a tourist's destination choice. The findings are consistent with those found in studies conducted by Nengovhela, Tshipala & Nyikana, (2017); Crompton, (1981); and Morrison, (2002); which found that motivational factors; as well as; push, and pull factors are what predetermines tourists' decision to visit a destination. UNIDO (2017) report into South Africa's E-Commerce activities found that out of 3.225 million active internet users, 68 percent were ready to shop online, yet such sales had not been realised. These discoveries coincide with the findings of this study's **H5** in the sense that mere accessibility to STTs does not serve as an antecedent or as a

pre-determinator of tourists' behaviour in terms of tourism destination choice within the context of the City of Tshwane. The finding therefore supports and reiterates the fact that by making STTs as easy as possible to access, it does not necessarily result in tourists making a destination choice.

The sixth hypothesis, termed **H6,** was investigating the moderation of smart tourism technologies on tourist's decision-making process to visit the City of Tshwane. The need for moderation was important due to the nature of smart tourism technology which further impact on personal preferences and a tourist's personal abilities to use smart tourism technologies. As such, the relationship had to be moderated by using self-efficacy as a moderator. The study's analysis however found that self-efficacy did not moderate the relationship between source credibility and tourism destination choice. This finding reinforces the previous finding at **H3** which indicated that source credibility does not influence destination choice since there was no form of moderation effect.

Hypothesis **H7** was also not supported and as such self-efficacy did not moderate the relationship between interactivity and tourism destination choice, however, interactivity was found to influence destination choice. Such a relationship was not moderated and did not depend on personal attributes of tourists towards their choice to visit the City of Tshwane.

Hypothesis **H8** was not supported by the findings of the study, and it was therefore concluded that self-efficacy does not negatively moderate the relationship between tourism destination choice and accessibility.

4.7 Summary

Chapter 4 has presented the data analysis of the findings of the study. The findings of contained positively reaffirm tourist travel motivation and decision-making theories which argue that tourist's travel decisions are predetermined by the push and pull motives. Furthermore, the findings of this study indicate that smart tourism technologies do not predetermine the decision to visit the City of Tshwane. These findings further leave room for validation of the findings of Yoo, Goo, Huang, Nam & Woo, (2017) who found that smart tourism technologies only offer decision making support to tourists since this study emphasizes the influence to decision making not necessarily decision support.

CHAPTER FIVE:

CONCLUSIONS AND RECOMMENDATIONS

5.1. INTRODUCTION

This chapter presents the conclusions and recommendations of this study. Its main objective is to present the conclusions of the study based on the research objectives proposed in Chapter 1 and to present the study's recommendations thereof. The aim of this study was to investigate the influence of smart tourism technologies on tourist's destination choice, using the elaboration likelihood model of persuasion as a conceptual framework. The study was set in City of Tshwane, in South Africa.

5.2. Summary of Findings

In order to ascertain the influence of smart tourism technologies on tourist's destination choice, the study adopted an elaboration likelihood model of persuasion as a conceptual framework of investigating attitude change which is created by the mediation of smart tourism technologies. The adopted framework resulted in a total of eight hypothesis. Of the eight hypotheses, two were supported and they were information relevance and interactivity. Hypothesis number 1, termed **H1,** was to investigate if the quality of information contained in smart tourism technologies such as mobile applications, directly influence tourist's decisions to visit the City of Tshwane. Such a hypothesis was not supported by the data. The second hypothesis, termed **H2,** investigated how the relevance of information contained in smart tourism technologies directly influenced tourists' decision to visit the City of Tshwane. The Hypothesis was supported and is consistent with the reviewed literature (Nengovhela, Tshipala & Nyikana, 2017; Crompton, 1981; Morrison, 2002). The third hypothesis, termed **H3,** was investigating whether the credibility of smart tourism technologies directly influences tourists' decisions to visit the City of Tshwane. Such a hypothesis was not accepted. The fourth hypothesis, termed **H4,** tested if the interactivity of smart tourism technologies had an impact on tourist's decision to visit the City of Tshwane. The hypothesis was supported, and the findings are consistent with those of Yoo, Goo, Huang, Nam & Woo, (2017). The fifth hypothesis, termed **H5,** was investigating the effect of accessibility of smart tourism technologies on tourism destination choice or rather a tourist's decision to visit the City of Tshwane. The Hypothesis was not accepted, meaning that the study found that the

accessibility to smart tourism technologies does not predetermine a tourist's destination choice. The sixth, the seventh and the eighth hypothesis was also not supported, this therefore clearly indicates that when tourists make decisions using smart tourism tools, there are influenced by the relevant information presented and the interactivity of tools.

XXXX.

5.3. Conclusions based on the Research Objectives

In order to achieve the aim of this study which was to investigate the influence of smart tourism technologies on tourist's destination choice, the following research objectives were set and served as a basis for the study:

5.3.1. Conclusion based on Research Objective 1: To determine the influence smart tourism information quality on tourist's destination choice

Research Objective 1 of this study was to investigate the influence of smart tourism technology's information quality on tourist's destination choice. Information quality was operationalized as one of the variables that influences attitude change in the Elaboration Likelihood Model within the central route of persuasion. To enable investigation into this objective, a hypothesis (H1) was developed which read, "Information quality has an influence on tourist's destination choice". The findings of the study as set out in chapter four of this study analysis, did not support this hypothesis. The study established that there was not enough evidence to support the hypothesis that information quality has an influence on a tourist's decision to visit the City of Tshwane. The study therefore concluded that the information quality of smart tourism technologies does not influence the decision of tourists to visit the City of Tshwane. The rejection of Hypothesis therefore means that the study successfully met objective one.

5.3.2. Conclusion regarding Research Objective 2: To investigate the moderating effect of self-efficacy on tourist's peripheral route of persuasion towards destination choice.

The theory of Elaboration Likelihood model demonstrates that persuasion, in terms of attitude change, is affected by a moderator. A moderator is a variable that affects the relationship between an independent and a dependant variable. The study came to the conclusion that attitude, as a decision-making factor, is influenced by certain variables. Therefore, this study viewed it as a critical moderating variable that needed to be investigated, in order to have

more profound results. In this study, the relationship between the dependant and the independent variable was moderated by self-efficacy.

Self-efficacy was then conceptualized as an individual's belief and confidence in using smart tourism technologies. From a psychological viewpoint, self-efficacy refers to an individual user's perceived ability of performing an activity in an effort to acquire an expected outcome (Bandura, 1997). Within the context of the current study, self-efficacy refers to the perceived ability of tourists to use STTs to make travel choices and travel related arrangements. However, in the conceptual framework self-efficacy moderated only the peripheral route of persuasion and as such, the following hypothesis were formulated in relation to research objective 2:

H6: Self-efficacy moderates the relationship between source credibility and tourism destination choice

H7: Self-efficacy moderates the relationship between interactivity and tourism destination choice

H8: Self-efficacy negatively moderates the relationship between accessibility and tourism destination choice

The findings in chapter four indicate that self-efficacy as a moderator, did not significantly impact the relationship between source credibility and tourism destination choice. This then indicates that the perceived ability of tourists to use STTs, did not determine the strength of the relationship between source credibility and tourism destination choice. The second variable in the peripheral route of persuasion was interactivity, and self-efficacy was the moderating variable of the relationship between interactivity and destination choice. The findings indicated that the interaction between self-efficacy and interactivity did not significantly impact destination choice and as such self-efficacy did not moderate the relationship between interactivity of STTs and tourist's decision to visit the City of Tshwane. The third variable in the peripheral route was accessibility, and self-efficacy was the moderating variable for the interaction between accessibility and destination choice. The finding was positive and significant and as such, it was found that self-efficacy did not moderate the relationship between accessibility and tourism destination choice.

5.3.3. Conclusion regarding research objective 3: To explore the influence of smart tourism technologies' information relevance on tourist's destination choice

Information relevance directly ties with information quality (Yoo et al, 2017). The relevance is however influenced by the motivation of tourists. If persuasive information presented to a tourist does not relate to their travel motivation, it is less likely that such a tourist may portray a positive attitude towards a tourism destination. When a prospective consumer believes that retrieved information relates to their information needs, or a connection exists between the acquired information and the internal needs of such a consumer, the information is considered relevant (Chen, Shang & Li, 2014). However, the relevance of information is often judged from a social perspective in the sense that hedonic impacts such as pleasure in reading a set of information can make such information more relevant to a prospective user.

The third objective was aimed at exploring whether the relevance of information contained in STTs influence the decision of tourists to visit the City of Tshwane. To investigate this research objective, a hypothesis (H2) was formulated as follows: "information relevance has an influence on destination choice". The findings presented in Chapter 4, indicated that such a hypothesis was supported. Therefore, it was found that the relevance of information contained in SSTs influence the decision of tourists to visit the City of Tshwane. It can therefore be concluded that when relevant information is presented in STTs, it creates positive attitudes in tourists and influences their decision to visit a tourism destination.

5.3.4. Conclusion regarding Research Objective 4: To investigate the influence of smart tourism technologies on tourist's destination choice

The fourth objective of the study aimed at investigating the influence of smart tourism technology's attributes that influence a tourist's destination choice. The smart tourism technology attributes that were used in the conceptual framework included; interactivity, source credibility, accessibility, information quality and information relevance. To test these smart tourism technology attributes, eight hypotheses were formulated and subjected to testing. Objective 1-3 addressed five of the eight hypotheses, and the 3 remaining hypotheses were then covered within objective 4. As such objective 4 tested the following hypothesis:

H3: source credibility has an influence on tourism destination choice

H4: interactivity has an influence on tourism destination choice

H5: accessibility has an influence on tourism destination choice

Hypotheses H3 to H5 tested the peripheral route of persuasion within the conceptual framework. As such, Objective 4 was primarily aimed at investigating the peripheral route of persuasion within the conceptual framework. The findings in chapter 4 of the study indicate that hypotheses 3, termed “source credibility has an influence on destination choice” was not supported as there was not enough data to support it. It can therefore be concluded that source credibility of smart tourism technologies does not influence the decision of tourists to visit the City of Tshwane.

As presented in Chapter 4, hypotheses 4 termed “interactivity has an influence on destination choice” was supported. It supported the study’s assertion that when STTs are interactive, they influence tourist’s decision to visit the City of Tshwane. It can further be deduced that since interactivity creates some form of co-creation and prior purchase experience, it leads to the creation of positive attitude towards the tourism destination, thereby influencing the decision to purchase. Hypothesis 5 termed “accessibility has an influence on destination choice” as presented and tested in chapter 4, was not supported by the findings of this study. This study therefore concluded that the accessibility of STTs does not influence the decision of tourists to visit the City of Tshwane.

In conclusion, in view of the analysis of the findings laid out above, the researcher submits that the study successfully met its objectives and made profound findings. Further, the study came to the profound conclusion that information relevance and interactivity of STTs had an influence on a tourist’s decision to visit the City of Tshwane. As such, these two attributes—information relevance and interactivity—should be considered during the designing and implementation of smart tourism products and services aimed at persuading prospective tourists.

5.4. Recommendations of the Study

The findings presented in Chapter 4 present a body of knowledge which provides a framework for decision making and managerial recommendations as far as the use of STTs to promote smart tourism practice within the tourism sector in South Africa. The study made profound findings that relate to consumer behaviour in the tourism sector, and from which recommendations can be made, specifically in the design of STTs to impact on tourists’ decisions to visit a tourism destination. Leadership within the tourism sector in South Africa should ensure that such tools are available, interactive and contain information that prospective users will perceive to be relevant. This therefore means that managers in the

tourism sector should ensure that STTs are interactive and contain information that is relevant to the information needs of the prospective users. Within the field of tourism destination marketing, implications derived from the study indicate that the implementation of STTs should not substitute traditional marketing rather, they should act to compliment the marketing efforts. Marketers should therefore design marketing strategies that combine STTs and other traditional marketing mix.

The policy recommendations that can be made from the findings of the study are that, policies that are to be made in relation to positioning of city of Tshwane as a smart tourism destination must be based on interactivity and relevance of information contained in smart tourism tools. Policy makers should therefore ensure that smart tools designed to market and position the city ensure that the designed tools are interactive and carry relevant information to tourists travel needs.

The study also recommends that the Government should play the role of ensuring that there is sufficient infrastructure that allows for internet connectivity, which will enable the increase in the adoption of STTs. Further, Government can also incentivise tourism businesses to adopt smart tourism and enjoy its benefits, thereby creating growth, development, and widespread adoption of STTs.

REFERENCES

British Colombia Open Textbooks (BCCampus). (n.d.) Introduction to Tourism and Hospitality. https://opentextbc.ca/introtourism/chapter/chapter-1-history-and-overview/

Brand South Africa. 2016. https://www.brandsouthafrica.com/tourism-south-africa/brand-south-africa-to-participate-in-africa-travel-indaba-2019. [accessed 03 March 2020]

Limpopo Tourism. 2018. http://www.golimpopo.com/regions/vhembe-region. [accessed 03 March 2020]

Du Preez, E. & Heath, E. (2009). Branding and positioning an African Capital City: The case of Tshwane in South Africa.

North West Tourism. 2019. http://www.tourismnorthwest.co.za/overview. [accessed 03 March 2020]

Mpumalanga Tourism and Parks Agency. 2019. http://www.mpumalanga.com/things-to-do/events-entertainment/leisure-lifestyle/blyde-river-canyon-MTATT5875. [accessed 03 March 2020]

Guateng Tourism Authority. 2020. https://www.gauteng.net/regions/ekurhuleni. [accessed 03 March 2020]

Tourism Kwazulu-Natal. 2016. https://www.zulu.org.za/destinations/zululand/babanango. [accessed 03 March 2020]

McDonald, R.P. and Ho, M.-H.R. (2002), "Principles and Practice in Reporting Statistical Equation Analyses," Psychological Methods, 7 (1), 64-82.

Boomsma, A. (2000), "Reporting Analyses of Covariance Structures," Structural Equation Modeling, 7 (3), 461-83.

Miles, J. and Shevlin, M. (2007), "A time and a place for incremental fit indices," Personality and Individual Differences, 42 (5), 869-74.

Bowerman, B. L., & O'Connell, R. T. (1990). Linear statistical models: An applied approach (2nd ed.). Belmont, CA: Duxbury.

Menard, S. (1995). Applied logistic regression analysis. Sage university paper series on quantitative applications in the social sciences, 07-106. Thousand Oaks, CA: Sage.

Myers, R. (1990). Classical and modern regression with applications (2nd ed.). Boston, MA: Duxbury

Kaiser, H. F. (1970). A second generation little jiffy. Psychometrika, 35, 401–415.

Crowley, S.L. and Fan, X. (1997), "Structural Equation Modeling: Basic Concepts and Applications in Personality Assessment Research," Journal of Personality Assessment, 68 (3), 508-31.

Kline, R.B. (2005), Principles and Practice of Structural Equation Modeling (2nd Edition ed.). New York: The Guilford Press.

Delone,W.H., McLean, E.R., 2003. The DeLone and McLean model of information systems success: a ten-year update. J. Manag. Inf. Syst. 19, 9–30.

Cohen, E. (1988). Authenticity and commoditization in tourism. Annals of Tourism Research, 15, 371e386

Crompton, J. L. (1981). Dimensions of a social group role in pleasure vacations. Annals of Tourism Research, 8, 550e568.

Mutinda, R., and Mayaka, M. (2012). Application of destination choice model: Factors influencing domestic tourist's destination choice among residents of Nairobi, Kenya. Tourism Management. Vol. 33. Pp. 1593-1597

Morrison, A. M. (2002). Hospitality and travel marketing (3rd ed.). UK: Oxford, Buttersworth Heinemann.

Gretzel, U., Sigala, M., Xiang, Z. *et al.* Smart tourism: foundations and developments. *Electron Markets* **25,** 179–188 (2015). https://doi.org/10.1007/s12525-015-0196-8 Gretzel, U.; Werthner, H.; Koo, C.; Lamsfus, C. Conceptual foundations for understanding smart tourism ecosystems. Comput. Hum. Behav. 2015, 50, 558–563

Neuhofer, B., Buhalis, D., & Ladkin, A. (2015). Smart technologies for personalized experiences: a case study in the hospitality domain. *Electronic Markets*, forthcoming.

Sigala, M. (2012a). Social media and crisis management in tourism: applications and implications for research. *Information Technology and Tourism, 13*(4), 269–283.

Sigala, M. (2012b). Social networks and customer involvement in New Service Development (NSD): the case of www.mystarbucksidea.com. *International Journal of Contemporary Hospitality Management, 24*(7), 966–990.

Sigala, M., & Chalkiti, K. (2014). Investigating the exploitation of web 2.0 for knowledge management in the Greek tourism industry: an utilisation–importance analysis. *Computers in Human Behavior, 30*, 800–812.

Sigala, M., Christou, E., & Gretzel, U. (Eds.). (2012). *Social media in travel, tourism and hospitality: Theory, practice and cases*. Ashgate Publishing, Ltd.

Tu, Q. & Liu, A. (2014). Framework of Smart Tourism Research and Related Progress in China. In *International Conference on Management and Engineering (CME 2014),* pp. 140-146. DEStech Publications.

UNWTO (2015). Understanding Tourism: Basic Glossary. Accessed online (May 25, 2015) at http://media.unwto.org/en/content/understanding-tourism-basic-glossary.

Venturini, A., & Ricci, F. (2006). Applying Trip@dvice Recommendation Technology to www.visiteurope.com. *Frontiers in Artificial Intelligence and Applications*, 141, 607.

Wang, D., & Xiang, Z. (2012). The new landscape of travel: A comprehensive analysis of smartphone apps. In M. Fuchs, F. Ricci, & L. Cantoni (Eds.), *Information and Communication Technologies in Tourism 2012* (pp. 308–319). Wien: Springer.

Wang, D., Park, S., & Fesenmaier, D. (2012). The role of smartphones in mediating the tourism experience. *Journal of Travel Research, 51*(4), 371–387.

Wang, D., Li, X. R., & Li, Y. (2013). China's "smart tourism destination" initiative: a taste of the service-dominant logic. *Journal of Destination Marketing and Management, 2*(2), 59–61.

Washburn, D., Sindhu, U., Balaouras, S., Dines, R. A., Hayes, N., & Nelson, L. E. (2010). Helping CIOs Understand “Smart City” Initiatives. Accessed online (March 1, 2015) at: http://www.uwforum.org/upload/board/forrester_help_cios_smart_city.pdf.

Werthner, H. (2003). Intelligent Systems in Travel and Tourism. In: *Proceedings of International Joint Conference on Artificial Intelligence (IJCAI 2003)*, Acapulco, Mexico, August 9-15, 2003, pp. 1620–1625. Accessed online (February 15, 2015) at http://ijcai.org/Past%20Proceedings/IJCAI-2003/PDF/286.pdf.

Werthner, H., & Ricci, F. (2004). E-Commerce and Tourism. *Communications of the ACM, 47*(12), 101–105.

Yoo, K.-H., Sigala, M., & Gretzel, U. (2015). Exploring TripAdvisor. In R. Egger, I. Gula, & D. Walcher (Eds.), *Open Tourism – Open Innovation, Crowdsourcing and Collaborative Consumption challenging the tourism industry*. Heidelberg: Springer Verlag.

Wöber, K. W. (2003). Information supply in tourism management by marketing decision support systems. *Tourism Management, 24*(3), 241–255.

Law, R., Buhalis, D., & Cobanoglu, C. (2014). Progress on information and communication technologies in hospitality and tourism. *International Journal of Contemporary Hospitality Management, 26*(5), 727–750.

Lamsfus, C., Martín, D., Alzua-Sorzabal, A., & Torres-Manzanera, E. (2015). Smart tourism destinations: An extended conception of smart cities focusing on human mobility. In I. Tussyadiah & A. Inversini (Eds.), *Information and Communication Technologies in Tourism 2015* (pp. 363–375). Heidelberg, Germany: Springer.

Lamsfus, C., Wang, D., Alzua-Sorzabal, A., & Xiang, Z. (2014). Going Mobile Defining Context for On-the-Go Travelers. *Journal of Travel Research*, DOI:0047287514538839.

Koo, C., Gretzel, U., Hunter, W. C., & Chung, N. (2015). The role of IT in tourism. *Asia Pacific Journal of Information Systems, 25*(1), 99–104.

Inversini, A., & Masiero, L. (2014). Selling rooms online: the use of social media and online travel agents. *International Journal of Contemporary Hospitality Management, 26*(2), 272–292.

Hunter, W. C., Chung, N., Gretzel, U., & Koo, C. (2015). Constructivist research in smart tourism. *Asia Pacific Journal of Information Systems, 25*(1), 105–120.

Huang, C. M., & Chen, S. C. (2015). Smart tourism: exploring historical, cultural, and delicacy scenic spots using visual-based image search technology. *Applied Mechanics and Materials, 764*, 1265–1269.

Guo, Y., Liu, H., & Chai, Y. (2014). The embedding convergence of smart cities and tourism internet of things in China: an advance perspective. *Advances in Hospitality and Tourism Research, 2*(1), 54–69.

Gretzel, U. (2011). Intelligent systems in tourism: a social science perspective. *Annals of Tourism Research, 38*(3), 757–779.

Gretzel, U., Werthner, H., Koo, C., & Lamsfus, C. (2015). Conceptual Foundations for Understanding Smart Tourism Ecosystems. *Computers in Human Behavior*, forthcoming.

Gretzel, U. (2011). Intelligent systems in tourism: a social science perspective. *Annals of Tourism Research, 38*(3), 757–779.

Lopez de Avila, A. (2015). Smart Destinations: XXI Century Tourism. Presented at the ENTER2015 Conference on Information and Communication Technologies in Tourism, Lugano, Switzerland, February 4-6, 2015.

Fesenmaier, D., Werthner, H., & Wöber, K. (2006). *Destination Recommendation Systems: Behavioral Foundations and Applications*. Cambridge: CAB International.

Buhalis, D., & Amaranggana, A. (2015). Smart Tourism Destinations: Enhancing Tourism Experience Through Personalisation of Services. In I. Tussyadiah & A. Inversini (Eds.), *Information and Communication Technologies in Tourism 2015* (pp. 377–389). Heidelberg: Springer.

Buhalis, D., & Amaranggana, A. (2014). Smart Tourism Destinations. In Z. Xiang & I. Tussyadiah (Eds.), *Information and Communication Technologies in Tourism 2014* (pp. 553–564). Heidelberg: Springer.

Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet—The state of eTourism research. *Tourism Management, 29*(4), 609–623.

Boes, K., Borde, L., & Egger, R. (2015a). The Acceptance of NFC Smart Posters in Tourism. In I. Tussyadiah & A. Inversini (Eds.), *Information and Communication Technologies in Tourism 2015* (pp. 435–448). Heidelberg: Springer.

Huang, D., C., Goo, J., Nam, K., & Yoo, C., W. (2017). Smart tourism technologies in travel planning: The role of exploration and exploitation. Information & Management. Vol. 54. Pp 757-770

Caragliu, A. & Del Bo, C. & Nijkamp, P., 2009. "**Smart cities in Europe**," Serie Research Memoranda 0048, VU University Amsterdam, Faculty of Economics, Business Administration and Econometrics.

Caragliu, A., Del Bo, C. and Nijkamp, P. (2009) Smart Cities in Europe. Proceedings of the 3rd Central European Conference in Regional Science—CERS 2009, Kosice, 7-9 October 2009, 49-59.

Koo, C., Ricci, F., Cobanoglu, C. *et al.* Special issue on smart, connected hospitality and tourism. *Inf Syst Front* **19,** 699–703 (2017). https://doi.org/10.1007/s10796-017-9776-9

Law, R., Leung, R., Lo, A., Leung, D., & Fong, L. H. N. (2015). Distribution channel in hospitality and tourism: Revisiting disintermediation from the perspectives of hotels and travel agencies. *International Journal of Contemporary Hospitality Management, 27*(3), 431–452.

Kim, H., Lee, J. N., & Han, J. (2010). The role of IT in business ecosystems. *Communications of the ACM, 53*(5), 151–156.

Koo, C., Yoo, K. H., Lee, J. N., & Zanker, M. (2016a). Special section on generative smart tourism systems and management: Man-machine interaction. *International Journal of Information Management, 36*, 1301–1305.

Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2015a). Smart tourism: Foundations and developments. *Electronic Markets, 25*, 179–188.

Germann Molz, J. (2012). Travel Connections. London: Routledge, https://doi.org/10.4324/9780203123096

Xiang, Z., Schwartz, Z., Gerdes, J. H., & Uysal, M. (2015). What can big data and text analytics tell us about hotel guest experience and satisfaction? International Journal of Hospitality Management, 44, 120-130. https://doi.org/10.1016/j.ijhm.2014.10.013

Park, D.-H., Lee, J., & Han, I. (2007). The effect of on-line consumer reviews on consumer purchasing intention: The moderating role of involvement. International Journal of Electronic Commerce, 11(4), 125-148.

Neirotti, P., Raguseo, E., and Paolucci, E. (2016). Are customer's reviews creating value in the hospitality industry? Exploring the moderating effects of market positioning. Int. J. Inf. Manag. Vol 36, (6), 1133–1143. DOI:https://doi.org/10.1016/j.ijinfomgt.2016.02.010

Femenia-Serra, F., Perles-Ribes, J. and Ivars-Baidal, J. (2019), "Smart destinations and tech-savvy millennial tourists: hype versus reality", *Tourism Review*, Vol. 74 No. 1, pp. 63-81. https://doi.org/10.1108/TR-02-2018-0018

Wober, K., Frew,A., Hitz, M., (2002) ICTs in Tourism, Springer WienNewYork Zaiţ Dumitru, Spalanzani Alain, Cercetarea în economie şi management, Editura Economică

Usoro A., Shoyelu S., Kuofie. M, (2010) Task Technology Fit and Technology Acceptance Models Applicability to e-tourism

Werthner, H. and Klein, S. (1999) Information Technology and Tourism: A Challenging Relationship, Springer-Verlag, Wien.

Morrison, A. M., Jing, S., O"Leary, J. T., & Lipping, A. C. (2001) Predicting usage of the Internet for travel bookings: An exploratory study, Information Technology & Tourism, 4(1), 15–30.

Fodness, D., & Murray, B. (1997) Tourist information search. Annals of Tourism Research, 24(3), 503–523.

Dye, A., & Shaw, S. (2007). A GIS-based spatial decision support system for tourists of Great Smoky Mountains National Park.

Nengovhela, M., Tshipala, N & Nyikana, S. (2017). Domestic tourism in practice: an investigation of Vhembe District Municipality residents' travel motivations.

Creswell, J. W. (2009). Research design: Qualitative, quantitative, and mixed methods approaches (3rd ed.). Sage Publications, Inc.

Quinlan, C., Babin, B. J., Carr, J. C., Griffin, M., & Zikmund, W. G. (2015). *Business research methods*.

Saunders, M., Lewis, P. and Thornhill, A. (2009) Research Methods for Business Students. Pearson, New York.

Bryman, A., & Bell, E. (2011). *Business research methods*. Cambridge: Oxford University Press

Gardiner, S., Grace, D., & King, C. (2014). The Generation Effect: The Future of Domestic Tourism in Australia. *Journal of Travel Research*, *53*(6), 705–720. https://doi.org/10.1177/0047287514530810

Minghetti, V., & Buhalis, D. (2010). Digital Divide in Tourism. *Journal of Travel Research*, *49*(3), 267–281. https://doi.org/10.1177/0047287509346843

Brand South Africa. 2016. https://www.brandsouthafrica.com/tourism-south-africa/brand-south-africa-to-participate-in-africa-travel-indaba-2019. [accessed 03 March 2020]

Limpopo Tourism. 2018. http://www.golimpopo.com/regions/vhembe-region. [accessed 03 March 2020]

North West Tourism. 2019. http://www.tourismnorthwest.co.za/overview. [accessed 03 March 2020]

Mpumalanga Tourism and Parks Agency. 2019. http://www.mpumalanga.com/things-to-do/events-entertainment/leisure-lifestyle/blyde-river-canyon-MTATT5875. [accessed 03 March 2020]

Guateng Tourism Authority. 2020. https://www.gauteng.net/regions/ekurhuleni. [accessed 03 March 2020]

Tourism Kwazulu-Natal. 2016. https://www.zulu.org.za/destinations/zululand/babanango. [accessed 03 March 2020]

McDonald, R.P. and Ho, M.-H.R. (2002), "Principles and Practice in Reporting Statistical Equation Analyses," Psychological Methods, 7 (1), 64-82.

Boomsma, A. (2000), "Reporting Analyses of Covariance Structures," Structural Equation Modeling, 7 (3), 461-83.

Miles, J. and Shevlin, M. (2007), "A time and a place for incremental fit indices," Personality and Individual Differences, 42 (5), 869-74.

Bowerman, B. L., & O'Connell, R. T. (1990). Linear statistical models: An applied approach (2nd ed.). Belmont, CA: Duxbury.

Menard, S. (1995). Applied logistic regression analysis. Sage university paper series on quantitative applications in the social sciences, 07-106. Thousand Oaks, CA: Sage.

Myers, R. (1990). Classical and modern regression with applications (2nd ed.). Boston, MA: Duxbury

Kaiser, H. F. (1970). A second generation little jiffy. Psychometrika, 35, 401–415.

Crowley, S.L. and Fan, X. (1997), "Structural Equation Modeling: Basic Concepts and Applications in Personality Assessment Research," Journal of Personality Assessment, 68 (3), 508-31.

Kline, R.B. (2005), Principles and Practice of Structural Equation Modeling (2nd Edition ed.). New York: The Guilford Press.

Delone,W.H., McLean, E.R., 2003. The DeLone and McLean model of information systems success: a ten-year update. J. Manag. Inf. Syst. 19, 9–30.

Cohen, E. (1988). Authenticity and commoditization in tourism. Annals of Tourism Research, 15, 371e386

Crompton, J. L. (1981). Dimensions of a social group role in pleasure vacations. Annals of Tourism Research, 8, 550e568.

Mutinda, R., and Mayaka, M. (2012). Application of destination choice model: Factors influencing domestic tourist's destination choice among residents of Nairobi, Kenya. Tourism Management. Vol. 33. Pp. 1593-1597

Morrison, A. M. (2002). Hospitality and travel marketing (3rd ed.). UK: Oxford, Buttersworth Heinemann.

Buhalis, D. (2000) Marketing the Competitive Destination of the Future. Tourism Management, 21, 97-116. http://dx.doi.org/10.1016/S0261-5177(99)00095-3

Cooper, C., Fletcher, J., Gilbert, D., Wanhill, S., & Shepherd, R. (1998). Tourism: Principles and Practice (2nd ed.). New York: Longman

Davidson, R., & Maitland, R. (1997). Tourism destinations. London: Hodder & Stoughton.

Murphy, P. E., & Pritchard, M. (1997). Destination price-value perceptions: An examination of origin and seasonal in#uences. Journal of Travel Research, 35(3), 16}22

Swarbrooke, J., & Horner, S. (1999). Consumer behaviour in tourism. Oxford: Butterworth-Heinemann.

Ritchie, B., & Crouch, G. (1993). Competitiveness in international tourism: A framework for understanding and analysis. Annual Congress of the International Association of Scienti"c Experts in Tourism, Baliloche, Argentina

Kotler, P., Bowen, J., & Makens, J. (1996). Marketing for hospitality and tourism. UK: Prentice-Hall.

Cooper, C. (1992). The life cycle concept and tourism. In P. Johnson, & B. Thomas, Choice and demand in tourism (pp. 145}160). London, UK: Mansell.

Fyall, A., Kozak, M., Andreu, L., Gnoth, J. and Lebe, S.S. (2011), Marketing Innovations for Sustainable Destinations. Int. J. Tourism Res., 13: 307-309. doi:10.1002/jtr.858

Jamal, T. and Jamrozy, U. 2006. Collaborative networks and partnerships for Integrated destination management. In Tourism Management Dynamics. D. Buhalis and C. Costa (eds.), Amsterdam: Elsevier, pp. 164–172.

Crouch, G. I. (2011). Destination Competitiveness: An Analysis of Determinant Attributes. *Journal of Travel Research*, *50*(1), 27–45. https://doi.org/10.1177/0047287510362776

Ritchie, J. R., and Crouch, G. I. (2003). The Competitive Destination: A Sustainable Tourism Perspective. Walling-ford, UK: CABI.

Prats, L., Guia, J., & Molina, F.-X. (2008). How Tourism Destinations Evolve: The Notion of Tourism Local Innovation System. *Tourism and Hospitality Research*, *8*(3), 178-191. https://doi.org/10.1057/thr.2008.24

South African Local Government Association (2015a) Ensuring the viability and sustainability of municipalities and improving their credit worthiness – An alternative funding model (doing the right thing for municipalities). Available at: www.salga.org.za/

Wang, X., *Xiang, L., Zhen, F.,* and *Zhang*, J. (2016). How smart is your tourist attraction?: Measuring tourist preferences of smart tourism attractions via a FCEM-AHP and IPA approach, *Tourism Management*, **54**, (C), 309-320

Benckendorff, P.J., Sheldon, P.J. and Fesenmaier, D.R. (2014) Social Media and Tourism. In: Tourism Information Technology, 2nd Edition, 120-147. https://doi.org/10.1079/9781780641850.0120

Caragliu, A., Del Bo, C., Nijkamp, P. (2011). Smart cities in Europe. Journal of Urban Technology 18(2), 65–82

Washburn, D., Sindhu, U., Balaouras, S., Dines, R.A., Hayes, N.M., Nelson, L.E. (2010). Helping CIOs Understand “Smart City” Initiatives: Defining the Smart City, its Drivers, and the Role of the CIO. Forrester Research, Inc., Cambridge

Lopez de Avila, A. (2015). Smart Destinations: XXI Century Tourism. Presented at the ENTER2015 Conference on Information and Communication Technologies in Tourism, Lugano, Switzerland, February 4-6, 2015.

Dameri, R. P. (2013). Searching for Smart City definition: a comprehensive proposal. *INTERNATIONAL JOURNAL OF COMPUTERS & TECHNOLOGY*, *11*(5), 2544-2551. https://doi.org/10.24297/ijct.v11i5.1142

Skinner, H., Sarpong, D. and White, G. (2018), "Meeting the needs of the Millennials and Generation Z: gamification in tourism through geocaching", *Journal of Tourism Futures*, Vol. 4 No. 1, pp. 93-104. https://doi.org/10.1108/JTF-12-2017-0060

Edwards, W. (1954). The theory of decision making. *Psychological Bulletin, 51*(4), 380–417. https://doi.org/10.1037/h0053870

Smallman, C. and Moore, K. (2010) Process Studies of Tourists’ Decision-Making. Annals of Tourism Research, 37, 397-422. http://dx.doi.org/10.1016/j.annals.2009.10.014

Von Neumann, J., & Morgenstern, O. (1944). Theory of games and economic behavior. Princeton University Press.

Lew, A. and McKercher, B. (2006) Modeling Tourist Movement: A Local Destination Analysis. Annals of Tourism Research, 33, 403-423. https://doi.org/10.1016/j.annals.2005.12.002

Middleton, V. and Clarke, J. (2001) Marketing in Travel and Tourism. 3rd Edition, Elsevier, Oxford.

Lew, A. and McKercher, B. (2006) Modeling Tourist Movement: A Local Destination Analysis. Annals of Tourism Research, 33, 403-423. https://doi.org/10.1016/j.annals.2005.12.002

Mathieson, A., & Wall, G. (1982). Tourism: Economic, physical, and social impacts. London, New York: Longman.

Allport, G. W. (1935). Attitudes. In *A Handbook of Social Psychology* (p. 798–844). Clark University Press.

Ross, E. A. (1908). *Social psychology: An outline and source book*. New York: The Macmillan Company.

Langer, E. J., & Abelson, R. P. (1972). The semantics of asking a favor: How to succeed in getting help without really dying. *Journal of Personality and Social Psychology, 24*(1), 26-32. https://doi.org/10.1037/h0033379

Wicker, A. (1971), "An Examination of the 'Other Variables' Explanation of Attitude-Behavior Inconsistency", Journal of Personality and Social Psychology, 19, 18-30.

Petty R.E., Cacioppo J.T. (1986) The Elaboration Likelihood Model of Persuasion. In: Communication and Persuasion. Springer Series in Social Psychology. Springer, New York, NY

Petty, R. E., & Briñol, P. (2012). The elaboration likelihood model. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (p. 224–245). Sage Publications Ltd. https://doi.org/10.4135/9781446249215.n12

Luo, C., Luo, X., Schatzberg, L., & Sia, C. L. (2013). Impact of informational factors on online recommendation credibility: The moderating role of source credibility. *Decision Support Systems*, *56*(1), 92-102. https://doi.org/10.1016/j.dss.2013.05.005

Eagly, A. H., Wood, W., & Chaiken, S. (1978). Causal inferences about communicators and their effect on opinion change. *Journal of Personality and Social Psychology, 36*(4), 424–435. https://doi.org/10.1037/0022-3514.36.4.424

Eagly, A. H., & Chaiken, S. (1975). An attribution analysis of the effect of communicator characteristics on opinion change: The case of communicator attractiveness. *Journal of Personality and Social Psychology, 32*(1), 136–144. https://doi.org/10.1037/h0076850

Tan, G.W.H., Lee, V.H., Hew, J.J., Ooi, K.B. & Wong, L.W. (2018). The interactive mobile social media advertising: An imminent approach to advertise tourism products and services?. *Telematics and Informatics*, *35*(8), 2270-2288.

Jensen, M. L., Dunbar, N. E., Connelly, M. S., Taylor, W. D., Hughes, M., Adame, B., & Rozzell, B. (2014). Organizational balancing of website interactivity and control: An examination of ideological groups and the duality of goals. *Computers in Human Behavior*, *38*, 43-54. https://doi.org/10.1016/j.chb.2014.05.015

Cyr, D., Head, M.M., Lim, E.T., & Stibe, A. (2018). Using the elaboration likelihood model to examine online persuasion through website design. *Inf. Manag., 55*, 807-821.

Bandura, A. (1997). Self-efficacy: The exercise of control. W H Freeman/Times Books/ Henry Holt & Co.

ITU (2018). *Measuring the information society report 2018*. Retrieved from https://www.itu.int/en/ITU-D/Statistics/Pages/publications/misr2018.aspx.

Ghasemaghaei, M and Hassanein, K. (2015). Online information quality and consumer satisfaction: The moderatingroles of contextual factors – A meta-analysis. *Information & Management.* Vol. 52. Pp. 965-981

Hooper, D., Coughlan, J. and Mullen, M. R. “Structural Equation Modelling: Guidelines for Determining Model Fit.” *The Electronic Journal of Business Research Methods* Volume 6 Issue 1 2008, pp. 53 - 60, available online at www.ejbrm.com

ANNEXURE A:

University of Venda

SCHOOL OF MANAGEMENT SCIENCES
DEPARTMENT OF BUSINESS MANAGEMENT

LETTER OF INTRODUCTION

Dear Sir/Madam

Re: Research Study on 'The influence of Smart Tourism Technologies on Tourist Destination Choice: A Case of the City of Tshwane, South Africa

My name is Munei Nengovhela (Student Number:). I am a Postgraduate Student at the University of Venda in the Department of Business Management pursuing a Master's Degree in Business Management.

I am carrying out a study titled, "The influence of Smart Tourism Technologies on Tourist Destination Choice: A Case of the City of Tshwane, South Africa". I am currently in the process of collecting data to support my study. The purpose of this study is to explore the relationship between smart tourism attributes and tourists' destination choice using an Elaboration Likelihood Model.

I would highly appreciate if you could read through the questionnaire attached and you're your feedback in support of this study. I forecast that answering the questions will take about ten minutes of your time, and I would like to thank you in advance for your cooperation. By not placing your name on the questionnaire your responses are kept anonymous and no one will be able to identify you as a respondent in this study. Please note that your participation is confidential.

For more information you may contact my supervisor Prof NM Ochara at: Muganda.Ochara@univen.ac.za/ or my co-Supervisor Tondani.Nethengwe@univen.ac.za

ANNEXURE B

QUESTIONNAIRE

SECTION A: Demographics

1. Indicate your age range

16-25 years	1
26-35 years	2
36-50 years	3
+60 years	4

2. What is your gender/sex?

Male	1
Female	2

3. What is your level of education?

Matric	1
Degree	2
Postgraduate	3
Other……..	4

4. Which smart tourism Technological tools are you familiar with?

Google Maps	1
Websites	2
Trip advisor	3
Expedia.com	4
Booking.com	5
Google groups	6
Mobile apps	7
Hotels.com	8
Other……	9

SECTION B: Smart tourism tools awareness and usage

5. Please indicate your extent of agreeing or disagreeing for the statements below by drawing a cross in the corresponding extent of agreement or disagreement

		Agree	Somewhat agree	Strongly agree	Neutral	Disagree	Somewhat disagree	Strongly disagree
S1	The tourism websites and Mobile Applications provides accurate information of the destination and the trip.	1	2	3	4	5	6	7
S2	The tourism websites and Mobile Applications enable me to complete my travel with detailed information provided.	1	2	3	4	5	6	7
S3	The tourism websites and Mobile Applications provide up-to-date information of the destination and the trip.	1	2	3	4	5	6	7
S4	The tourism websites and Mobile Applications providing the travel planning information and services are trustworthy.	1	2	3	4	5	6	7
S5	The tourism websites and Mobile Applications providing the travel planning information and services are reliable	1	2	3	4	5	6	7
S6	The tourism website and app providing the travel planning information and services are established.	1	2	3	4	5	6	7
S7	The tourism website and Mobile Applications providing the travel planning information and services appear to be professional.	1	2	3	4	5	6	7
S8	Tourism Mobile Applications and websites provide information that is relevant to my travel needs.	1	2	3	4	5	6	7

		Agree	Somewhat agree	Strongly agree	Neutral	Disagree	Somewhat disagree	Strongly disagree
S9	It is easy to relate tourism Mobile Applications and websites information to my travel motivations.	1	2	3	4	5	6	7
S10	Tourism Mobile Applications and websites capture the needs of its prospective tourists.	1	2	3	4	5	6	7
S11	The tourism website and Mobile Applications providing the travel planning information and services is well-known for its good credibility.	1	2	3	4	5	6	7
S12	A lot of other users' questions and relevant answers can be found on the tourism website and Mobile Applications.	1	2	3	4	5	6	7
S13	The tourism website and Mobile Applications that I use is highly responsive to users.	1	2	3	4	5	6	7
S14	It is easy to share and find tourism information on the tourism website and Mobile Applications.	1	2	3	4	5	6	7
S15	I can easily access to the contents of the tourism website and Mobile Applications anytime and anywhere.	1	2	3	4	5	6	7
S16	I can easily search the tourism website and Mobile Applications in the internet.	1	2	3	4	5	6	7
S17	I always have enough time to use and consider information from tourism websites and mobile Applications.	1	2	3	4	5	6	7
S18	I find the tourism website and Mobile Applications easy to navigate.	1	2	3	4	5	6	7
S19	I have necessary skills to use tourism website and Mobile Applications.	1	2	3	4	5	6	7

		Agree	Somewhat agree	Strongly agree	Neutral	Disagree	Somewhat disagree	Strongly disagree
S20	I have knowledge of using tourism website and Mobile Applications.	1	2	3	4	5	6	7
S21	I am confident of using tourism website and Mobile Applications even if there is no one around to show me how to do it.	1	2	3	4	5	6	7
S22	The tourism website and Mobile Applications provides help for better travel planning.	1	2	3	4	5	6	7
S23	The tourism website and Mobile Applications provides helps for more effective destination choice making.	1	2	3	4	5	6	7
S24	The tourism website and Mobile Applications builds a foundation for prioritization when making a destination choice.	1	2	3	4	5	6	7
S25	Smart tourism technologies improve my satisfaction with destination choice.	1	2	3	4	5	6	7
S26	Decision support provided by Smart tourism technologies improves destination satisfaction.	1	2	3	4	5	6	7
S27	My choice of a destination is highly influenced by smart tourism technologies.	1	2	3	4	5	6	7
S28	Mobile applications and websites help me choose a destination.	1	2	3	4	5	6	7
S29	I mostly visit destinations that I can find on websites and mobile applications	1	2	3	4	5	6	7

UNIVERSITY OF VENDA

OFFICE OF THE DEPUTY VICE-CHANCELLOR: ACADEMIC

TO : MR/MS M. NENGOVHELA

SCHOOL OF MANAGEMENT SCIENCES

FROM: PROF. J.E CRAFFORD

DEPUTY VICE-CHANCELLOR: ACADEMIC

DATE : 22 JULY 2019

DECISIONS TAKEN BY UHDC OF 22nd JULY 2019

Application for approval of Masters Proposal Report in Management Sciences: **M. Nengovhela (11629275)**

Topic: "The influence of Smart Tourism on Tourist Destination Choice in the City of Tshwane, South Africa."

Supervisor	UNIVEN	Prof. N. Ochara
Co-supervisor	UNIVEN	Ms. T. Madzunye

UHDC approved the Masters proposal

PROF. J.E CRAFFORD
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