FACTORS INFLUENCING YOUNG ADULTS TOWARDS THE ADOPTION OF ONLINE SHOPPING

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DECLARATION

We, Khanyisa Lutholi and Kaylinn Nagar, hereby declare that:

- The content of this treatise entitled "Factors influencing young adults towards the adoption of online shopping" is our own work;
- All sources used or quoted, have been acknowledged and documented by means of references; and
- This treatise has not been submitted previously for a degree at any other tertiary institution.

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ABSTRACT

The advancement of the internet has dramatically altered how businesses and consumers interact as it has given rise to a low-cost channel where the aforementioned can exchange information and communicate on a global scale. In recent years, online shopping has become more popular amongst adults between the ages of 18 to 25 years as these adults are more technologically advanced and comfortable with using the internet. However, not all young adults between the ages of 18 to 25 years are engaged in the growing trend of online shopping.

The aim of this study was to develop and validate a hypothesised model of factors influencing the adoption of online shopping amongst young adults between the ages of 18 to 25. A positivistic quantitative research methodology was followed. A self-administered web-based, five point -Likert scale style structured questionnaire was used to obtain the data. The sample for this study comprised of 200 young adults between the ages of 18 to 25 residing in the Nelson Mandela Bay.

An exploratory factor analysis extracted three valid constructs namely perceived riskiness, perceived usefulness and convenience. Cronbach's alphas confirmed the reliability of all extracted constructs. The correlation results indicate no strong relationships between the three valid constructs. However, online shopping proved to have a strong correlation with perceived usefulness. The results of the multiple regressions for factors influencing the adoption of online shopping identified three statistically significant relationships between perceived riskiness, perceived usefulness and convenience.

This study has recommended specific strategies to help increase the adoption of online shopping mainly for perceived riskiness, perceived usefulness and convenience. The hypothesised model developed from the study, illustrating the three factors, can now be used by other researchers in other countries as a framework for further testing or for businesses to obtain information on the attributes to pay attention to increase the adoption of online shopping.

TABLE OF CONTENTS

CHAPTER 1
INTRODUCTION TO THE STUDY

CHAPTER 2

FACTORS INFLUENCING THE ADOPTION OF ONLINE SHOPPING

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

CHAPTER 4
EMPIRICAL RESEARCH FINDINGS

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

LIST OF TABLES

CHAPTER 1

INTRODUCTION TO THE STUDY

1.1   INTRODUCTION AND BACKGROUND

Over the past ten years the Internet has grown exponentially increasing both its cross-industry impact and diffusive power (Kim, Galliers, Shi, Ryoo & Kim, 2012: 374). The advancement of the Internet has dramatically altered how businesses and consumers interact as it has given rise to a low-cost channel where the aforementioned can exchange information and communicate on a global scale. According to Almousa (2013:65), the Internet has changed how businesses and consumers purchase, distribute and customise their products. As of December 2017, there are approximately 4 billion people that use the Internet worldwide with South Africa accounting for just over 30 million of these users growing over 1000% since the year 2000 (Internet world statistics, 2018). An increasing number of people are gravitating towards a more intensive use of the Internet as the accessibility of technology, availability of information and the ability to interact through the Internet has increased and evolved since its inception (Kansra & Rajiva, 2015: 62).

The Internet has given rise to an electronic commerce environment referred to as e-commerce. The advancement of the Internet and e-commerce have allowed for the expansion of business and consumer activities on a global scale benefiting from its main advantage of lessened trade boundaries (Al-Maghrabi, Dennis & Halliday, 2011:85). These advancements in Internet technology have created an opportunity for the expansion of shopping options beyond traditional methods. These methods may be less time consuming and more convenient where businesses are able to reach consumers from around the globe and vice versa (Kansra & Rajiva, 2015; 65).

E-commerce, driven by innovations in social and mobile commerce, is projected to become a key component in the success and growth factors in the global competitive business arena (Almousa, 2013:65). E-commerce is growing significantly in South Africa as total users of this market is estimated at 20 million for 2018 and is expected to reach 26 million by 2022 with revenue from this market totaling US$3 million (Statista, 2018). It is evident that this is a growing market with lucrative advantages for both businesses and consumers that choose to operate within the e-commerce sector.

E-commerce has allowed for the availability of various electronic marketspaces, such as business to consumer (B2C) commerce in the retail sector known as online shopping. Online shopping is defined as the process of selling and buying products through the use of the Internet (Kumar, 2017:32).

In recent years, online shopping has become more popular amongst adults between the ages of 18 to 25 years as these adults are more technologically advanced and comfortable with using the Internet (Shanthi & Kannaiah, 2015:83). However, not all young adults between the ages of 18 to 25 years are engaged in the growing trend of online shopping. Various consumers are still concerned with negative connotations associated with transacting online such as the security risks it poses with revealing personal data as well as non-delivery risks and not being familiar with the e-shopping process (Shanthi & Kannaiah, 2015:83).

Kumar (2017:34) further explains that online shopping is directly affected by demographic factors such as age, gender, education and income. In addition to the above, the author asserts that there is a strong relationship between age and attitude towards online shopping. Therefore, the main focus of this study will be geared towards investigating the factors influencing the adoption of online shopping by young adults between the ages of 18 and 25 years old.

This chapter will provide a literature overview of factors influencing the adoption of online shopping. Prior to that the problem statement and primary and secondary objectives of this study will be formulated. The methodological objectives, research design as well as the significance of the study will be highlighted in this section.

A number of notions are used in this study and because various definitions can be found in literature, central concepts are clarified before proceeding with the other sections.

1.2   CONCEPT CLARIFICATION

To provide the context of the study, a brief literature overview focusing on concepts such as e-commerce, online shopping and online marketspaces will be presented.

1.2.1 E-commerce

E-commerce has become a buzz word in the 21st century and it is vital for the purpose of this study, to define what e-commerce is. Chaffey, Chadwick, Mayer and Johnston (2009:15), define electronic commerce as referring to both financial and informational electronically mediated transactions between an organisation and any third party it deals with. The author further mentions that e-commerce involves the management of not only online sales, but also of non- financial transactions such as inbound customer enquiries and outbound email broadcasts.

Hugo, Badenhorst-Weiss and van Biljon (2011:250), define e-commerce as "a dynamic set of technologies, applications and management systems that enable and manage relationships between a business organisation, its functions and process and those of its customers, suppliers, value chain, community and industry." Shahriari, Shahriari and Gheiji (2015:50), also define e-commerce as conducting, transacting and facilitating business activities over the Internet. The authors' further state that e-commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, electronic data exchange, inventory data collection and Internet marketing.

For the purpose of this study e-commerce refers to a dynamic set of technologies, applications and management systems that enable and manage relationships between a business organisation, its functions and process and those of its' customers, suppliers, value chain, community and industry.

1.2.2 Online marketspaces

Rhambe, Matema and Madichie (2017:47), argue that the quick adoption of e-commerce has slowly led to exponential growth in online trading platforms exponential growth of online marketspaces. The authors define these online marketspaces as open online systems that allow businesses to conduct its operations with suppliers and consumers in a virtual market. According to Alrubaiee, Alshaibi and Al-Bayati (2012:24), online marketspaces or, electronic marketspaces, are virtual market places on an electronic network. Online marketspaces provide its users with electronic means to facilitate transactions with regards to the order and fulfilment process. This is in complete contrast to traditional markets where the stores have physical brick-and-

mortar locations. Additionally, online marketspaces have a unique feature in that it brings multiple businesses and consumers together in the virtual sense.

For the purpose of this study, online marketspaces refer to a virtual market place accessed by means of the Internet. Users are able to navigate online transactions in exchange for goods and services offered by businesses operating through e-commerce.

1.2.3   Online shopping

Online shopping is defined as the process of selling and buying products through the use of the Internet (Kumar, 2017:33). Huseynov and Yildirim (2016:452), define online shopping as activities that include searching for product information, buying products and services and also communicating with retailers and other consumers using the Internet. Wu (2013:166), states that online shopping takes place in a virtual store rather than physical brick-and-mortar locations. Subsequently, online consumers are viewed differently than traditional consumers as their shopping behaviour are indicative of online environments where they purchase specific products or services as part of the order and fulfilment process.

For the purpose of this study online shopping refers to the process of selling and buying products through the use of the Internet.

In the next section the problem statement is highlighted.

1.3   PROBLEM STATEMENT

The use of Internet-enabled devices such as smartphone and tablets have allowed its users ease of access to global markets by the simple touch of a button which, according to Akroush and Al-Debei (2015:1353), has led to the emergence and eventual exponential growth of e-shopping opportunities for consumers and global retailers alike. Traditionally, consumers were only exposed to the brick-and-mortar ways of shopping where one had to go into a physical store to evaluate possible choices before making a purchase. However, due to the emergence of e-commerce, consumers have the advantage of being able to evaluate possible choices online and complete purchases via smartphones or any other electronic mobile device (Laohapensang, 2009:502). Ultimately, the growing trend of e-

shopping as a part of e-commerce has created an opportunity for businesses, whether it is a small local start-up or global brand, to reach consumers all around the world (Akroush & Al-Debei, 2015:1353).

Despite online shopping becoming a popular trend amongst young adults, not all consumers are participating in these online exchanges. As an increasing amount of businesses continue to establish an online presence, it is evident that some consumers are still reluctant to shift in that same direction as there are still major concerns regarding online shopping (Shanthi & Kannaiah, 2015:86).

According to Chen (2009:22), there is limited information provided on the topic of online consumer behavior as it is an emerging phenomenon that takes into account an array of factors. Javadi, Dolatabadi, Nourbakhsh, Poursaeedi and Asadollahi, (2012:81) further express that various factors that affect online consumer adoption have been analysed. Javadi *et al.,* (2012:82) suggest that perceived usefulness, convenience and perceived risk are central factors influencing the adoption of online shopping whereas Laohapensang, (2009:504), suggests that subjective norms and trustworthiness are major factors that affect the adoption of online shopping. Kim, Galliers, Shin, Ryoo and Kim (2012:275), state that both perceived service usefulness and online shopping satisfaction are key factors affecting consumer online shopping intentions. However, Wu and Ke (2015:85), state that studies regarding the factors that influence online shopper behavior is fragmented in nature. Wu and Ke (2015:85) assert that online shopping intentions are influenced by personality traits, perceived risk, and technology acceptance simultaneously.

The factors that influence the adoption of online shopping is already well documented in literature as is evident in the published works by Javadi *et al.,* (2012), Laohapensang (2009), Kim *et al.,* (2012) and Wu and Ke (2015). However, there is limited information provided in the context of online shopping and the adoption of it by young South African consumers and even less information is provided in the context of young adults residing in Nelson Mandela Bay. Therefore, this research will emphasise the importance of e-commerce as a global marketplace. The most popular factors that have been identified by previous research to have the most significance in affecting online consumer behaviour will be tested by means of an online survey

within Nelson Mandela Bay. This research will provide new information to researchers by providing insight into the adoption of online shopping by young South African consumers, more specifically ranging between the ages of 18 to 25 years old and residing in Nelson Mandela Bay.

The problem statement of this study is to investigate the factors influencing the online shopping behaviour of young adults. South African marketers may find this investigation useful in order to better target their offerings to young adults and those that have negative perceptions or reservations towards online shopping.

To address the problem in question, the research objectives are outlined in the following section.

1.4 RESEARCH OBJECTIVES

Primary and secondary objectives as well as research questions will be outlined in this section.

1.4.1 Primary objectives

The primary objective of this study is to provide a framework of the factors influencing the adoption of online shopping by young adults between the ages of 18 to 25 years old and residing in Nelson Mandela Bay.

1.4.2 Secondary objectives

To achieve the primary objective of this study, the following secondary research objectives have been formulated:

- To establish the possible factors affecting the adoption of online shopping by young adults; and
- To investigate the relationship between these factors and the intention to shop online.

1.4.3 Methodological objectives

In order to achieve the above-mentioned primary and secondary objectives, the following methodological objectives have been identified:

- To conduct a literature overview on e-commerce with a focus on online shopping as well as the primary factors influencing the adoption of online shopping through investigating theories developed in relation to these factors;
- To develop and test a hypothesised model on the factors influencing the adoption of online shopping;
- To select a research method that is suitable to address the research problem and research objectives;
- To develop an appropriate measuring instrument that will be used to empirically test the influence of the independent variables on the dependent variables;
- To source primary data from a random sample of young adults and to statistically analyse the data, as well as test the proposed hypotheses; and
- To provide conclusions and recommendations based on the findings of this study, which could assist Internet marketers and online businesses in tailoring their offers to attract and retain discerning online consumers.

1.4.4   Proposed hypotheses and hypothesised model

The analysis of the factors highlighted by Javadi *et al.,* (2012), Laohapensang (2009), Kim *et al.,* (2012) and Wu and Ke (2015) have been adapted in order to better serve the purpose of this study. Therefore, *perceived ease of use, convenience, perceived risk, perceived usefulness and trustworthiness* will be the five independent variables influencing the dependent variable, adoption of online shopping.

1.4.4.1   Proposed hypotheses

Given the problem statement and the primary objective of this study, five hypotheses have been considered to determine whether relationships exist between the independent variables and the dependent variable as stated.

H_1:   There is a relationship between *perceived ease of use* and the *adoption of online shopping*

H_2:   There is a relationship between *convenience* and the *adoption of online shopping*

H_3:   There is a relationship between *perceived risk* and the *adoption of online shopping*

H4:   There is a relationship between *perceived usefulness* and the *adoption of online shopping*

H5:   There is a relationship between *trustworthiness and* the *adoption of online shopping*

1.4.4.2   Proposed Hypothesised model

The proposed hypothesised model is illustrated in Figure 1.1.

Figure 1.1: Factors influencing the adoption of online shopping

<u>**Independent variables**</u>   <u>**Dependent variable**</u>

| *Perceived ease of use* | H1

| *Convenience* | H2

| *Perceived risk* | H3 | *Adoption of online shopping* |

| *Perceived usefulness* | H4

| H5

| *Trustworthiness* |
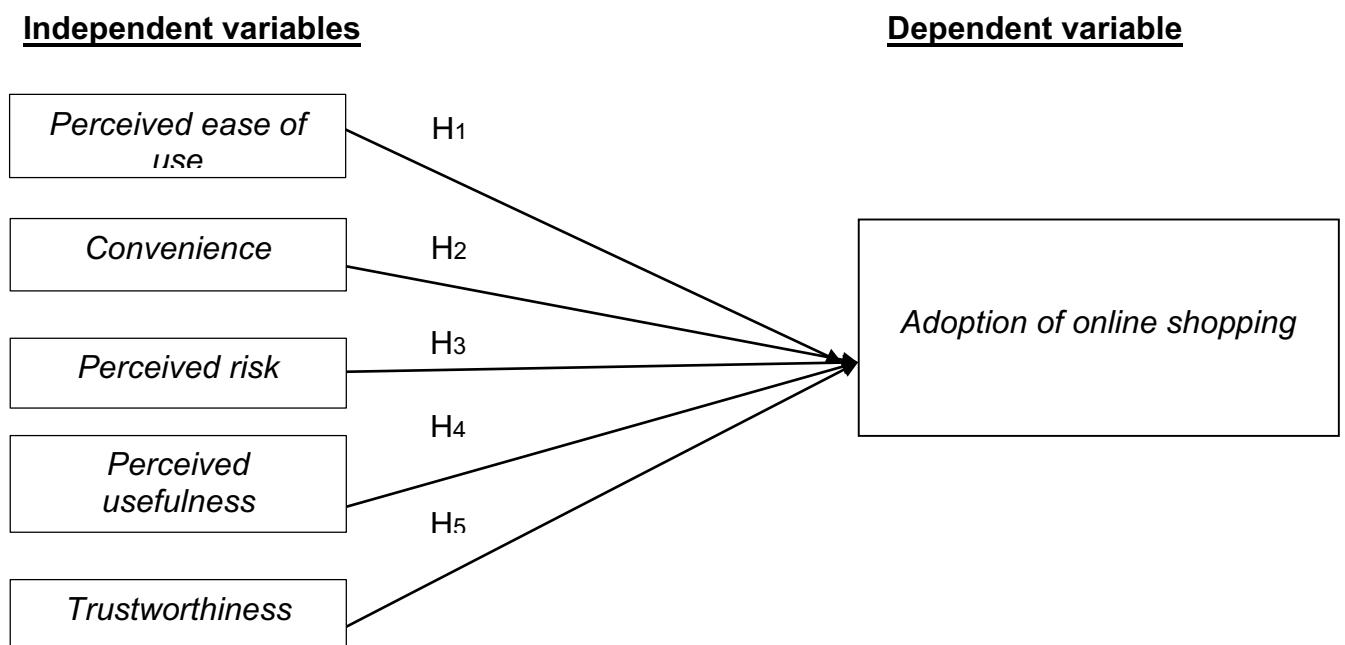
Source: Researchers own construct

The next section presents the research design and methodology of the study.

1.5   RESEARCH DESIGN AND METHODOLOGY

In order to successfully address the research objectives of the study, the research is divided into two categories, namely secondary and primary research.

1.5.1   Secondary research

According to Struwig and Stead (2015:82), secondary data is data which is already collected and made available in some form to the researcher. Sources of secondary data include annual reports, journal articles, newspaper articles, government

publications and business reports. In order to achieve the primary objective of the study, a secondary research will be conducted and will consist of a broad literature review to identify and describe the nature and importance of e-commerce, online marketspaces and online shopping. The literature review will further identify various factors influencing the adoption of online shopping. The secondary research of this study will be conducted by consulting numerous textbooks and journal articles to obtain relevant information for the study. Relevant secondary sources obtained will be used to create the proposed hypothesised framework shown in Figure 1. The hypothesised framework will illustrate a relationship between the dependent variable being the adoption of online shopping to the independent variables being factors influencing the adoption of online shopping namely perceived ease of use, convenience, perceived risk, subjective norm and trustworthiness.

1.5.2   Primary research

Primary data is data that is collected for the first time for the purpose of a particular study (Struwig & Stead, 2015:82). Primary research consists of four subsections namely the research design, population, sample and sampling techniques, data collection and data analysis.

1.5.2.1   Research design

According to Punch (2016:89), a research design is the blueprint for conducting the study that maximises control over factors that could interfere with the validity of the finding. The research design dictates the research methodology to be adopted in a study. Struwig and Stead (2015:64), state that there are two main research paradigms, a quantitative (positivist) and a qualitative phenomenological paradigm. For the purpose of this study, a positivist paradigm which is quantitative research will be adopted. Punch (2016:4), defines quantitative research as an empirical research where the data are in the form of numbers. Struwig and Stead (2015:3), define quantitative research as a form of conclusive research involving a large representative sample and fairly structured data collection procedures. The author further states that quantitative research's primary role is to test an idea, theory or hypothesis about the relationship between two or more variables.

1.5.2.2   Population, sampling and sampling techniques

According to Meyers, Gamst and Guarino (2013:9), a population is the aggregate or totality of all the objects, subjects or members that conform to a set of specifications. A population is typically made up of people or other entities meeting certain criteria. For the purpose of this study, the research population consists of all young adults both male and females between the ages of 18 to 25 years residing in the Nelson Mandela Metropole. However due to the inability of researchers to test all young adults residing in the Nelson Mandela Metropole, a sample will be selected.

According to Punch (2016:89), a sample is a subset of a population selected to participate in the study, it is a fraction of the whole, selected to participate in the research project. Struwig and Stead (2015:116), state that there are several alternatives ways of sampling, but the two main sampling techniques are non-probability and probability sampling. For the purpose of this study the researchers will use non-probability sampling. Struwig and Stead (2015:116-117), state that researchers can choose from various non-probability sampling techniques including convenience, judgmental and snowball sampling. For the purpose of this study, quota and snowball sampling will be used as a sampling technique to conduct the research. Quota sampling will be used due to respondents having to comply with certain criteria, namely age and snowball sampling as the respondents will invite others to participate on the online survey Struwig and Stead (2015:117). For the purpose of this study the criteria are young adults, both male and female, between the ages of 18 to 25 years residing in Nelson Mandela Bay.

1.5.2.3   Data collection

Punch (2016:100), defines data as information obtained in a course of a study. For the purpose of this study respondents will be required to complete a structured self-administered online survey which will be used as the basis of data collection. Respondents will be required to evaluate their responses using a 5-point Likert scale. The online survey will consist of a cover letter as well as three sections namely section A, section B and section C.

The purpose of the cover letter is to highlight the research topic, clearly explain the objective of the study as well as to assure confidentiality to the respondents. Section A of the online survey will focus on the general demographic information relating to

the respondent. In sections B and C, the respondent will use a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5) to measure the respondent's response to factors leading to the adoption of online shopping.

1.5.2.4 Data analysis

Morrison (2012:22), defines data analysis as the process of bringing order, structure and meaning to the mass of collected data. Punch (2016:84), mentions that data analysis involves statistics, with well-established and well-documented techniques. For the purpose of this study, primary data collected from the online survey will be captured in the Microsoft Excel 2016 programme. When the data has been captured the statistical programme Statisca version 12 will be used to analyse the captured data. The validity and reliability of the data will be assessed using an Exploratory Factor Analysis (EFA) and Cronbach's Alpha Coefficients.

According to Worthington and Whittaker (2006:807), EFA is a technique used to identify or confirm smaller numbers of factors or latent constructs from a larger number of observed variables or items. Worthington and Whittaker (2006:808) further explain Cronbach's Alpha Coefficients as a measure of internal consistency, which refers to whether all the items measure the same factor and is expressed as a number between 0 and 1. Cronbach's Alpha Coefficients will be used to assess the internal consistency reliability of the measuring instrument in this study. According to Struwig and Stead (2015:140), this formula is suitable for measures that use a Likert-type scale ranging from strongly agree to strongly disagree.

To provide a statistical summary of the data, descriptive statistics such as the mean, standard deviation and frequency distribution will be calculated. De Vaus (2013:316) explain that multiple regression analysis is a highly general and flexible data analytic system which assess the relationship between a dependent variable and two or more independent variables. A multi regression study will be conducted to determine the relationship between the independent variables, being the factors influencing the adoption of online shopping and the dependent variable, the adoption of online shopping.

The next section highlights the scope of the study.

1.6   SCOPE OF THE STUDY

Although information regarding the numerous factors influencing the adoption of online shopping have been provided through literature, the focus of this particular study is to determine the factors that are perceived to have the most significance on the adoption of online shopping by young adults between the ages of 18 to 25 years old residing in Nelson Mandela Bay. The literature review will identify those various factors which have the most significance to this study. Thereafter, these factors will be the focal point of the empirical investigation where the factors will be used to compile a relevant online survey pertaining to this study. Due to accessibility factors, 200 respondents residing in Nelson Mandela Bay will be chosen. The sample will be between the ages of 18 to 25 years, vary in race and aim to be divided as 50% female and 50% male in order to equally represent each gender.

In the following section the contribution of the study will be discussed.

1.7   CONTRIBUTION OF THE STUDY

Consumers have a choice not only to shop at traditional stores but have an alternative to shop online. Previous research has mostly focused on factors leading to the adoption of e-commerce. This study is important because it focuses on a specific segment of e-commerce which is online shopping. It also focuses on a specific age group which is young adults between the ages of 18 to 25 years. The study will identify factors that influence the adoption of online shopping amongst young adults. This study will be mostly beneficial to businesses operating online or business still wanting to operate online as it will assist in identifying and understanding factors that influence the adoption of online shopping amongst young adults. Businesses can further use these factors such as perceived ease of use, convenience, perceived risk, subjective norm and trustworthiness to improve its online shopping to attract and retain customers.

This study will furthermore be beneficial to individuals wanting to know more about online shopping and e-commerce. This study will add to the body of knowledge by identifying the nature and importance of e-commerce, online marketspace and online shopping. The study also developed a hypothesised model which illustrates five factors that influence the adoption of online shopping amongst young adults and which can be used in other research studies.

In the following section, the structure of the research is presented.

1.8   STRUCTURE OF THE RESEARCH

The structure of the research is as follows:

Chapter One serves as an orientation to the study and provides an introduction and background. The problem statement, the purpose of the research, as well as the research objectives are presented. Formulated research objectives include the primary, secondary and methodological research objectives. The research objectives are followed by the clarification of key concepts central to the study as well as a brief literature overview. Thereafter, the scope and demarcation of the study are presented. The chapter concludes with the research design including secondary research and primary research. The research design elaborates on the population sample and sampling techniques, data collection as well as the data analysis.

Chapter Two will provide a literature review based on the factors influencing the adoption of online shopping. The chapter will commence with a discussion on the nature and importance of both e-commerce and online shopping. Thereafter, reference will be made to the key differences between the concepts. Subsequently, the advantages and disadvantages of the aforementioned will be deliberated on in addition to the deterrents to online shopping. The chapter will discuss the TAM and factors influencing online shopping will be discussed.

Chapter Three will focus on the research design and methodology to be used in this study. In addition, the motivation behind the selected methodology will be explained by elaborating on the sample population and sampling techniques, the measuring instrument to be used as well as the primary data collection. Chapter Three will conclude with the statistical techniques used in the study.

Chapter Four will present and discuss the data analysis, empirical findings and interpretations of the results obtained from 200 respondents between 18 and 25 years old residing in Nelson Mandela Bay. The empirical findings will be presented in tables and figures, analysed, interpreted and discussions thereof will ensue. The results will be tested using the EFA and Cronbach's Alpha Coefficients to verify the validity and reliability of the research instrument. Chapter Four will further present the results of the Pearson product moment correlation coefficients to indicate the strength of the

relationships between the variables. This will be followed by the results of the multiple regression to determine the statistically significant relationships between the independent and dependent variables.

Chapter Five, will conclude the study by providing a brief overview of all the preceding chapters, together with a short synopsis of the findings in Chapter Four. Conclusions will be formulated based on the findings in Chapter Two's literature review and Chapter Four's empirical investigation. Lastly, Chapter Five will conclude with an explanation into both the contributions and limitations after which recommendations for future research will be proposed.

Chapter Two will provide an in-depth literature review on the various factors influencing the adoption of online shopping.

CHAPTER 2
FACTORS INFLUENCING THE ADOPTION OF ONLINE SHOPPING

2.1   INTRODUCTION

Chapter One provided an introduction to the study where the overall layout of the investigation was discussed. As this study investigates the factors influencing the adoption of online shopping, it is important that the development and growth of e-commerce, along with the nature of online shopping, is understood and that the possible factors influencing the adoption of online shopping are explored.

E-commerce is growing significantly in South Africa as total users of this market is estimated at 20 million for 2018 and is expected to reach 26 million by 2022 with revenue from this market totalling US$3 million (Statista, 2018). It is evident that this is a growing market with lucrative advantages for both businesses and consumers that choose to operate within the e-commerce sector. The advancement and growth of the e-commerce sector has, therefore, further solidified online shopping as a new e-commerce platform within the business-to-consumer context for online retailers. Therefore, research into what drives South African consumers towards the adoption of online shopping is needed.

To commence this chapter, the importance of e-commerce as a basis to facilitate online shopping is presented along with the respective advantages and disadvantages. Online shopping as a growing trend within the South African context is explored along with its respective advantages and disadvantages. The categories of e-commerce as well as the forms of e-commerce organisations are referred to. The chapter concludes with the deliberation on the possible factors influencing online shopping and the selection of several factors determined to be most suitable for this study.

The next section provides a discussion on the development and growth of e-commerce.

2.2   THE DEVELOPMENT AND GROWTH OF E-COMMERCE

Technological development in recent decades has opened new perspectives in all aspects of life. In the economic field, the emergence and wide spread use of

information and communication technologies facilitated the emergence of a new type of commerce, commonly known as e-commerce (Diacon & Doncici, 2013:187). During the late 1990s, e-commerce was still evolving as a novel way of conducting business; at that time, many businesses did little to no buying or selling online. Businesses were still selling its merchandise in physical shops or taking customer orders via the telephone and mail (Schneider, 2015:3). Although e-commerce has existed for many years it only gained wide popularity with the development of the World Wide Web in the mid-1990s. Banks have been using electronic funds transfers (EFTs, also referred to as wire transfers) since the mid 1990's which are electronic transmissions of account exchange information over private communications' networks (Manzoor, 2010:12).

Later with the development of the World Wide Web in the mid 90's, numerous creative applications were developed ranging from online direct sales to e-learning activities. With many businesses now having a website and large companies even having staff portals for controlled access to company information, the emergence and growth of online applications as well as e-commerce continues to improve and change the global business environment and became a common way of doing business (Manzoor, 2010:13). According to Schneider (2015:11), between the late 90s and early 2000s more than 12000 Internet- based businesses were started globally and a rapid growth amongst these businesses continues to grow larger. Yunusov (2016), mentions that e-commerce continues to grow rapidly despite the world economic crisis and other negative effects. He further mentions that according to eMarket research the average global growth rate for e-commerce is 18% to 20% and it has been forecasted that this number will increase to 25% in the next few years. In South Africa, there are currently 18.4 million e-commerce users, with an additional 6.36 million users expected to be shopping online by 2021 (Eshopword, 2018).

The next section will provide an in-depth discussion on e-commerce.

2.3   E-COMMERCE

This section will define the concepts of e-commerce and e-business and elaborate on the main categories of e-commerce.

2.3.1 Definition of e-commerce and e-business

The term e-commerce and e-business are used interchangeably, however, it is important to note that these concepts are distinct from each other (Manzoor, 2010:2). Hugo, Badenhorst-Weiss and van Biljon (2011:250), define e-commerce as a dynamic set of technologies, applications and management systems that enable and manage relationships between a business organisation, its functions and process and those of its customers, suppliers, value chain, community and industry. Venter and Urban (2015:443), define e-commerce as technology- mediated exchanges between parties (Individuals, organisations or both) as well as the electronically based intra- or interior-organisational activities that facilitate such exchanges. E-commerce is defined as conducting, transacting and facilitating business activities over the Internet. Online shopping transactions are also part of e-commerce and it draws on technologies such mobile commerce, EFT, supply chain management, electronic data exchange, inventory data collection and Internet marketing (Shahriari *et al.,* 2015:50).

For the purpose of this study e-commerce is defined as conducting, transacting and facilitating business activities electronically particularly over the Internet and underlying technologies. However, e-commerce does not only refer to the underlying technologies (such as the Internet) but adds to the application and management of these technologies.

E-business does not only refer to buying and selling of products online, but to a broader definition of e-commerce which further includes conducting all types of business online such as co-operating with business partners, servicing customers, fostering e- learning and conducting electronic transactions within a business (Turban, King, Lee, Liang &Turban 2015:7). Urban and Venter (2015:488), refer to e- business as comprising all business activities that rely on technology to improve the effectiveness, efficiency and therefore productivity of these activities. E-business refers only to Internet business; however, it also includes businesses that are using technology to improve its productivity as well as its profit. The difference between e-commerce and e-business can be seen by the degree to which a business transforms its business operations and practices using the Internet (Manzoor, 2010:2).

For the purpose of this study e-business will not only refer to the buying and selling of goods and services on the Internet, but also serving customers and joining forces with business partners in an effort to increase business profitability.

2.3.2 Main categories of e-commerce

According to Manzoor (2010:5), e-commerce is commonly categorised according to the nature of the transaction or the relation among participating entities. This section will identify and elaborate on the main categories of e-commerce.

2.3.2.1 Business-to-business (B2B)

B2B refers to traditional inter business commercial activities or transactions between and amongst organisations that are performed online, and include purchasing, supply chain management and payments (Venter & Urban 2015: 448). Dan (2014:138), notes that B2B includes a broad range of intercompany transactions, including wholesale trades as well as company purchases of services, resources, technology, manufactured parts and components, and capital equipment. It also includes some types of financial transactions between companies, such as insurance, commercial credits, bonds, securities and other financial assets.

2.3.2.2 Business-to-consumer (B2C)

B2C refers to all online business activities conducted between businesses to consumer. B2C e-commerce has grown to include services such as online shopping, online banking, travel services, health information and real estate sites (Venter & Urban, 2015: 448). Qin (2010:27), mentions that in B2C e-commerce, the Internet is resorted to by business organisations to provide customers goods and services via website. Dan (2014:138), asserts that B2C applies to any business or organisation that sells its product or services to consumers over the Internet for its own use.

2.3.2.3 Consumer-to-business (C2B)

C2B refers to all online business activities where individuals use the Internet to sell goods and services to businesses. Alternatively, individuals use C2B to bid on products or services. Travel service transactions are good examples of C2B commerce (Turban *et al.,* 2015:11). Dan (2014:138), notes that in C2B there is a complete reversal of the traditional sense of exchanging goods in the sense that consumers offer their products or services online to businesses.

2.3.2.4 Consumer-to-consumer (C2C)

With C2C, the Internet is used to facilitate transactions between consumers and it is a business model, involving two individuals who conduct business directly with one another (Nenehkaran, 2013:192). Shahriari *et al.,* (2015:49) further states that in customer to customer markets the business facilitates an environment where customers can directly sell merchandise to each other. Dan (2014:137), notes that the goal of C2C is to enable buyers and sellers to find each other easily. They benefit in two crucial commerce areas. Firstly, they benefit from competition for product and secondly, they can easily find products that are otherwise difficult to locate.

2.3.2.5 Mobile commerce

Mobile commerce occurs when using mobile or wireless devices namely cellular phone, laptops and other similar platforms for business transactions (Venter & Urban, 2015:448). Nenehkaran (2013:192), mentions that the computer networks interact with the wireless devices to be able to perform the online purchase. Mobile commerce allows for individuals to be able to access the Internet and perform transactions online without needing a physical location to get connected.

2.3.3 Forms of e-commerce organisations

According to Manzoor (2010:4), depending on the degree of digitalisation of the product, service and the process of delivering, e-commerce can be conducted in various types of businesses such as a brick and mortar business, a click-and-mortar business, a virtual business or the electronic marketplace.

Brick and mortar businesses are traditional businesses that operate in physical stores and deals with customers face to face. Grocery stores, banks and retail shops are examples of brick and mortar businesses. Bennett (2018), alludes that the term brick and mortar first appeared in 1992, to refer to businesses with physical presence. The term was used to differentiate between businesses with storefronts and online businesses without them. The author further elaborates that with the rise of e-commerce it has become increasing common for brick and mortar business to also have an online presence to reap the benefits of each particular business model.

Manzoor (2010:4) notes that click-and-mortar businesses are organisations that conduct its business activities online, but also have physical stores. Click -and- mortar businesses exist both online and in physical platforms. CFI (2018), mentions that click and mortar is an omnichannel e-commerce business model that integrates online and offline operations. Individuals can shop over the Internet on the retailer's website, and still be able to shop at the retailer's brick and mortar shop. The author further mentions that the business model provides customers with efficiency of online transactions where goods purchased online are shipped to the customer, as well as enjoy face to face interaction with the retailer.

Manzoor (2010:5) mentions that virtual businesses refer to organisations that exclusively conduct and perform its business activities online. Ward (2018), notes that virtual businesses conducts all or most of its business over the Internet and does not have physical premises to interact with customers face-to-face. A purely virtual company may outsource nearly all their business functions such as product development, marketing, sales and shipping. However, most virtual businesses retain some of these activities in-house and may still require a physical presence in the form of headquarters, warehouses, shipping and delivery hubs.

E-marketplace is an online electronic market allowing for consumers and businesses to exchange their goods, services and information (Manzoor, 2010:6). E-market place is a virtual online market platform where companies and individuals can register as buyers and sellers to conduct business to business transactions over the Internet. The use of the Internet has helped remove intermediaries in a transaction. It is a web-based information system which provides opportunities for both suppliers and buyers (Mbasakool, 2018).

2.3.4 Advantages of e-commerce

One of the most important benefits of e-commerce is business growth, since small and large businesses can effectively compete in the same space. This is particular important in stimulating or promoting growth in small businesses and encourage the entry of entrepreneurs into the marketplace. Furthermore, e-commerce assists organisations to expand its market to national and international markets with minimum capital investment (Venter & Urban: 2015:459). Dan (2014:137), notes that e-

commerce makes it possible to conduct business 24 hours a day, abolishing the time restriction on business transaction which helps increase sales and profit.

Utilising e-commerce furthermore leads to reduced operation cost as there is no need to physical set up companies and costs associated with maintaining a physical retail outlet such as processing orders, inventories storing, and paper-based information are reduced (Bosch, Tait & Venter, 2018:449). Order errors can be reduced through the implementation of e-commerce. E-commerce has an electronic interface that checks if orders are internally consistent, it checks if the order, receipt and the invoice match to reduce errors and make the order process faster (Straus & Frost, 2012:220).

E-commerce provides a wider range of goods and services both nationally and internationally. Individuals are able to buy and enjoy services and products that might not be available to them (Shahriari *et al.,* 2015:49). Dan (2014:136), affirms that e-commerce enables people in developing countries and rural areas to enjoy and access, products, services, information and other people which otherwise would not be easily available to them. Straus and Frost (2012:221), mention that e-commerce has benefits for society, as individuals can work from home resulting in less traffic on the roads as well as reduction in air population. E-commerce moreover helps society by enabling the government to deliver public services such as health care, education, social services online at reduced costs. Using e-commerce further help some goods to be sold at lower prices when compared to traditional stores as customers have more options to compare from (Manzoor, 2010:23).

Businesses using e-commerce can more easily gain access to data analysis its customers as compared to traditional retailers. Individuals might feel uncomfortable providing personal information such as email addresses or postal addresses to physical retailers. However, with e-commerce business can get information from customers easily by asking them to create an account so they can obtain more information to better serve them Ferreira (2018).

2.3.5 Disadvantages of e-commerce

Niranjanamurthy, Kavyashree, Jagannath and Chahare (2013:2363), state that security is a major concern with customers regarding e-commerce. Individuals are at risk of identity fraud and other dangers as individuals' personal details are captured

and required by e-commerce businesses. E-commerce businesses are usually at high risk of phishing attacks and other forms of security fraud that can lead to stolen assets and damaged reputation. The authors further mention that e-commerce businesses and customers are likely at risk of credit card fraud leading to money being stolen. Strauss and Frost (2012:224), mention that there is no real control of data that is collected over the Internet. Data protection laws are not universal, and websites hosted in different countries may or may not have laws which protect privacy of personal data making it easier for information to be stolen.

One of the main problems with e-commerce is integrating existing databases which were designed for traditional commerce into new sophisticated software of e-commerce. Some companies can assist in integrating the software, however these services can be expensive. Furthermore, new methods for conducting transactions, through e-commerce will need new instruments, new service providers and will require new legal terms, recognition, and permission (Manzoor, 2010:24). Dan (2014:224), mentions that technology needs to be updated regularly to be compatible with the changing requirements of the Internet, websites and application leading to additional financial costs and is disruptive to the efficient running of organisations.

Computing equipment is needed for individuals to participate in e-commerce. E-commerce can only be done through devices such as a smartphones and computers. Not only do individuals need devices to participate in e-commerce, but need Internet connectivity (Niranjanamurthy *et al.,* 2013:2361). Dan (2014:140), mentions that e-commerce relies on telecommunication infrastructure, power and Information Technology (IT) skills which in developing countries nullifies the benefits when the power, advanced telecommunication infrastructure and IT skills are unavailable or scarce or underdeveloped. Khan (2016:21), records that the current challenge with e-commerce is keeping the prices of the Internet bandwidth low. Internet experts are still trying to find solutions in bringing the price of Internet bandwidth down. However, the high cost of dispersing the networks and operating expenses impede on keeping the price of the Internet low.

The above information mentioned that e-commerce and e-business are used interchangeably however these concepts are distinct from each other. E-commerce is divided into different categories which are categorised according to the nature of the

transaction or the relation between the participating entities such as business to business, business to consumer, consumer to consumer and mobile e-commerce. E-commerce can further take different forms depending on the degree of its digitalisation such as brick-to mortar business, click-and-mortar business, virtual business or electronic marketplace. E-commerce has several advantages such as allowing small and large business to compete in the same space as well as conducting business transactions 24 hours a day with any time restriction. However, e-commerce also has several disadvantages such as security risks and needing computing equipment such as computers and smartphones for individuals to be able to participate.

The following section will elaborate on the concept of online shopping.

2.4 ONLINE SHOPPING

Considering the rapid growth of online shopping and the popularity it has gained over the years, it is important to know what it entails. This section will define online shopping, discuss the development and growth of online shopping and present some advantages and disadvantages of online shopping.

2.4.1 Definition of online shopping

According to Niranjanamurthy *et al.,* (2013:2360), online shopping is a form of e-commerce and allows individuals or businesses to directly buy goods and services using the Internet. The authors further state that alternatives terms are used such as e-shop, e-store, Internet shop, web-store and virtual stores. For the purpose of the study, the term online shopping will be used.

Kumar (2017:33), defines online shopping as the process of selling and buying products through the use of the Internet. Huseynov and Yildirim (2016:452), define online shopping as activities that include searching for product information, buying products and services and also communicating with retailers and other consumers using the Internet. For the purpose of this study online shopping refers to the process of selling and buying products through the use of the Internet.

2.4.2 Development and growth of online shopping

The history of online shopping started 40 years ago, and to this day it continues to grow with new technologies, innovations and thousands of businesses entering the market each year (Doherty & Chadwick, 2010:943). Michael Aldrich from the United

Kingdom invented online shopping in the year 1979. A system was launched using videotex, which was a two-way message service which is now referred to as e-commerce. He connected a television set to a transaction processing computer with a telephone line and it could be used to make online purchases, train reservations, check stock prices and search a telephone directory (Deepali, 2013:65). Trading online started emerging in the mid-1990s with the development of the World Wide Web as well as innovative and technically savvy companies responding to the opportunities and challenges professed by the Internet to develop websites that will be able to serve consumers at the convenience of their homes (Doherty & Chadwick, 2010:943).

2.4.3 Advantages of online shopping

Online shoppers can shop in the comfort and convenience of their homes or where ever they are. Business activities can be conducted 24 hours a day with no face to face interaction with the business or standing in long queues (Niranjanamurthy *et al.,* 2013:2363). Since online shopping allows for customers to switch to other businesses, customers can easily change just by a click of a button to another business if they are not satisfied with the goods and services offered by that particular company (Khan, 2016:21). Strauss and Frost (2012:223), mention that online shopping gave a new meaning to the term globalisation. For example, to buy handcrafted items from Madagascar it is not necessary to travel to that destination, but to only open the browser and look for shops selling these items and place an order.

Khan (2016:21), states that online shopping platforms allow for customers to see review comments written by other customers and allow for individuals to be able to write comments about the goods and services. This helps create transparency and trust on the products and services being offered. The author further mentions that online shopping provides for rapid and endless access to information as individuals will have easier access to information from different business websites just by a click of a mouse.

Niranjanamurthy *et al.,* (2013:2363), mention that online shopping allows for superior customisation and value-added services. Businesses can use cookies and other methods of monitoring and tracking consumer behaviour on their online activities. This provides insight to businesses on individual preferences and assist in providing

customised goods and services as opposed to traditional shopping. Value added services can be offered such as chat facilities and currency converters. Dan (2014, 137), mentions that due to the interactive nature of online shopping much information about a customer can be gathered and permits for personalisation. Online shops can target their marketing message to specific individuals by adjusting the message to a person's name, interest and past purchase. The author further mentions that it also permits for customisation as it can change the products and service based on the preference or prior behaviour of customers.

2.4.4 Disadvantages of online shopping

The inability to experience the product prior to purchase is noted as a disadvantage. There are various products that consumers want to touch, feel, hear, taste and smell before they buy them. Individuals are not able to physically see or touch the actual product when purchasing items online. (Niranjanamurthy *et al.,* 2013:2363). Sankar (2017), records that the lack of close examination in online shopping is one of its disadvantages. A customer has to buy a product without seeing what it looks like. The electronic image of products can sometimes be misleading. The colour, appearance and size in real life may not match the electronic image.

For some individuals shopping is about instant fulfilment. Delay in receiving goods is viewed as a disadvantage. With traditional or physical stores consumers can go and buy what they need and walk out with it, however with online shopping goods need to be physically delivered and may take time and additional costs may also be incurred (Niranjanamurthy *et al.,* 2013:2366). Sankar (2017), notes that the delay in delivery of goods is a problem for customers. Long durations and lack of proper inventory management results in delays of shipments. The delivery of the products to customers can take about one to three weeks resulting in customers being frustrated and preventing them from shopping online.

Khan (2016:21), mentions that in developing countries there is a culture of buying products by negotiating the price with the seller or the business. With online shopping, it is difficult for consumers to negotiate price with the business or seller as there is no face to face relationship. Bhalekar, Ingle and Pathak (2014:26), mention that there is no interaction between customers and sellers. Therefore, the scope of convincing customers does not exist. Some individuals prefer to buy the product at the store,

rather than purchasing it online. The authors further mention that few discounts are offered online, and bargaining is not possible.

Online shopping is a form of e-commerce which allows individuals or businesses to directly buy goods and services using the Internet. Online shopping started 40 years ago and continues to grow rapidly due to the development of the world wide web as well as innovative and technically savvy companies responding to the opportunities provided by the Internet. Online shopping has several advantages such as allowing individuals to shop in the comfort of their homes and providing platforms for customers to write review and comments about the product. However, online shopping also had several disadvantages such as inability to experience the product prior to the purchase and delay in goods.

In the next section the technology acceptance model on which some factors of this study are based, will be discussed.

2.5   TECHNOLOGY ACCEPTANCE MODEL

The technology acceptance model (TAM) proposed by Fred Davis will be presented as it is one of the most widely accepted research models and is used to predict the use and acceptance of technology by individuals (Surendran, 2012:175).

According to Yulihasri and Daud (2011:129), individuals will use technology if it is perceived as having benefits from its use in terms of convenience and social importance. Davis introduced the TAM to explain the acceptance of technology where both perceived usefulness and perceived ease of use are primary beliefs in the acceptance of technology and computer acceptance behaviours (Davis, 1989:320). Constructs for this study, perceived usefulness and perceived use of ease, both derived from the TAM, will be empirically tested in this study.

Using the TAM in the context of online shopping is important, as it explains how consumers will accept and adopt online shopping (Ozturk, Bilgihan, Nusair & Okumus, 2016:2). Amin, Rezaei & Tavana (2015:220), assert that the TAM has been tested and validated by previous research and is thus a suitable theoretical foundation in the adoption of online shopping.

Technology acceptance is an important factor and is significant in the adoption of online shopping and thus is the starting point for the factors that follow in the next section.

2.6   FACTORS INFLUENCING THE ADOPTION OF ONLINE SHOPPING

Considering that online shopping, a platform for e-commerce within the business-to consumer context, is a growing phenomenon amongst South African young adults between the ages of 18 to 25 years, it is important to identify and discuss the factors influencing the adoption of online shopping. The factors that are likely to influence the adoption of online shopping as identified from the reviewed literature by Javadi *et al.,* (2012), Laohapensang (2009), Kim *et al.,* (2012) and Wu and Ke (2015, are presented next.

2.6.1   Perceived usefulness

According to Rauniar, Rawski, Yang and Johnson (2014:9-10) perceived usefulness is defined as the degree to which a technology user believes that using technology and its Internet implications improves job performance. Furthermore, in the context of online shopping, Wu, Chen and Chiu (2016:286), assert that perceived usefulness indicates the extent to which e-commerce users believe using a particular website will improve shopping productivity.

Perceived usefulness is one of two key determinants in user technology acceptance as highlighted in the TAM (Amin *et al.,* 2015:220). Perceived usefulness has an interdependent relationship with perceived ease of use, an additional key determinant in technology acceptance. Additionally, Ariff, Shan, Zakuan, Ishak and Wahi (2014:4), put forward the notion that all things being equal, the ease of using technology directly influences how useful it will be thus indicating that there is a positive relationship amongst the aforementioned key determinants.

Furthermore, perceived usefulness involves a users' assessment on the degree to which using a particular Internet technology will improve their desired productivity (Ariff *et al.*, 2014:3). The main benefits of online shopping are listed as accessibility, speed and the availability of convenience purchases. Therefore, users that desire these benefits may perceive online shopping as a useful activity (Cho & Sagynov, 2015:24).

One of the most important benefits online shopping brings is the availability of information. Users have access to a plethora of product information as users get more detailed product information than one would in a brick-and-mortar shopping environment leading to a positive effect on perceived usefulness. Additionally, the availability of price in the online environment allows users to compare prices amongst various e-businesses which in turn leads to a positive effect on perceived usefulness (Cho & Sagynov, 2015:25-26).

It is therefore important that in the context of the e-commerce within the B2C platform, it is essential that a website should be simple, have a clear structure and provide benefits that stimulates the adoption of online shopping behaviour (Ariff *et al.*, 2014:3). Websites that employ the aforementioned signal high levels of perceived usefulness to online consumers (Hernández, Jiménez & Martín, 2011:111). As can be seen from the reviewed literature, positive levels of perceived usefulness will have a significant impact towards the adoption of online shopping will thus be empirically tested in in the subsequent chapters.

2.6.2 Perceived ease of use

Rauniar *et al.,* (2014:10) define perceived ease of use as the degree to which a person believes that use of a particular system would be free of effort. Ozturk *et al.,* (2016:3), further explain that it is directly linked to an individual's evaluation of the effort needed in the utilisation of technology with perceived ease of use being an integral component in the adoption of technology and usage behaviour. Cho and Sagynov (2015:26), apply the aforementioned in the context of online shopping. The authors note that perceived ease of use is the perception that e-commerce users have that online shopping will involve minimal effort and that the Internet is an easy medium to conduct shopping activities.

Along with perceived usefulness, perceived ease of use is one of two key determinants in technology acceptance highlighted in the TAM model (Amin *et al.,* 2015:221). For first time users, online shopping websites should have a component of ease as well as friendliness. Almin *et al.,* (2015:221), note that online retailers should ensure that its' websites are developed in a user-friendly manner as this would ultimately enhance the performance of the website.

Bilgihan, Kandampully and Zhang (2015:106) highlight that websites of online retailers that are user friendly nurture value and satisfaction perceived by consumers as well as increase levels of adoption. Furthermore, a website that is user friendly will give effect to high ease of use perceived by online consumers. Subsequently, ease of use will positively impact the adoption of online shopping by consumers and is a significant construct in determining the aforementioned and will be tested empirically in subsequent chapters (Hernández *et al.*, 2011:111).

2.6.3 Perceived risk

Online shopping is made possible through a virtual marketspace and presents many convenient advantages of time and place (Ozturk *et al.*, 2016:3). However, consumers are not privy to crucial aspects influencing the buying process, which is present in brick-and-mortar shopping activities and may present risks for consumers (Liaw & Le, 2017:160). According to Chiu, Wang, Fang and Huang (2014:10), perceived risk is an important determinant in initial online purchase adoption and is more prominent in online shopping than in traditional brick-and-mortar shopping.

Dai, Forsythe and Kwon (2014:14), state that perceived risk is multifaceted as it encompasses elements of financial risk, product risk as well as privacy risk which are all strong predictors of online shopping adoption. Liaw and Le (2017:161) refer to additional risks that consumers may experience such as missing product information, delivered products not meeting one's expectations as well as losing personal data when filling in payment fields.

The aforementioned could lead to feelings of unpleasantness and low levels of trust which in turn could lead to high levels of perceived risk when engaging in online shopping activities. Furthermore, it can be deduced that high levels of perceived risk significantly affect the adoption of online shopping and is an important construct for this study. In addition to the above, Mortimer, Hasan, Andrews and Martin (2016:206), assert that shoppers often weigh up levels of trust of an online retailer against that of perceived risk. Therefore, the authors of this study hypothesise that trust is relative to perceived risk and both constructs should be considered in the adoption of online shopping. This is deduced as the less trust a consumer has in an online retailer, the higher the levels of perceived risk. As can be seen from the reviewed literature,

perceived risk is an important construct that influences the adoption of online shopping and will be empirically tested in the subsequent chapters.

2.6.4 Convenience

Convenience is one of the main incentives for consumers to engage in online shopping as it is related to creating benefits for users consisting of time saving which is critical in today's fast-paced environment (Thananuraksakul, 2018:42). Jiang, Yang and Jun (2013:191) assert that shopping convenience is a motivating construct in the adoption of online shopping. Nazir, Tayyab, Sajid, Rashid and Javed (2012:492), note that consumers can easily obtain desired products through online shopping, rather than going to brick-and-mortar stores. The authors further imply that the convenience of online shopping involves less effort than physical shopping.

Additionally, Jiang *et al.,* (2013:192), state that convenience, in the context of online shopping, encompasses various dimensions such as transaction convenience and operational convenience. The aforementioned add to the overall importance of convenience towards the adoption of online shopping. These dimensions further solidify convenience as a motivating construct in the adoption of online shopping. This is highlighted by the benefits that online shopping provides such as starting the buying process at a time that is more convenient for the consumer and can be conducted from an individual's office desk or the comfort of the individual's home (Ozturk *et al.*, 2016:4).

Lin and Lu (2015:109), state that the convenience of shopping online positively influences the value perceived by shoppers using it. Subsequently, high perceived value enhances the usefulness of online shopping and therefore positively influences the adoption of online shopping. Therefore, it can be concluded that convenience has a significant impact towards the adoption of online shopping and is an important construct to test empirically.

2.6.5 Subjective norm

Subjective norm refers to the pressures that external elements, such as societal pressures, may have on the behaviour of individuals (Lim, Osman, Salahuddin, Romle & Abdullah, 2016: 403). In the context of online shopping, societal pressure refers to the degree to which individuals are affected by recommendations made by third parties

such as family, friends and the media towards online shopping adoption. Jamil and Mat (2011: 454), assert that there is a significant relationship between the subjective norm and online shopping adoption as recommendations made by third parties have a significant effect on the behaviours of individuals.

Laohapensang (2009:502), note that subjective norm was the second most influential factor to influence the adoption of online shopping. In a research study conducted, the findings conducted by Leeraphong and Mardjo (2013:316), indicate that there is a significant relationship between subjective norm and online shopping adoption. Therefore, it can be concluded that subjective norm has an impact towards the adoption of online shopping however it will not be invested further with regards to this study.

2.6.6 Trustworthiness

Kim and Peterson (2017:45), assert that due to the vast availability of e-commerce websites, trust is a key determinant in the adoption of e-commerce, especially online shopping. The authors elaborate on this construct by noting that online trust is the reliance on a firm's e-commerce business activities especially in the context of e-commerce websites. Trust is an expectation that others will not behave opportunistically and that the vendor will provide what is promised (Akroush & Al-Debei, 2015:1355). In an online shopping context, the authors express that trustworthiness is an important determinant affecting consumers' purchase intentions as the absence of consumer trust will likely have negative behavioural intentions.

Kim, Song, Braynov and Roa (2001:784) developed a theoretical framework for trust within B2C online exchanges. The framework highlights constructs that could potentially improve or decrease trust in online exchanges. The authors assert that web site trust can be improved for consumers if it provides an element of privacy in addition to providing accurate product information and a sophisticated web-site experience. On the contrary, consumers would develop limited trust if a website provides accurate product information but fails to supply delivery guarantees and after-sales services. Furthermore, low levels of trust could result in decreased satisfaction and negative attitudes and purchase intentions within the e-commerce context (Kim & Peterson, 2017:45).

There are numerous antecedents of online trust that include, but are not limited to, perceived risk and perceived usefulness that are investigated within this study (Kim & Peterson, 2017:45). This implies the notion that these factors, including trust, are interdependent on one another within the context of e-commerce. Trust has a significant impact on the adoption of online shopping due to the precarious nature of e-commerce. Therefore, it can be deduced that high levels of trust in the usefulness of online websites have a significant positive affect on the adoption of online shopping and is an important construct to consider for this study.

2.6.7 Self-efficacy

According to Hernández *et al.,* (2011:114), self-efficacy is an important factor in the acceptance of technology and subsequent adoption of online shopping. The authors define self-efficacy as the belief that an individual has with regard to his or her propensity to behave in a specific way to achieve desired results. In the context of online shopping, self-efficacy is the extent to which individuals feel that he or she is safe, comfortable and capable when searching for information on the Internet or making online purchases.

Ozark *et al.,* (2016:4), note that there are different levels of self-efficacy regarding e-commerce. Online shopping can also be accessed through a subset of e-commerce, mobile commerce. The authors further assert that levels of self-efficacy differ when using mobile devices and when using desktops, which can both be used in online shopping behaviour. This drives the notion that self-efficacy is dependent on each user's perception of what is convenient. For example, a user might deem a mobile device as more convenient and easier to use for online shopping than a desktop computer. This in turn signals that convenience, self-efficacy and perceived ease of use are interdependent.

Although self-efficacy is a mediating factor in the adoption of online shopping, it is not deemed a significant construct for the purposes of this study and will therefore not be examined further.

2.5.8 Previous use of the Internet

Previous use of the Internet encourages users to make online purchases and ultimately improves satisfaction experienced by online shoppers (Hernández *et al.,*

2011:115). The authors further assert that previous use of the Internet reduces perceived risks by online users when engaged in online shopping. Additionally, Dai *et al.,* (2014:16), note that online experience positively influences a consumer's perception of online shopping as an individual perceives less risk and is more inclined to adopt online shopping.

Although Huang, Hsieh and Wu (2012:774), propose that online experience is a motivating factor in the transition to adopt online shopping, there is no evidence to suggest that it is a significant construct. Therefore, previous research does not suggest that it is significant enough in the adoption of online shopping and therefore will not be investigated as a construct in this study.

2.5.9 Personality traits

In the context of online shopping, personality traits, which form part of consumer characteristics, refers to a consumer's knowledge of the Internet as well as the individual's social environment. It is predominantly the psychological personality with regards to the psychological characteristics of an individual that drives an individual's motivations to perform specific actions (Keisidou, Sarigiannidis, & Maditinos, 2011:33). Liu, Li and Hu (2013:830), state that there are various personality trait variables that affect the adoption of online shopping such as instant gratification and impulsiveness. The authors assert that a consumer's desire for instant gratification can be achieved more easily in an online environment as online shopping is quick and convenient. Additionally, the authors note that impulsiveness is related to the desire for instant gratification and that online shopping is a stimulant for both these traits (Lui *et al*, 2013:831).

However, despite being a mediating factor in the adoption of online shopping, it is not deemed a significant construct for the purposes of this study and will therefore not be examined further.

2.7 SUMMARY

This chapter discussed e-commerce as well as online shopping in detail by indicating its advantages and disadvantages within the marketing world. It was stated that both e-commerce and online shopping provide opportunities such as reduced operational costs as well as limitations such as high costs of the Internet. The new way of

conducting business over the Internet emerged by e-commerce facilitated for different categories of transactions or different relation among participating entities such as business to business, business to consumer, consumer to business, consumer to consumer as well as mobile commerce.

Manzoor (2010:4), states that depending on the degree of digitisation of the product and services, e-commerce can take numerous forms namely brick to mortar business, click to mortar business, virtual business as well electronic market place. It is important for businesses to establish which form of e-commerce they will participate in. Furthermore, factors influencing the adoption of online shopping namely perceived ease of use, perceived usefulness, convenience, perceived risk, subjective norm, trustworthiness, technology acceptance, self-efficacy, previous use of the Internet along with personality traits were covered in this chapter. For the purpose of this study, factors identified in the TAM such as perceived usefulness and perceived ease of use along with perceived risk, convenience and trustworthiness will be used as constructs to test user perceptions on the adoption of online shopping in the subsequent chapters.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1   INTRODUCTION

A literature review was conducted and discussed in Chapter Two. The aim was to provide background information on e-commerce and online shopping, with particular emphasis on the factors that lead to the adoption of online shopping. A hypothesised model was presented, which was substantiated by secondary sources on factors that lead to the adoption of online shopping

According to Cooper and Schindler (2011:12), research is commonly known for the search of information. The authors further explain that research comprises of defining and re-defining problems, formulating hypothesis or suggested solutions, collecting, organising and evaluating data. Maruyama and Ryan (2014:29), mention that research is a systematic method of exploring, analysing and conceptualising in order to correct or verify knowledge in the construction of theory or in practice. From these definitions, it is evident that research involves a systematic means of solving a research problem, this is referred to as the research methodology.

This chapter will focus on the research design and methodology that were followed in this study. The objective of the chapter is to elaborate, justify and clarify the research methodology utilised. The research design will be detailed first, after which the population, sampling techniques, research instrument and data analysis used in this study will be presented.

3.2   RESEARCH DESIGN

According to Vosloo (2014:316), a research design focuses on the end-product and all the steps in the process to achieve that outcome. Thus, a research design is viewed as the functional plan in which certain research methods and procedures are linked together to acquire a reliable and valid body of data for empirically grounded analyses, conclusions and theory formulation. The research design thus provides the researcher with a clear research framework; it guides the methods, decisions and sets the basis for interpretation. Punch (2016:89), affirms that a research design is a blueprint for conducting the study that maximises control over factors that could interfere with the validity of the findings.

The next section presents the different research paradigms that can be followed.

3.3   RESEARCH PARADIGM

According to McGregor and Murnane (2010:419), a paradigm is a set of assumptions, concepts, values and practices that attribute to the way reality is perceived by the group that hold them. With each paradigm comes associated methodologies, which refer to assumptions about knowledge, values, reality and logic. Wood and Welch (2010:56), indicate that there are two main paradigms with research, namely positivistic and phenomenological. A positivistic paradigm is associated with quantitative, objectivist methods whereas a phenomenological paradigm is associated with qualitative, subjective methods.

For the purpose of this study the positivistic paradigm will be referred to as quantitative research and the phenomenological paradigm as qualitative research. In the section to follow, the quantitative and qualitative research paradigms will be elaborated on and the reason for the method selected, as applicable for this study, will be given.

3.3.1   Quantitative Research

According to Neuman (2013:16), quantitative research is a research approach aimed at testing theories, determining facts, demonstrating relationships between variables and predicting outcomes. Quantitative research uses methods from natural science that are designed to ensure objectivity, generalisability and reliability. Verhoeven (2011:111) mentions that quantitative research uses measurement of quantity or amount as basis and applies to phenomena that can be expressed in terms of quantity. Rajasekar, Philominathan and Chinnathambi (2013:9), note that the objective of quantitative research entails the measuring of such phenomena through data collection in the form of polls, surveys or questionnaires, examining numerical data, and carrying out statistical tests to summarise and form conclusions from the data gathered.

3.3.2   Qualitative Research

According to Neuman (2013: 18), qualitative research is a research approach aimed at the development of theories and understanding. Qualitative research implies an emphasis on the qualities of entities and on the processes and meanings that are not experimentally examined or measured. Taylor, Bogdan and DeVault (2015:7), note that qualitative researchers study phenomena in their natural settings, attempting to

make sense of, or interpreting phenomena in terms of the meanings people bring to them. Punch (2012:113), mentions that the objective of qualitative research is to promote better self- understanding and increase insight into the human condition. This is contrary to quantitative research which has as its objective collecting facts about human behaviour that will lead to verification and extension of theories.

When taking into consideration the comparison between quantitative research and qualitative research as mentioned above, it is evident that the quantitative research method is best suited for this study. The study aims to test the relationship between variables and will be of a numeric nature. Statistical analysis will be conducted on the data collected where the findings of the analysis will be guided by theories and prior research as the aim is to test hypotheses.

The data collection methods available to the researchers will be discussed in the following section as well as how the data will be collected in this study.

3.4   DATA COLLECTION

To achieve the primary objective of this study, the research is divided into two components, namely secondary data collection and primary data collection.

3.4.1 Secondary data collection

According to Struwig and Stead (2015:82), secondary data is data which is already collected and made available in some form to the researcher. The authors further mention that secondary data can be collected from annual reports, journal articles, newspaper articles, government publications, books and business reports. In this study, a broad literature review was conducted identifying and describe the nature and importance of e-commerce, online marketspaces and online shopping. The literature review further identified various factors influencing the adoption of online shopping. Numerous academic textbooks and journal articles made available by the Nelson Mandela University Library and other sources such as Google Scholar, EBSCOhost were used to obtain relevant information of the study.

3.4.2 Primary data collection

According to Struwig and Stead (2015:82), primary data is data that is collected for the first time for the purpose of a particular study. Singh and Mangat (2013:2) exert that information collected from the original source by the researchers when conducting

a study is defined as primary data. Singh and Mangat (2013:2) further state that primary data can be collected by means of direct personal interviews, questionnaires sent through mail, interviews by enumerators and telephone interviews. The collection of primary data calls for decisions on the population, sample frame and sample.

For the purposes of this study both primary data and secondary data will be collected. Secondary data will be used to collect information on the research problem identified in Chapter 1 as well as on researching the factors that influence the adoption of online shopping

3.4.3. Hypothesised model and operationalisation of variables

Given the problem statement for this study, five hypotheses were identified. Several variables that could possibly influence the adoption of online shopping are depicted below. Figure 1.1 from Chapter 1 is now reproduced as Figure 3.1 in this chapter for ease of reference.

Figure 3.1: Proposed hypothesised model

Independent variables   **Dependent variable**

Perceived ease of use		H1
Convenience		H2
Perceived risk		H3
Perceived usefulness		H4
Trustworthiness		H5

Adoption of online shopping
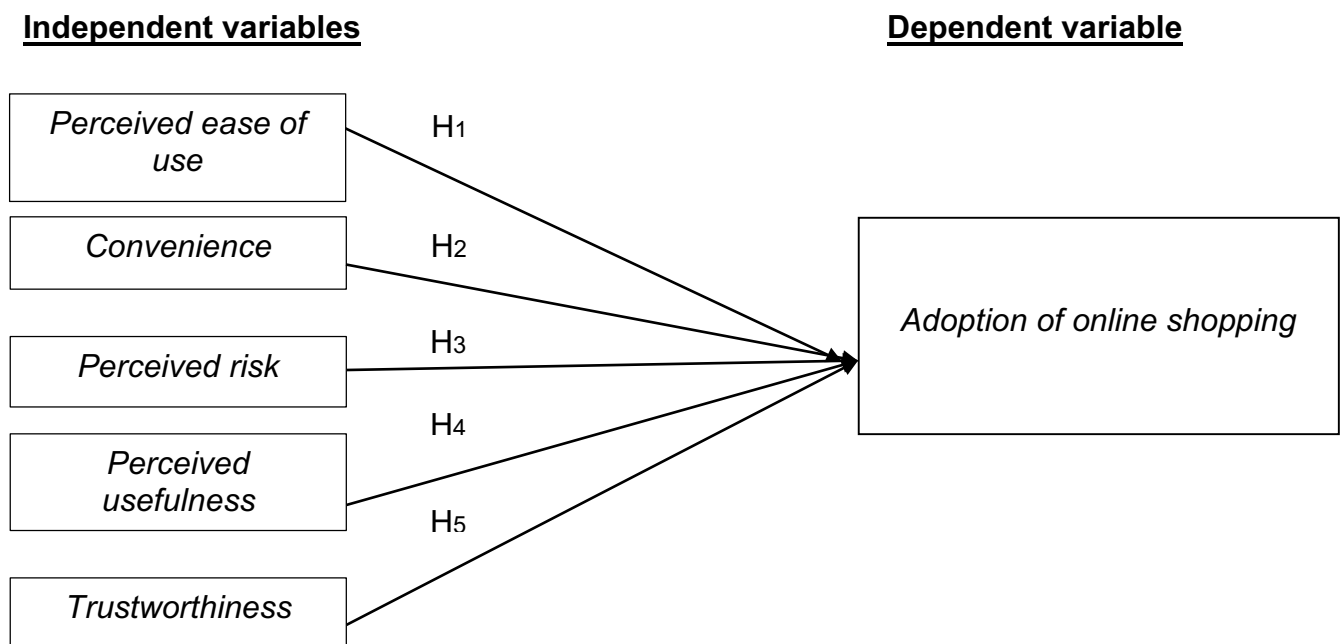
(Source: Researchers own construct)

As it is depicted in Figure 3.1, the following hypotheses have been constructed in order to test the relationships proposed in the hypothesised model.

H1:   There is a relationship between *perceived ease of use* and the *adoption of online shopping*

H2:   There is a relationship between *convenience* and the *adoption of online shopping*

H3:   There is a relationship between *perceived risk* and the *adoption of online shopping*

H4:   There is a relationship between *perceived usefulness* and the *adoption of online shopping*

H5:   There is a relationship between *trustworthiness and* the *adoption of online shopping*

The factors influencing the adoption of online shopping will now be operationalised. According to Swanborn (2010:99) operationalisation is the process of strictly defining variables into measurable factors. The process defines confused concepts by allowing them to be measured empirically and quantitively. Operationalisation thus the defining of concepts or variables using a scale. The independent variables are measured by developing suitable scales to measure the relevant concepts in relation to the dependent variable. For the purpose of the study, the items in the measuring scales that are used to measure the independent variables are self-developed based on the literature review that was conducted. Table 3.1 provides a summary of the operationalisation of the variables.

Table 3.1:   Operationalisation of the variables used in the measuring instrument

Constructs	Operationalisation of factors	Source
Perceived ease of use	When an individual perceives online shopping easier than going to a physical store, can easily access online shops anytime of the day, it is easy to browse through online shops and find products; when individuals do not require assistance with any online purchases.	Ariff *et al., (*2014:4); Cho & Sagynov (2015:26); Rauniar e*t al.,* (2014:912)

Perceived usefulness	When individuals can compare different offerings and prices of online shops, have access to wide variety of products and better prices are offered; when individuals are able to buy products faster than going to the physical store and online support options and help forums are offered.	Bilgihan *et al*., (2015:106); Cho & Sagynov (2015:24); Rauniar *et al*., (2014:910); Wu *et al*., (2016:286)
Perceived risk	When individuals feel delivery might not be made within the promised time frame, personal information might be given to other internet companies, there is no previous word of mouth to guarantee safety of online shop and there is no return policy.	Chiu *et al*., (2014:10); Dai *et al*., (2014:14); Liaw & Le (2017:10); Mortimer *et al*., (2016:206)
Convenience	When individuals do not have to go to a physical store to make a purchase, individuals are able to shop anywhere regardless of their geographical location, delivery is quick, products will be delivered regardless of the individual's location, individuals have access to products not available in their vicinity.	Jiang *et al.,* (2013:191); Nazir *et al*., (2012:492); Thananuraksakul, (2018:42)
Trustworthiness	When individuals perceive online shops to have accurate and authentic description and images of products, the online shops have been verified, have a reputation of being safe and have privacy policies.	Akroush & Al-Debei (2015:1355); Laohapensang (2009:502); Kim & Peterson (2017:45)
Online shopping	When individuals can shop in the comfort of their homes, 24 hours a day without any limits with the transactions; when individuals are provided with a wide range of products and services and allows for a platform to see reviews and comments written by other customers.	Huseynov & Yildirim (2016:452); Kumar (2017:33); Schneider (2015:11)

The next section provides an overview on the population, sample frame and framework.

3.5   POPULATION, SAMPLE FRAME AND SAMPLE

According to Meyers, Gamst and Guarino (2013:9), the term population refers to the aggregate or totality of all the objects, subjects or members that conform to a set of specifications. A population is typically made up of people or other entities meeting certain criteria (Struwig & Stead, 2015:115). For the purpose of this study, the research population consists of all young adults both male and females between the ages of 18 to 25 years residing in the Nelson Mandela Metropole. However due to the inability of researchers to test all young adults residing in the Nelson Mandela Metropole, a sample will be selected.

A sample frame according to Lohr (2010:3) is a list of items of the population from which the sample may be selected. The sampling frame is identical with the population specially when the population is finite and the time frame is either in the present or past (Kothari 2004:153).

A sample is a subset of a population selected to participate in the study, it is a fraction of the whole, selected to participate in the research project (Punch, 2016:89). Sampling refers to the process of acquiring information about an entire population through examining only a selected portion of it. Struwig and Stead (2015:116), state that the sampling method involves selecting a representative portion of the population and using the data gathered from this selected portion as research information. Hair, Celsi, Money, Samouel and Page (2015:116), state that the sample should be truly representative of the populations' characteristics and free of any bias. A sample of 200 young adult between the ages of 18 to 25 years were selected within the Nelson Mandela Metropole.

The next section presents and discusses the various sampling techniques.

3.6   SAMPLING TECHNIQUES

Various techniques or methods can be used to select the subset and unbiased representative of the population for a particular study. According to Maruyama and Ryan (2014:233), samples can be either probability samples or non-probability samples.

3.6.1 Probability sampling

According to Alvi (2016:5), probability sampling is based on the concept of random selection and is therefore, known as 'random sampling' or 'representative sampling'. A probability sampling technique is one in which every unit in the population has a chance (greater than zero) of being selected in the sample, and the probability can be accurately determined (Ritchie, Lewis, Nicholls & Ormston, 2014:113). Maruyama and Ryan (2014:233), also state that in probability sampling, one can specify for each element of the population the probability that it will be included in the sample, thus each of the elements has the same probability of being included. Probability sampling includes sampling techniques such as simple random sampling, systematic sampling, stratified sampling and cluster sampling which will be briefly discussed in the section to follow.

3.6.1.1. Simple random sampling

Du Plooy-Cilliers, Davis and Bezuidenhout (2014:137), note that a simple random sample is the most basic type of sampling method. It can be used when each element of the population has the same equal chance of being selected to be part of a sample. Verhoeven (2014:179), mentions that a popular example of a simple random sample is drawing names from a hat.

3.6.1.2. Systematic sampling

Struwig and Stead (2015:112), note that systematic sampling includes a procedure in which initial points are selected by a random process and then every nth number on the list is selected. Bless, Smith and Kagee (2009:103), also mention that systematic sampling is similar to simple random sampling. However, instead of relying on random numbering, systematic sampling is based on the selection of elements at equal intervals, starting with a randomly selected element of the population.

3.6.1.3. Stratified sampling

Du Plooy-Cilliers *et al.,* (2014:139), state that stratified sampling is a technique that involves dividing the subpopulation or 'stata' and then selecting a random sample from each subpopulation. Alvi (2016:21) mentions that this sampling technique is used when a population is heterogeneous and is preferable when a few characteristics are known about the population, as the population may be organised into subpopulations where a random sample can be extracted.

3.6.1.4.   Cluster sampling

According to Stat Trek (2016), with cluster sampling researchers divide the population into separate groups called clusters. After that, a simple random sample of clusters is selected from the population. Daniel (2012:152), also mentions that cluster sampling is a probability sampling procedure in which elements of the population are randomly selected in naturally occurring groupings (clusters). In the context of cluster sampling, a "cluster" is an aggregate or intact grouping of population elements. Cluster sampling involves the selection in of respondents' aggregates and not individually.

Non-probability sampling will be discussed in the following section.

3.6.2   Non-probability sampling

Non-probability sampling is the sampling procedure which does not afford any basis for estimating the probability that each item in the population has of being included in the sample (Struwig & Stead, 2015:116-117). Plooy-Cilliers *et al.,* (2014:), mention that non-probability sampling techniques can be used when the findings of a study do not need to be generalised to the larger population. Techniques within this sampling method include convenience, snowball, purposive sampling and quota sampling and will be elaborated on the following section.

3.6.2.1. Convenience sampling

Verhoeven (2011:183) notes that when conducting convenience sampling, individuals are approached ad hoc and asked whether they would be willing to participate in the sample. Etikan, Musa and Alkassim (2016:1), affirm that with convenience sampling members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate, are included for the purpose of the study. Thus, the sample is selected based on preferences and ease of sampling respondents.

3.6.2.2. Snowball sampling

Snowball sampling also called 'chain sampling' refers to a variety of procedures in which initial respondents are selected by probability methods, but in which additional respondents are then obtained from information provided by the initial respondents (Struwig & Stead, 2015: 112). Verhoeven (2011:183) also mentions that this sampling technique is used when individuals use networks of people. Alvi (2016:34), mentions that the researchers select individuals who match the criteria of the research and then

these individuals are asked to refer the researcher to another person who meets the same criteria.

3.6.2.3. Purposive sampling

This technique is also referred to as 'judgemental sampling as the method is based on the judgement of the researchers regarding the characteristics of a representative sample (Bless *et al.,* 2009:106.) Struwig and Stead (2015:111), state that a sample could be selected on the basis of expert judgement, meaning specialists in the subject of the research choose what they believe to be the best sample for a particular study. Therefore, selection of the respondents is based on the researcher's judgement.

3.6.2.4. Quota sampling

According to Saunders, Lewis and Thornhill (2012:101), quota sampling is a method of gathering representative data from a group. The authors further state that as opposed to random sampling, quota sampling requires that representative individuals are chosen from a specific subgroup. Struwig and Stead (2015:111), also mention that respondents, may be selected according to their characteristics such as age, gender, income and socio-economic status. The authors further explain that in quota sampling respondents have to comply with certain criteria before qualifying for inclusion in the sample.

For this study the non-probability sampling techniques, quota sampling and snowball sampling were used to identify the sampling units. In quota sampling respondents have to comply with certain criteria before qualifying to be part of a sample. Individuals, both males and females between the ages of 18 to 25 years residing in the Nelson Mandela Bay were included in the sample of the study. Snowball sampling occurred when additional respondents were selected based on the information received from the respondents chosen initially. Respondents chosen from the quota sampling invited other individuals to participate in the online survey by sharing the link of the survey on their social media such as Facebook, WhatsApp and Instagram. The invited respondents were then able to click on the link which lead to the online survey and were able to participate.

The next section will discuss the research instrument that was used for this study.

3.7   RESEARCH INSTRUMENT USED

A quantitative approach was employed as the research methodology for this study. Struwig and Stead (2013:112), indicate that experiments, surveys and observations are quantitative methods of primary data collection. A structured self-administered Web-based questionnaire was used to obtain quantitative data for statistical analysis. A Web-based questionnaire was selected because according to van Gelder, Bretveld and Roeleveld (2011:1293), data collection using Web- based as opposed questionnaires as opposed to traditional paper and pencil questionnaires, generally improves data quality since validation checks can be incorporated to alert respondents when they have entered incorrect answers or missed certain items. Vosylis, Malinuaskiene and Zukauskiene (2012:8), further mentions web-based questionnaires guarantee a rather short time frame for collection of responses and are more time and cost saving as there is no need for printing paper. The web-based questionnaire was created and uploaded on the internet using e-survey creator. E- survey creator is a free online tool that allows for users to create their own survey

Different types of questions can be utilised in questionnaires, namely open-ended and closed-ended questions (Struwig & Stead 2015:98). Open ended questions allow for respondents to answer in a relatively unconstrained way, either writing or typing the response. In contrast, closed ended questions are those that provide two or more response alternatives and respondents are instructed to select the choice closes to their own position (Maruyama & Ryan, 2014:176). For the purpose of the study closed-ended questions are suitable and were utilised for the questionnaire. According to Saunders *et al.,* (2012:111), close- ended questions yield quantitative data and are easier for people of all literacy levels to respond to as it might be easier to choose from available options rather than writing or typing answers. Verhoeven (2011:162) states that close-ended questions are easier for researchers to interpret and analyse. The author further states that close-ended questions are measurement scales.

As previously stated, a structured self-administered online survey was used as the data collection instrument in the study. The online survey explored the perceptions held by young adults both male and female between the ages of 18 to 25 years regarding the factors influencing the adoption of online shopping. The online survey (Appendix A) consists of the following sections:

- Section A explores the biographical data of respondents;
- Section B explores the factors influencing the adoption of online shopping; and
- Section C explores the adoption of online shopping and what encourages respondent's motivation therein.

A 5-point Likert scale was used for this study, ranging from strongly disagree (1) to strongly agree (5). The statements within sections B and C were constructed based on the information obtained from the literature chapter of this study and respondents were required to indicate their responses using the Likert scale. Murray (2013:258), defines a Likert scale as a psychometric response scale used mainly in questionnaires in an effort to determine respondents' preferences or degree of agreement regarding a statement or set of statements. Joshi, Kale, Chandel and Pal (2013:397), further mention that a Likert scale was devised in order to measure 'attitude' in a scientifically accepted and validated manner.

The following section will provide a brief overview on the data analysis

3.8   DATA ANALYSIS

According to Morrison (2012:22), data analysis is the process of bringing order, structure and meaning to the mass of collected data. In addition to the aforementioned, Punch (2016:84), asserts that data analysis includes statistics with well-established and well-documented techniques. Once the primary data for this study had been gathered, data analysis was conducted using appropriate statistical techniques by transforming raw data into useful information. The primary data collected from the online survey was captured on the e-survey tool and then extracted into Microsoft Excel. Once the data was cleaned, the statistical programme Statistica v12.0 was used to analyse the captured data. Subsequently, the validity and reliability of the data were assessed using an Exploratory Factor Analysis (EFA) and calculating Cronbach's Alpha coefficients.

The following section will elaborate on the validity and reliability of the research instruments.

3.9   VALIDITY AND RELIABILITY OF THE RESEARCH INSTRUMENT

The following section will discuss the validity of the measuring instrument of the study, the types of validity available as well as the validity measures. The reliability of the research instrument will also be referred to.

3.9.1   Validity

Validity refers to the degree to which the measure reflects the concept it has been designed to measure (Punch, 2016:91). Newton (2012:1), affirms that validity is the degree to which both the evidence and theory support the interpretation of test scores. Therefore, validity entails whether the measuring instrument used in fact measures what it is intended to measure in a quantitative study.

3.9.1.1 Types of validity

Two types of validity have been highlighted by Moutinho and Hutcheson (2011:147), internal and external validity. Internal validity refers to whether a causal relationship exists between the independent variables observed within the study. Contrastingly, external validity refers to how the results from the measuring instrument represents the generalisability of the study to the population from which the sample originated.

According to Heale and Twycross (2015:66), three major types of validity exist, namely, content, construct and criterion validity. Content validity indicates the extent to which the measuring instrument adequately represents all the content it is intended to measure with respect to the study. Stevenson (2012:12), adds to the definition of content validity as asserted by Heal and Twycross (2015:66) in that content validity is when professionals agree subjectively that the measuring instrument measures what is intended. Construct validity refers to whether inferences can be drawn from test scores relating to the study being measured.

Face validity refers to the extent to which the purpose of the test is apparent to its intended respondents (Laerd Statistics, 2012). Hair *et al.*, (2015:446) note that face validity can also be referred to as surface validity or appearance validity due to it being a subjective and superficial assessment of a variable or construct. Lastly, criterion validity refers to whether the measuring instrument correlates with other measures of the same construct (Struwig & Stead, 2015:147). Heale and Twycross (2015:66) affirm the definition provided by Struwig and Stead (2015:147) in referring to criterion validity

as the correlations that are conducted to assess the extent to which each instrument measures the same variable.

3.9.1.2   Measuring validity

Once the data pertaining to the study is collected, an EFA will be conducted to confirm construct validity to identify the underlying relationships between the measured variables and determine item factor loadings (Punch, 2016:91). An EFA is a variable reduction technique used to reduce smaller numbers of factors or latent constructs that share a common variance from a larger number of observed variables or items (Worthington & Whittaker, 2006:807). Furthermore, Baglin (2014:1), asserts that an EFA is useful in assisting researchers in assessing the dimensionality of the questionnaire's scales that measure the number latent variables and interpreting them.

According to Pearce and Yong (2013:80), determining a factor is based on the assumption that there is a linear relationship between both factors and the variables when calculating the correlation. Thus, with respect to the study, a factor should have at least three factors for it to be labeled as a factor.

A factor loading for a variable is a measure of the strength that a particular variable contributes to the factor. Therefore, Pearce and Yong, (2013: 80) assert that high factor loading scores of 0,50 and above indicate that the dimensionality of the factors are better suited for by the variables.

For the purpose of this study, a factor loading of 0,50 or more will be used and any items below 0,50 will not be considered as relevant factors. Therefore, factor loadings greater than or equal to 0,50 will be deemed as valid for the study. Items that cross-load (load under two factors) will be eliminated and only factors with three or more items loading onto them will be considered for further statistical analysis (Pearce & Yong, 2013:6). Additionally, a situation with a low common variance will indicate that the item is the only indicator of a particular aspect in a specific dimension with respect to the study.

3.9.2   Reliability

In quantitative research, reliability refers to the degree to which measures are without

error and produce results which are consistent, and it is expected that different findings will not result each time the same measures are used (Punch, 2016:110). Therefore, the essence of reliability relies on consistency (Leung, 2015:3). Furthermore, Heale and Twycross (2015:67), affirm that important aspects of reliability include consistency and stability.

Cronbach's alpha coefficients is a measure of homogeneity or internal consistency of an instrument, which refers to whether all the items pertaining to the study measure the same factor and is expressed as a number between 0 and 1 (Tavakol & Dennick, 2011:53). Reliability is furthermore ensured through stability. Stability is ensured when consistency of results is ensured after repeatedly testing the same respondents. This can be done by using test-retest where the instrument is given to the same respondent more than once under similar conditions (Heale & Twycross, 2015:67).

For the purpose of this study Cronbach's alpha coefficients will be computed to assess the internal consistency reliability of the measuring instrument. A cut off point of 0,7 as recommended by Tavakol and Dennick (2011:54) will be used. Therefore, a factor loading greater than or equal to 0.7 will indicate to researchers that the scale item and factor is reliable. The following section will provide a discussion on the descriptive statistics for the study.

3.10 DESCRIPTIVE STATISTICS

According to Sullivan-Bolyai and Bova, (2014:311), descriptive statistics are the basic descriptive procedures that aim to describe and summarise data with regards to the data set of a particular study. Two types of statistics can be described, namely descriptive statistics and inferential statistics. To provide a statistical summary the mean, median, mode and variance will be calculated.

Listed in Table 3.2 are the forms of descriptive statistics that can be used.

Table 3.2: Forms of descriptive statistics

Descriptive Statistics	Explanation
Mean	A measure of central tendency based on the arithmetic average of all the values.
Median	A measure of central tendency based on the mid-value of a set of data arranged in size order.
Mode	A measure of central tendency based on the most frequently occurring value in a distribution.
Range	A measure of dispersion that represents the difference between the maximum and the minimum value in a frequency distribution arranged by size order.
Standard Deviation	A measure of dispersion that is the square root of the variance and can be used for inferential statistics.
Variance	The mean of the squared errors.

Source: Adapted from Collis & Hussey (2013:225-232); Sullivan-Bolyai & Bova, (2014:316).

3.11   Inferential statistics

According to Sullivan-Bolyai and Bova, (2014:311), inferential statistics combines mathematical process and logic to assist researchers in testing hypotheses about a population using data collected from probability samples.

Pearson's product moment correlation coefficient is an inferential statistical technique which will be used in this particular study to test the strength and direction of a linear association between the variables of the study which include: perceived ease of use, perceived usefulness, perceived risk, convenience and trustworthiness (Collis & Hussey 2014:270).

De Vaus (2013:316) explains that multiple regression analysis is a highly general and flexible data analytic system which assess the relationship between a dependent variable and multiple independent variables as was the case in this study. In this study, a multi regression analysis will be undertaken to investigate whether there is a relationship between the independent variables, and the dependent variable, the adoption of online shopping.

The following section will provide an overview of Pearson's product-moment correlation coefficients.

3.11.1   PEARSON'S PRODUCT-MOMENT CORRELATION COEFFICIENTS

Pearson's product-moment correlation coefficient identifies the correlation between two intervals or ratio variables. The Pearson product-moment correlation coefficient is a measure of the strength of linear relationship between two variables. It is denoted "r" (Yount, 2006:22-23). De Vaus (2013:316) mentions that the Pearson product-moment correlation coefficients denote values between -1 and 1. A Pearson product-moment correlation attempts to draw a line of best fit through the data of two variables, revealing how far away all these data points are from this line of best fit (Laerd Statistics, 2013).

Bryman and Bell (2011:323) provide the following measures guiding the strength of the correlation relationships:

- Very strong relationship < 0,7;

- Moderately strong relationship 0,5 < 0,69;

- Average relationship 0,3 < 0,49;

- Weak relationship 0,1 < 0,29; and

- Slight relationship < 0,09.

For this study, Pearson's product-moment correlations were calculated to determine the correlation between the influential online shopping factors (the dependent variables) with online shopping (the dependent variable).

The following section provides an overview on multiple regression analysis.

3.11.2   MULTIPLE REGRESSION ANALYSIS

Multiple regression analysis is a statistical technique used for estimating the relationship among variables which have reason and result relation. The objective of the analysis is to establish whether a relationship exist between the dependent and independent variables individually, and to determine the overall strength of that particular relationship (Uyanik & Guler, 2013:234). After identifying how these multiple variables relate to the dependent variable, information about all the independent variables can be used to make accurate predictions regarding why things are as they

are (Ramos, Delgado, Almeida, Simoes & Manuel, 2015:29). For the purpose of the study, multiple regression will be used to determine which dependent variables (factors leading to the adoption of online shopping) have a significant relationship with the dependent variable (online shopping).

The following section will provide a summary of this chapter.

3.12   SUMMARY

This chapter served to describe and motivate the research design and methodology adopted for this study. Additionally, a comprehensive definition of the research was discussed as well as the concept of research design. The research methodology for the study was discussed with a focus on qualitative and quantitative research design with a specific focus geared towards quantitative research as this is the method that is relevant to the intended study.

Primary and secondary data were defined and elaborated on in greater detail drawing on from Chapter 1. The population, sample frame, sample as well as the various sampling techniques available for use were also discussed. This was followed by an overview of the measuring instrument to be used and the operationalisation of each of the variables used in the measuring instrument. The data analysis relevant to this study was discussed with specific focus on the validity and reliability. This was then followed by a discussion on descriptive and inferential statistics and the appropriate statistics to be used for this study.

In Chapter Four, the empirical findings of this study will be presented.

CHAPTER 4

EMPIRICAL RESULTS

4.1   INTRODUCTION

In the previous chapter, an overview of the research design and methodology adopted in the study was provided. The research approach, population, sampling methods, data collection methods as well as the online survey design and data analysis were discussed. Chapter Three furthermore highlighted the important techniques used to test the validity and reliability of the measuring instrument.

This chapter will present and discuss the data analysis, empirical findings and interpretations of the results obtained from 200 respondents between 18 and 25 years old residing in Nelson Mandela Bay. The empirical findings will be presented in tables and figures, analysed, interpreted and discussions thereof will ensue. Chapter Four gives effect to the primary objective of this study which was the investigation of the factors influencing the online shopping behaviour of young adults.

This chapter commences with the presentation of the demographic profile of the respondents. This is followed by the results of the EFA and Cronbach's alpha coefficients analysis employed to verify the validity and reliability of the research instrument developed to measure the dependent and independent variables. Based on the results of the EFA and the reliability tests, the constructs of the hypothesised model are reformulated with particular reference to the re-grouping and/or renaming of items and reformulation of the e factors.

This chapter further presents the results of the Pearson product moment correlation coefficients to indicate the strength of the relationships between the variables. This is followed by the results of the multiple regression to determine the statistically significant relationships between the independent and dependent variables. This chapter concludes by highlighting the results of the descriptive statistics where the mean scores and standard deviations are presented.

The next section indicates the demographic profile of the 200 respondents.

4.2 DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Table 4.1 provides a summary of the collected data from 200 respondents whom participated in the online survey.

Table 4.1: Demographic profile of respondents (N = 200)

Gender	Frequency	Percentage
Male	98	49%
Female	102	51%
Total	200	100%
Age	**Frequency**	**Percentage**
18	13	6,5%
19	14	7%
20	25	12,5%
21	40	20%
22	26	13%
23	35	17,5%
24	32	16%
25	15	7,5%
Total	200	100%
Ethnic Affiliation	**Frequency**	**Percentage**
Asian	14	7%
SA Black	80	40%
Coloured	51	25,5%
White	53	26,5%
Other	2	1%
Total	200	100%
Highest Education Qualification	**Frequency**	**Percentage**
Matric (Grade 12)	81	40,5%
Certificate	19	9,5%
Undergraduate diploma	25	12,5%
Undergraduate degree	51	25,5%
Post-graduate studies	10	5%
Post-graduate degree	14	7%
Total	200	100%
Years of Internet usage	**Frequency**	**Percentage**
>1	0	0
2 - 5	24	12%
6 - 10	107	53,5%
11 - 15	54	27%
16+	15	7,5%
Total	200	100%

As can be seen in Table 4.1, female respondents accounted for the majority of respondents (51%), while male respondents accounted for (49%) of the sample which is in line with the objectives of this study which was to achieve 100 (50%) female respondents and 100 (50%) male respondents. According to My Broadband (2018), survey data shows there is almost an even male and female split when looking at the gender of Internet users in South Africa which is reflected in the descriptive statistics of this study.

Of the 200 respondents surveyed, more than a quarter of all respondents (26%) were between the ages of 18 and 20 years old. Just over half of the respondents (50,5%) were between the ages of 21 and 23 years old, whereas the remaining respondents, almost a quarter of the sample (23,5%), were between the ages of 24 and 25 years old.

In this study, the majority of respondents were black users (40%), followed by white users (26,5%), coloured users (25%), Asian users (7%), and other users accounting for just one percent (1%) of the total sample. According to the Space Station's (2018), profile of Internet users in South Africa, two-thirds of users of the Internet are black (66%), followed by white users (23%), coloured users (8%) and Asian (3%). Therefore, the results of the demographics in this study can be seen as a close representation to the South African Internet usage statistics.

Table 4.1 indicates that almost half of the respondents' highest level of education achieved was that of Grade 12 (40,5%) with 9,5% of the respondents having achieved a certificate, 12,5% of respondents having an undergraduate diploma and 25,5% of respondents having an undergraduate degree. Table 4.1 further indicates that 5% of respondents have achieved a post-graduate diploma and 7% of respondents have achieved a post-graduate degree.

With regards to years of Internet usage, 12,5% respondents have been using the Internet between two to five years, just over half (53,5%) of the respondents have been using the Internet between six to ten years and 27% of respondents indicated that they have been using the Internet for 11 to 15 years and only 7,5% indicated Internet usage for over 16 years.

In the following section, the findings regarding the validity and reliability of the measuring instrument will be presented.

4.3   RESULTS OF THE VALIDITY AND RELIABILITY ANALYSIS

For the purpose of this study, construct validity was used to determine the validity of the study's measuring instrument. An EFA was conducted, thereafter factor loadings were generated, which were used to determine the underlying relationships between the measured variables and item factor loads (Punch, 2016:92). A factor loading of 0,50 and greater as well as those that loaded onto one construct were considered significant in this study, and therefore any item below 0,50 was not considered as a valid factor loading. Furthermore, items that cross-loaded were eliminated and only factors with three or more items loading onto it was considered for further statistical analysis. According to Costello and Osborne (2005:5), factor loadings with five or more items with strong factor loadings are seen as desirable and said to indicate a solid factor. Constructs with factor loadings less than three is regarded as a weak and unstable construct and were therefore disregarded in this study.

Additionally, Cronbach's alpha coefficients were calculated to assess the reliability of the measuring instrument for this study. A Cronbach's alpha coefficient of 0,70 and above was deemed as a reliable scale for this study as recommended by Tavakol and Dennick (2011:54).

Table 4.2 presents the factor matrix structure for the predetermined factors influencing the adoption of online shopping, namely perceived ease of use, perceived usefulness, perceived risk, convenience and trustworthiness.

4.3.1 Factor loadings for the independent variables

Table 4.2 presents the factor coefficient loading matrix for the factors influencing the adoption of online shopping.

Table 4.2: Factor matrix for the independent variables

ITEMS	P. EASE	P. USE	P. RISK	CONV	TRUSTW
PEOU 1	0,187	-0,033	0,119	0,028	**0,517**
PEOU 2	-0,012	0,308	0,263	-0,035	0,221
PEOU 3	0,157	0,394	0,151	-0,178	0,201
PEOU 4	-0,084	0,366	0,092	-0,053	0,494
PEOU 5	-0,144	0,285	0,131	0,013	0,497
PEOU 6	0,110	**0,602**	0,013	-0,037	0,257
PEOU 7	-0,112	**0,737**	0,047	0,243	-0,107
PU 1	-0,165	**0,712**	-0,102	0,071	0,009
PU 2	0,128	**0,631**	-0,099	0,142	0,032
PU 3	0,106	0,142	0,179	0,179	0,060
PU 4	0,328	0,288	0,110	-0,057	0,166
PU 5	0,406	0,156	0,320	-0,166	0,052
PU 6	-0,091	-0,025	**0,641**	-0,018	0,163
PU 7	-0,079	0,268	0,335	-0,007	0,041
PR 1	**0,508**	0,004	-0,018	-0,063	0,040
PR 2	**0,786**	-0,207	-0,095	-0,067	0,176
PR 3	**0,614**	-0,098	0,201	-0,054	0,148
PR 4	**0,754**	-0,029	0,027	-0,069	-0,298
PR 5	0,332	0,005	**0,526**	0,040	-0,271
PR 6	0,075	-0,129	0,434	0,347	0,009
PR 7	0,452	0,085	0,136	0,025	0,004
CON 1	-0,133	-0,035	**0,660**	0,169	0,054
CON 2	-0,190	-0,102	**0,699**	0,197	0,160
CON 3	0,114	0,231	0,374	-0,059	-0,108
CON 4	**0,531**	-0,184	0,112	0,150	0,144
CON 5	0,473	0,115	0,037	-0,050	-0,159
CON 6	-0,063	0,170	0,292	0,245	0,082
CON 7	**0,534**	0,068	0,031	0,136	-0,051
TRUST 1	**0,498**	-0,106	0,020	0,282	0,098
TRUST 2	-0,053	0,114	0,160	**0,563**	0,020
TRUST 3	0,195	0,232	0,004	0,373	-0,076
TRUST 4	**0,516**	0,191	-0,304	0,289	0,061
TRUST 5	**0,755**	0,055	-0,328	0,041	-0,012
TRUST 6	0,178	0,013	0,335	0,392	-0,111
TRUST 7	0,477	-0,066	-0,081	0,236	0,220

Key: P.EASE = Perceived ease of use; P.USE = Perceived usefulness; P.RISK = Perceived risk; CONV = Convenience; TRUSTW = Trustworthiness

In this study, an EFA was undertaken to assess the validity of the scales measuring the dependent variable (the adoption of online shopping) and the independent variables (factors influencing the adoption of online shopping). As is evident in Table 4.2, a total of three constructs emerged and are considered for further analysis as at least three factors loaded onto the constructs and were thus regarded as valid as per the study conducted by Costello and Osborne (2005:5). These constructs will be discussed in the following sections.

4.3.1.1   Perceived ease of use

Table 4.3 below summarises the results of the EFA of the dependent variable *perceived ease of use;* the items that loaded; the Cronbach's alpha of each item, and the overall construct.

An EFA revealed that none of the seven items (PEOU1 to PEOU7) intended to measure *perceived ease of use* loaded together. Four items (PR1 to PR4) intended to measure *Perceived Risk* loaded onto the *perceived ease of use* factor. Additionally, two items (CON4 and CON7) intended to measure *convenience* loaded onto the *perceived ease of use* construct along with three items (TRUST1, TRUST4 and TRUST5) intended to measure t*rustworthiness*. As a result of the items that loaded together, the name of the factor is changed from *perceived ease of use* to *perceived riskiness.*

Mortimer *et al*., (2016:206), assert that shoppers often weigh up levels of trust of an online retailer against that of perceived risk. Therefore, the authors of this study hypothesise that trust is relative to perceived risk and thus the respondents of the study perceive both *trustworthiness* and *perceived risk* interchangeably. Furthermore, it is evident from the findings that respondents will experience high levels of *perceived riskiness* when: shopping costs are acceptable; there is a guarantee that products will not be damaged and delivered within the promised time frame quickly; personal information will not be shared with other Internet companies or cybercriminals; orders can be returned from home; descriptions and images of products are authentic and lastly, when online shops have a reputation of being safe.

It can be seen in Table 4.3 that nine items were retained for *perceived ease of use* with respective factor loadings ranging between 0,508 and 0,786. The reported

Cronbach's Alpha coefficient is 0,870 which is greater than the lower limit of 0,70 (Tavakol & Dennick 2011:53). The aforementioned statistics indicate that the items measuring the construct can be regarded as highly reliable and therefore sufficient evidence of validity for this construct is provided.

Table 4.3: Validity and reliability of *perceived riskiness*

% of Variance: 27,495		Cronbach's alpha: 0,870		
Items	**I engage in online shopping if**	**Factor loading**	**Item-total correl.**	**CA after deletion**
PR1	Shipping costs are acceptable	0,508	0,464	0,866
PR2	I am guaranteed my products will not be damaged	0,786	0,616	0,856
PR3	It seems as if my delivery will be within the promised time frame	0,614	0,601	0,857
PR4	My personal information will not be shared with other Internet companies	0,754	0,544	0,861
CON4	Delivery is quick	0,531	0,576	0,859
CON7	I can return orders from home and not have to go into physical stores	0,534	0,437	0,868
TRUST1	Descriptions and images of products are accurate and authentic	0,498	0,606	0,858
TRUST4	Online shops have a reputation of being safe	0,516	0,578	0,859
TRUST5	My personal information will be protected from cybercriminals	0,755	0,605	0,857

4.3.1.2   Perceived usefulness

Table 4.4 below summarises the results of the EFA of the dependent variable *perceived usefulness;* the items that loaded; the Cronbach's alpha of each item, and the overall construct.

An EFA revealed that only two of the seven items (PU1 to PU2) intended to measure *perceived usefulness* loaded together. Furthermore, two items (PEOU6 to PEOU7) intended to measure *perceived ease of use* loaded onto the *perceived usefulness* factor. As a result of the items that loaded together, the name of the factor remains *perceived usefulness.*

Amin *et al.,* (2015:220), assert that perceived usefulness has an interdependent relationship with perceived ease of use. This notion has translated to the respondents'

evaluation of the two constructs as one in the same. Furthermore, it is evident from the findings that respondents will experience high levels of perceived usefulness when products can be viewed easily, prices and offerings amongst different online shops can be compared easily as well as when a greater variety of products can be accessed from online shops.

From Table 4.4 it is clear that four items were retained for *perceived usefulness* with respective factor loadings ranging between 0,602 and 0,747. Sufficient evidence of validity for this construct is thus provided. *Perceived usefulness* returned a Cronbach's alpha coefficient of 0.849 which is greater than the lower limit of 0,70 (Tavakol & Dennick 2011:53). Satisfactory evidence of reliability for the scale measuring *perceived usefulness* is thus provided.

Table 4.4: Validity and reliability of *perceived usefulness*

% of Variance: 34,667		Cronbach's alpha: 0,849		
Items	**I engage in online shopping if**	**Factor loading**	**Item-total correl.**	**CA after deletion**
PEOU6	I can easily view product information	0,602	0,747	0,811
PEOU7	I can easily compare the different offerings of online shops	0,737	0,609	0,828
PU1	I can compare prices amongst various online stores	0,712	0,508	0,840
PU2	I can access a greater variety of products	0,631	0,572	0,833

4.3.1.3   Perceived risk

Perceived risk is no longer applicable as a factor for this study as five items intended to measure *perceived risk* have loaded onto other factors, namely *perceived ease of use* which changed to *perceived riskiness* as well as *convenience*.

As previously mentioned in the study, Amin *et al.,* (2015:220), asserted that *perceived usefulness* has an interdependent relationship with *perceived ease of use*. This notion is therefore evident in the respondents' perception of the constructs and has thus resulted in the items of *perceived risk* having loaded onto other constructs.

4.3.1.4   Convenience

Table 4.5 below summarises the results of the EFA of the independent variable *convenience;* the items that loaded; the Cronbach's alpha of each item, and the overall construct.

An EFA revealed that only two of the seven items (CON1 to CON2) intended to measure *convenience* loaded together. One item (PU6) intended to measure *perceived usefulness* loaded onto the *convenience* factor. Furthermore, one item (PR5) intended to measure *perceived risk* loaded onto the *convenience* factor. As a result of the items that loaded together, the name of the factor remains *convenience*.

Jiang *et al.,* (2013:191) assert that shopping convenience is a motivating construct in the adoption of online shopping. Furthermore, it is evident from the findings that respondents will experience high levels of convenience when useful information such as sales notifications is provided; extensive product images are provided; busy crowds can be avoided in addition to not needing to go into physical stores to make purchases.

From Table 4.5 it is clear that four items were retained for *convenience* with respective factor loadings ranging between 0,526 and 0,699. Sufficient evidence of validity for this construct is thus provided. *Perceived usefulness* returned a Cronbach's alpha coefficient of 0,737 which is greater than the lower limit of 0,70 (Tavakol & Dennick 2011:53). Satisfactory evidence of reliability for the scale measuring *convenience* is thus provided.

Table 4.5: Validity and reliability of *convenience*

% of Variance: 40,429		Cronbach's alpha: 0,737		
Items	**I engage in online shopping if**	**Factor loading**	**Item-total correl.**	**CA after deletion**
PU6	I am provided with useful information such as sales notifications	0,641	0,500	0,692
PR5	Extensive product images are provided	0,526	0,478	0,700
CON1	It enables me to avoid busy crowds	0,660	0,539	0,678
CON2	I don't have to go in to a physical store to make a purchase	0,699	0,569	0,668

4.3.1.5   Trustworthiness

Trustworthiness is no longer applicable as a factor for this study as three items intended to measure *trustworthiness* have loaded onto other factors, namely *perceived ease of use* which changed to *perceived riskiness.*

Kim and Peterson (2017:45), assert that there are numerous antecedents of online trust that include, but are not limited to, *perceived risk* and *perceived usefulness* that are investigated within this study. This implies the notion that these factors, including *trustworthiness*, are interdependent on one another within the context of e-commerce and has resulted in the respondents' understanding of individual item constructs as one and the same.

4.3.2   Validity and reliability analysis of the dependent variable

Table 4.6 indicates the results of the validity and reliability analysis in terms of factor loadings, Cronbach's alpha values for each item, as well as the variance explained by the dependent variable, *Adoption of online shopping*.

Table 4.6: Validity and reliability of adoption of online shopping

% of Variance: 45,885		Cronbach's alpha: 0,868		
Items	**I engage in online shopping if it**	**Factor loading**	**Item-total correl.**	**CA after deletion**
C1	Enables me to shop in the comfort of my home	0,644	0,590	0,855
C2	Enables me to make limitless transactions 24 hours a day	0,574	0,528	0,861
C3	Enables me to easily switch from e-vendor to e-vendor	0,660	0,609	0,853
C4	Provides a wide selection range of goods and services	0,732	0,673	0,846
C5	Provides cheap deals and offer better prices	0,735	0,677	0,845
C6	Has platforms to see review comments written by other customers	0,592	0,552	0,861
C7	Enables me to make easy price comparisons of products	0,772	0,711	0,841
C8	Enables me to feel more comfortable when making discreet purchases	0,686	0,642	0,849

Eight items (C1 to C8) were developed to measure the dependent variable *Adoption of online shopping*. All the items intended to measure the dependent variable loaded. Eight items for the dependent variable were retained with respective factor loadings ranging between 0,574 to 0,772. This indicates that sufficient evidence of validity for this factor is provided.

A Cronbach's alpha coefficient of 0,868 had been returned for the dependent variable, *Adoption of online shopping*. This coefficient denotes that this factor is greater than the lower limit of 0,70 (Tavakol & Dennick 2011:53). Satisfactory evidence of reliability for the scale measuring *Adoption of online shopping* is thus provided. Furthermore, this variable explains 45,885% of the variance in the data.

This section displayed the EFA results to establish the validity of the independent and dependent variables used within the measuring instrument. The Cronbach's alpha coefficients indicated the inter-item reliability of the valid items.

The following section presents the revised hypothesised model along with the reformulated hypotheses.

4.4   REVISED HYPOTHESISED MODEL AND HYPOTHESES

As stated by Costello and Osborne (2005:5), factor loadings with five or more items with strong factor loadings are seen as desirable and said to indicate a solid factor. Constructs with factor loadings less than three is regarded as a weak and unstable construct and were therefore disregarded in this study.

Based on the findings of the EFA, there proved to be a lack of evidence that some of the factors that were intended to be including in the hypothesised model are both valid and reliable. Only items with a value of 0,5 and above were considered valid and only factors with a Cronbach's alpha coefficient of above 0,7 were regarded reliable. As a result of the EFA and reliability test of the measuring instrument for this study, *perceived riskiness*, *perceived usefulness* and *convenience* were found to be both valid and reliable.

The regrouping and retaining of items have resulted in the renaming of some factors and deletion of other factors. This has required the reformulation of the operationalisation of the various constructs as well as the revision of the hypothesised

model. Figure 4.1 presents the revised hypothesised model and subsequent hypotheses whilst Table 4.7 summarises the reformulated operational definitions.

Figure 4.1:   The revised hypothesised model of the factors influencing the adoption of online shopping

Independent variables   **Dependent variable**
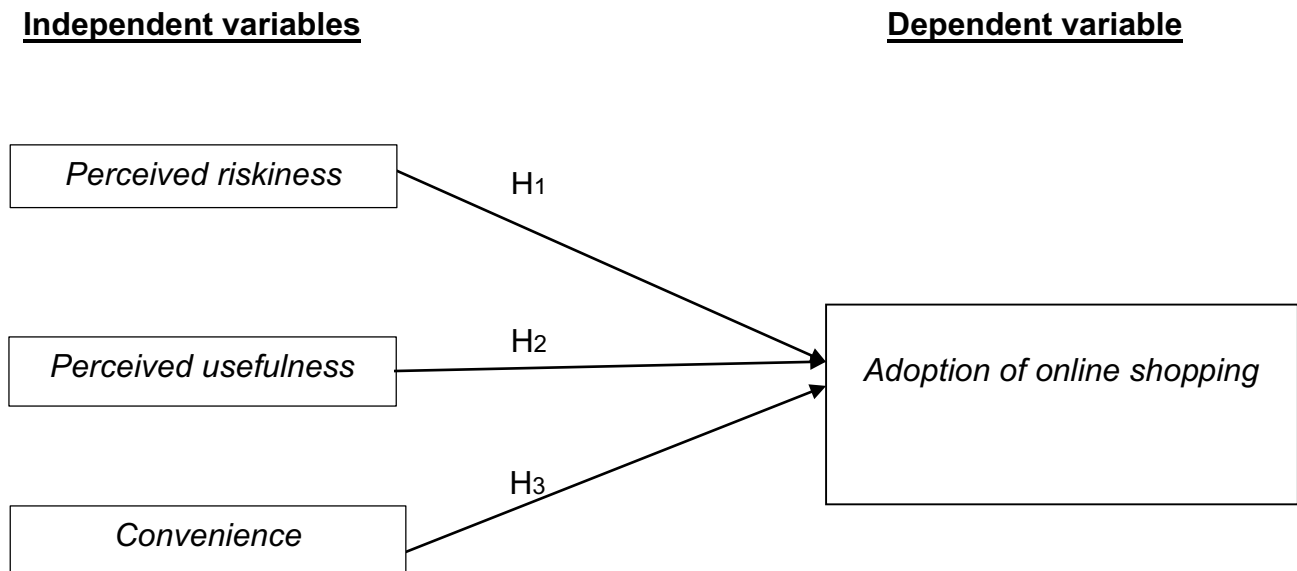
Source: Researchers own construct

Based on the revised hypothesised model, the reformulated hypotheses are thus as follows:

The relationship between the factors and the adoption of online shopping are as follows:

H_{1a}:   There is a relationship between *perceived riskiness* and the *adoption of online shopping*

H_{2a}:   There is a relationship between *perceived usefulness* and the *adoption of online shopping*

H_{3a}:   There is a relationship between *convenience* and the *adoption of online shopping*

The re-operationalisation of the variables in the revised hypothesised model is depicted in Table 4.7.

Table 4.7: **Re-operationalisation of the variables in the revised hypothesised model**

Constructs	Operationalisation of factors	Sources
Perceived riskiness	When individuals are not guaranteed that their personal information will not be shared with other Internet companies and protected from cybercriminals; when the online shop does not have a reputation of being safe, description and images of products might not be accurate and authentic, and products might not be delivered within the promised time frame.	Akroush & Al-Debei (2015:1355); Chiu, Wang, Fang & Huang (2014:10); Dai, Forsythe & Kwon (2014:14); Kim & Peterson (2017:45); Liaw & Le (2017:160); Laohapensang (2009:502)
Perceived usefulness	When individuals can easily get information about a product or service, compare different prices as well as different offering with a wide variety of products online.	Cho & Sagynov, (2015:24); Bilgihan, Kandampully & Zhang (2015:106); Rauniar, Rawski, Yang &Johnson (2014:910); Wu, Chen & Chiu (2016:286)
Convenience	When individuals are provided with useful information about a product, extensive product images are provided, have access to products not available to them as well as return orders without going to the physical outlets.	Jiang, Yang & Jun (2013:191); Nazir, Tayyab, Sajid, Rashid & Javed (2012:492); Thananuraksakul, (2018:42)
Online shopping	When individuals can shop in the comfort of their homes, 24 hours a day without any limits with the transactions; when individuals are provided with a wide range of products and services and allows for a platform to see reviews and comments written by other customers.	Kumar (2017:33); Huseynov & Yildirim (2016:452); Schneider (2015:11)

Source: Researcher's own construction

The results of the validity and reliability tests have guided the revised hypotheses and hypothesised model for the adoption of online shopping. A Pearson product-moment

correlation coefficient was conducted on the the valid and reliable factors as presented in the following section.

4.5 PEARSON PRODUCT- MOMENT CORRELATIONS COEFFICIENTS

Pearson product-moment correlation coefficients denote values between -1 and 1 (De Vaus, 2013:316). Bryman and Bell (2011:323) provide the following measures guiding the strength of the correlation relationships:

- Very strong relationship < 0,7;
- Moderately strong relationship 0,5 < 0,69;
- Average relationship 0,3 < 0,49;
- Weak relationship 0,1 < 0,29; and
- Slight relationship < 0,09.

Table 4.8 below presents the results of the correlations between the three independent variables and dependent variable investigated in this study.

Table 4.8:   Pearson's product- moment correlation coefficients of variables

Factor	Perceived Riskiness	Perceived Usefulness	Convenience	Adoption of Online Shopping
Adoption of online shopping				1
Convenience			1	0,451
Perceived usefulness		1	0,515	0,544
Perceived riskiness	1	0 ,439	0,403	0,394

It is evident from Table 4.8 that *convenience* reported a moderately strong positive relationship with *perceived usefulness* (r=0,515), and an average positive relationship with *perceived riskiness* (r=0,403).

Lastly, it is also evident from Table 4.8 that *perceived usefulness* reported an average positive relationship with *perceived riskiness* (r=0,439).

As can be seen in Table 4.8, no very strong relationships were found between the variables and therefore no elaborate discussions on the results are followed. *Adoption*

of online shopping reported average positive correlations with *convenience*(r=0,451), a moderately strong positive relationship with *perceived usefulness* (r=0,544), and an average positive relationship with *perceived riskiness* (r=0,394). It can be inferred that the respondents in this study regard the factors influencing the adoption of online shopping (*convenience, perceived usefulness and perceived riskiness*) as contributing to the adoption of online shopping. The aforementioned show a clear indication that these variables are averagely correlated because of the strength of the associations between the dependent variable and independent variables above 0,3.

The following section will present the results of the multi-regression analysis and the testing of significant relationships thereafter.

4.6   RESULTS OF THE MULTIPLE REGRESSION ANALYSIS

The multiple regression analysis is a statistical technique used for estimating the relationship among variables which have reason and result relation. The objective of the analysis is to establish whether a relationship exist between the dependent and independent variables individually, and to determine the overall strength of that particular relationship (Uyanik & Guler, 2013:234). A residual analysis was employed to assess normality as a pre-requisite for multiple regression analysis (Stat Trek, 2017). According to Ghasemi and Zahediasl (2012:486), regression and analysis of variance are some of the parametric statistical analysis requiring tests for normality, to ensure accurate interpretation of results. Hair, Black, Babin and Anderson (2014:112), note that when a t-value of a factor is less than 1,96 at a significance level of 0,05, or between 1,96 and 3,09 at the significance level of 0,001, the hypothesis is rejected. Table 4.9 presents the results of the multiple regression analysis for the factors influencing the adoption of online shopping.

Table 4.9 Multiple regression analysis results of the factors influencing the adoption of online shopping

Dependent variable: Adoption of online shopping				Hypothesis number	Hypotheses
Adjusted R²=0.382					
Independent variables	Beta	T-value	Sig. (p)		
Perceived riskiness	0,200	2,353	0,020	H_{1a}	Accept

Dependent variable: Adoption of online shopping Adjusted R²=0.382				Hypothesis number	Hypotheses
Independent variables	Beta	T-value	Sig. (p)		
Perceived usefulness	0,2.41	3,008	0,003	H_{2a}	Accept
Convenience	0,322	4,023	0,000	H_{3a}	Accept

P<0.05

Table 4.9 indicates that approximately 38,2% of the variance in online shopping can be explained by the variance in the independent variable factors. Three statistically significant relationships were found between the independent variables perceived riskiness, perceived usefulness and convenience. This is evident from the t-values which exceed the critical value of 1,96 at the significance level of 0,05. The hypotheses H_1 H_2, H_3 are thus supported. The beta value is an indication of how strongly each independent variable influences the dependent variable. Therefore, the higher the beta value, the greater the impact of the independent variable on the dependent variable (Brace, Snelgar & Kemp 2012:208). Convenience had the highest beta value (0,322) revealing it has a greater influence on online shopping. Perceived usefulness had the second highest beta value (0,241) meanwhile perceived riskiness attained a small beta value (0,200) indicating that it has the smallest influence on online shopping.

The results are affirmed in literature as Chiu *et al*. (2014:10), alluded that perceived risk is an important determinant in initial online purchase adoption and is more prominent in online shopping than in traditional brick-and-mortar shopping. Dai *et al*. (2014:14), state that perceived risk is multifaceted as it encompasses elements of financial risk, product risk as well as privacy risk which are all strong predictors of online shopping adoption. Mortimer e*t al*. (2016:206), assert that shoppers often weigh up levels of trust of an online retailer against that of perceived risk. Kim and Peterson (2017:45), assert that due to the vast availability of e-commerce websites, trust is a key determinant in the adoption of e-commerce, especially online shopping.

According to Rauniar *et al*. (2014:9-10) perceived usefulness is defined as the degree to which a technology user believes that using technology and its Internet implications improves job performance. Furthermore, in the context of online shopping, Wu *et al.* (2016:286), assert that perceived usefulness indicates the extent to which e-commerce users believe using a particular website will improve shopping productivity.

Thananuraksakul (2018:42), mentioned that convenience is one of the main incentives for consumers to engage in online shopping as it is related to creating benefits for users consisting of time saving which is critical in today's fast-paced environment. Jiang *et al*. (2013:191) assert that shopping convenience is a motivating construct in the adoption of online shopping as consumers can easily obtain desired products through online shopping, rather than going to brick-and-mortar stores. Lui *et al.* (2013:830), state that the convenience of shopping online positively influences the value perceived by those using it. Subsequently, high perceived value enhances the usefulness of online shopping and therefore positively influences the adoption of online shopping. Table 4.10 presents the regression statistics for the *adoption of online shopping* (dependent variable).

Table 4.10: Summary of the regression statistics for adoption of online shopping

Dependent variable: Adoption of online shopping	Value
Multiple R	0,631
Multiple R²	0,398
Adjusted R²	0,382
F	25,624
P	0,000 [b]
Standard error of estimate	0,450

As can be seen in Table 4.10 approximately 39,8% of the variation observed in online shopping can be explained by the factors influencing the adoption of online shopping (independent variable factors). Given that the residual analysis validates the fitted model, the estimates could be used to assess variable significance in the fitted model.

The following section presents the results of the descriptive statistics.

4.7   DESCRIPTIVE STATISTICS

In this section, the results of the descriptive statistics relating to the various factors influencing the adoption of online shopping are summarised in Table 4.11. The mean scores and standard deviation for all 200 respondents are reported.

Response categories on the 5-point Likert scale for the dimensions of the factors influencing the adoption of online shopping were categorised as follows: responses from 1 <=x< 2,333 were categorised as disagree; 2,333 <=x< 3,667 categorised as neutral; and 3,667 <=x<= 5,000 were categorised as agree.

Table 4.11   Descriptive statistics of the factors influencing the adoption of online shopping

Factor	Mean	Standard Deviation
Perceived riskiness	3,6688	0,57313
Perceived usefulness	4,0538	0,60755
Convenience	3,8950	0,60648
Adoption of online shopping	4,1150	0,57225

Table 4.11 presents the summary of results in respect of what 200 respondents regard as important factors that influence the adoption of online shopping. As is evident in Table 4.11, the respondents agree that *perceived riskiness* is an important factor in the adoption of online shopping as the mean resulted in 3,6688.

Respondents agree that *perceived riskiness* (3,6688*), perceived usefulness* (4,0538) and *convenience* (3,8950) are influential factors in the adoption of online shopping. The dependent variable, *adoption of online shopping*, returned a mean score of 4,1150. Furthermore, as all the standard deviations were relatively low, varying from 0,57225 to 0,60755, the results indicate that there are low response variances.

4.8   SUMMARY

This chapter presented the results obtained from the empirical research. The data analysed was obtained from 200 online survey responses – a sample deemed adequate for the generalisability of the findings to the total population. The demographic profile of the respondents was presented by means of descriptive statistics. The results indicated that 51% of the respondents were female while 49%

were male. With regards to the age of the respondents most were between the ages of 20-23 years. In terms of the years of Internet usage, 53% of the respondents have been using the Internet for between six to ten years and 27% of the respondents indicated that they have been using the Internet for 11 years to 15 years.

An EFA was employed to extract the factors considered to be valid and influential regarding online shopping. Items loading below 0,5 and/or cross-loading, were disregarded. In addition, all the extracted factors were subjected to Cronbach's alpha coefficients testing for reliability, with factors falling below 0,7 being considered unreliable and disregarded from further statistical analysis. As a result, three constructs perceived riskiness, perceived usefulness and convenience from the original were retained and some subsequently renamed.

The correlation matrix of the factors influencing online shopping and adoption of online shopping were then presented to determine the strength of association between the variables. The correlation matrix was based on the calculation of Pearson product-moment correlation coefficients. No very strong relationships were found between variables and therefore no elaborate discussion on the results were followed. The results of the multiple regression for the factors influencing the adoption of online shopping identified three statistically significant relationships. It was established that perceived riskiness, perceived usefulness and convenience influence the adoption of online shopping. Lastly, descriptive statistics for the selected independent and dependent variables were presented and discussed.

In the final chapter, recommendations, summaries and conclusions will be made based on the results of the study.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1   INTRODUCTION

The main objective of the study was to identify the factors that influence the adoption of online shopping amongst young adults aged between 18-25 years residing within Nelson Mandela Bay. This chapter provides an overview of all the chapters within this study. Conclusions and recommendations will be provided as well as contributions and limitations to the study. Future research areas to which the study could extended are provided and concluding comments are presented.

5.2   OVERVIEW OF CHAPTERS

Chapter One served as an orientation to the study and provided an introduction and background to the study. The problem statement, the research objectives and methodological research objectives were presented. The clarification of key concepts central to the study as well as a brief literature overview and the hypothesised model to be tested in the study were provided. Reference was made to research methodology adopted in the study.

Chapter Two focused on e-commerce and online shopping addressing issues such as the development and growth of e-commerce and online shopping. The definition of e-commerce, e-business and online shopping, main categories of e-commerce and forms of e-commerce were provided. The advantages and disadvantages of participating in e-commerce and online shopping were presented. The factors influencing the adoption of online shopping were identified and discussed. The aim of this chapter was to instil an understanding regarding the importance and role of e-commerce and online shopping and to identify the factors that could possibly influence the adoption of online shopping.

Chapter Three discussed the research methodology that was followed in this study. This chapter formed an outline for the empirical study that followed. All the steps followed in the research process were discussed and motivations were given regarding selection of the chosen methods. The paradigm selected as most suitable for this study was the quantitative paradigm.

Chapter Four presented results from the primary data conducted for this study. The data was summarised and presented in a table format. The items used within the online survey were tested to determine the validity and reliability of the research instrument developed to measure the independent and dependent variables. Thereafter, the Pearson product moment correlation coefficients matrix showed the correlation between the retained variables and the results of the multi regression indicated which significant relationships exist between the predetermined independent and dependent variables.

The following section will provide the research objectives of the study.

5.3   RESEARCH OBJECTIVES

Primary and secondary objectives as well as research questions are outlined in this section.

5.3.1   Primary objectives

The primary objective of this study was to investigate the factors influencing the online shopping behaviour of young adults.

5.3.2   Secondary objectives

To achieve the primary objective of this study, the following secondary research objectives were formulated:

- To establish the possible factors affecting the adoption of online shopping by young adults between the ages of 18 and 25 years old residing in Nelson Mandela Bay; and
- To investigate the relationship between these factors and the intention to shop online.

The following section will provide an overview of the research design used for the study.

5.4   RESEARCH DESIGN

Punch (2016:89), asserts that research design is the blueprint for conducting the study that maximises control over factors that could interfere with the validity of the finding. The research design dictates the research methodology to be adopted in a study. Struwig and Stead (2015:64), state that there are two main research paradigms, a

quantitative (positivist) and a qualitative phenomenological paradigm. For the purpose of the study, a positivist paradigm was employed, and a quantitative research approach was followed. Punch (2016:4), defines quantitative research as an empirical research where the data are in the form of numbers. Struwig and Stead (2015:3), define quantitative research as a form of conclusive research involving large representative sample and fairly structured data collection procedures. The author further state that quantitative research primary role is to test an idea, theory or hypothesis about the relationship between two or more variables.

The following section will provide an overview of the objectives of the study and how they were achieved.

5.5   HOW OBJECTIVES OF THE STUDY WERE ACHIEVED

Table 5.1 presents an overview of the objectives of the study and a brief explanation of how each of the objectives were achieved.

Table 5.1:   How objectives of the study were met

Objectives of the study	How and where these were achieved
To conduct a literature overview on e-commerce with a focus on online shopping as well as the primary factors influencing the adoption of online shopping through investigating theories developed in relation to these factors	This was achieved through the discussions provided in the literature review presented in Chapter Two. This chapter highlighted the role of e-commerce and the development and growth of online shopping as well as the effect various factors have on the adoption of online shopping.
To develop and test a hypothesised model on the factors influencing the adoption of online shopping	Factors influencing the adoption of online shopping were selected and used in the hypothesised model as illustrated in Chapter One. The factors, namely, *perceived ease of use*, *perceived usefulness*, *perceived risk*, *convenience* and *trustworthiness*, were selected to test the adoption of online shopping were operationalised and tested empirically in Chapters Three and Four respectively.

To select a research method that is suitable to address the research problem and research objectives	This was presented in Chapter Three where research methods were discussed, and the most suitable approach was identified and selected to form the basis for the empirical part of the study.
To develop an appropriate measuring instrument that will be used to empirically test the influence of the independent variables on the dependent variables	This was discussed in Chapter Three and is presented in the form of an online survey where the questions can be found Annexure A. The questions consisted of seven measurable items intended to measure the respective constructs, *perceived ease of use*, *perceived usefulness*, *perceived risk*, *convenience* and *trustworthiness*. Furthermore, these questions were 5-point Likert scale statements ranging from strongly disagree (1) to strongly agree (5).
To source primary data from a random sample of young adults between the ages of 18 to 25 years old in Nelson Mandela Bay, and to statistically analyse the data, as well as test the proposed hypotheses	Data was presented in Chapter Four where perceived riskiness, perceived usefulness and convenience were identified as the factors influencing the adoption of online shopping.
To provide conclusions and recommendations based on the findings of this study, which could assist Internet marketers and online businesses in tailoring their offers to attract and retain discerning online consumers	This was performed in Chapter Five where recommendations are provided based on the literature and empirical findings of the study.

Conclusions of the study and recommendations for future researchers and online marketers will be elaborated on in the following section.

5.6 CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations will be based on the main literature and empirical research findings. The findings of sections A's demographical profile, section

B's online shopping perceptions and section C's adoption of online shopping from the online survey will be discussed, thereafter recommendations will be provided.

5.6.1 Conclusions and recommendations of the demographic data

Section A of the online survey investigated the demographic information of the respondents. The findings in Chapter Four indicated that the majority of the respondents (51%) were female, while male respondents accounted for the remainder (49%) of the sample. This infers that the study gathered information from more females than males and most respondents (50,5%) were between the ages of 21 and 23 years old. In this study, the majority of respondents were black users (40%), followed by white users (26,5%), coloured users (25%), Asian users (7%), and other users accounting for just one percent (1%) of the total sample.

Furthermore, of the 200 respondents that had completely the online survey, most of the respondents (59,9%) had post high school education with the majority of the respondents (53,5%) having used the Internet between six to ten years to date.

Based on the above findings it is therefore recommended that:

- A more inclusive sample of all racial groups should be included in future online surveys in order to account for a more racially inclusive sample of the population;

- South Africa online marketers need to target their sales promotions to women due to the growing online economic power women hold. The fastest growing online retail segments in South Africa are that of fashion and beauty which are largely frequented by female customers (bizcommunity, 2018);

- South African online marketers must convey their sales messages in ways that young adults between the ages of 18 and 25 years will resonate with and understand. According to Hiveage (2015), every generation has its own lingo and their attention will be captured when marketing messages speak to its young consumers in a current and relatable way.

In the next section, the conclusions and recommendations of the significant relationships will be indicated.

5.6.2 Conclusions and recommendations of statistically significant relationships

In the multiple regression analysis, three statistically significant relationships were found between the independent variables (perceived riskiness, perceived usefulness and convenience). In the next section, the conclusions and recommendations of three significant relationships will be indicated.

5.6.2.1 Perceived riskiness

An EFA revealed that none of the seven items intended to measure *perceived ease of use* loaded together. Four items intended to measure *perceived risk* loaded onto the *perceived ease of use* factor. Additionally, two items intended to measure convenience loaded onto the *perceived ease of use* factor along with three items intended to measure trustworthiness. As a result of the items that loaded together, the name of the factor was changed from *perceived ease of use* to *perceived riskiness.*

Perceived riskiness (H1) attained the smallest beta value (0,200) indicating it had a weaker statistically significant relationship with online shopping. This shows that respondents in this study agree that perceived riskiness influence the adoption of online shopping however it had a weaker influence. The empirical evidence according to the respondents suggested that *perceived riskiness* occurs when there is no guarantee that the products will not be damaged, delivery might not be within the promised time frame and an individual's personal information might be shared with other Internet companies or stolen through cybercrime.

Literature affirms that *perceived risk* is multifaceted as it encompasses elements of financial risk, product risk as well as privacy risk which are all strong predictors of online shopping adoption (Dai *et al.,* 2014:14). Liaw and Le (2017:161) refer to additional risks that consumers may experience such as missing product information, delivered products not meeting one's expectations and being damaged as well as losing personal data when filling in payment fields. Furthermore, the empirical results suggested that *perceived riskiness* occurred when description and images of products might not be accurate and authentic and online shops might not have a reputation of safe. This finding is validated by Kim and Peterson (2017:45) who assert that due to the vast availability of e-commerce websites, trust is a key determinant in the adoption of e-commerce, especially online shopping. The authors assert that web site trust can

be improved for consumers if it provides an element of privacy in addition to providing accurate product information and images as well as a sophisticated web-site experience.

It is therefore, recommended that:

- Online retailers should guarantee that products will not be damaged. However, if the goods are damaged the business must have a solid return policy in place whereby the business will collect the damaged items from the consumer at the business expense and either refund the consumer or deliver a new product that will not be damaged. Furthermore, online retailers could offer and promote money-back guarantees to reassure consumers of the safety of making purchases online.

- Online retailers should deliver products within the promised time frame. This can be achieved by improving the delivery performance. Using electronic data exchange also mentioned in the literature chapter which replaces paperwork with electronic data simplifies the process making the delivery process quicker.

- Online retailers should ensure that customers personal information will be safe from cybercrime. Business must have software in place which will be able to detect cybercrime activities. Businesses can send messages to customers through their phone numbers whenever personal information is entered to confirm if it is the individual using the information and only when the business has received the confirmation the transaction can proceed.

- Online retailers should have verification signs on their websites so that individuals can be able to trust the online shop. Verification signs can come in a form of a lock symbol, where individuals would look for the sign on the website to guarantee authenticity.

- Online retailers should offer alternative payment methods such as an electronic fund transfer or third-party platform such as PayPal. These alternatives ensure that retailers do not obtain access to the financial details of consumers and reduces financial risks that consumer may incur.

- In addition to payment processes that protect the money and details of consumers, online retailers need to make consumers feel safe while paying. Online retailers should make their Terms and Conditions, Privacy Policy and Returns Policy visible at checkout, as well as their contact details.

5.6.2.2   Perceived usefulness

An EFA revealed that only two of the seven items intended to measure *perceived usefulness* loaded together. Furthermore, two items intended to measure *perceived ease of use* loaded onto the *perceived usefulness* factor. As a result of the items that loaded together, the name of the factor remained *perceived usefulness.*

Perceived usefulness (H2) attained the second highest beta value (0,241). This shows that respondents seem to agree that *perceived usefulness* influences the adoption of online shopping. The empirical results suggest that respondents regard usefulness of online shops as being able to easily view product information, can compare prices amongst various online stores and have access to greater variety of products. Cho and Sagynov (2015:25) confirm that one of the most important benefits online shopping brings is the availability of information. Users have access to a plethora of product information as users get more detailed product information than one would in a brick-and-mortar shopping environment leading to a positive effect on perceived usefulness. Additionally, the availability of price in the online environment allows users to compare prices amongst various e-businesses which in turn leads to a positive effect on *perceived usefulness*. Wu *et al.* (2016:286), assert that *perceived usefulness* indicates the extent to which online shopping users believe using a particular website will improve shopping productivity

It is therefore, recommended:

- Online retailers must make the online shopping experience as easy and effortless. When the perception is that online shopping is difficult and frustrating, consumers will be tempted to abandon online shopping and return to traditional shopping methods. It is thus recommended that online retailers pay careful attention to the position of information and products on their website, to ensure a user-friendly online shopping experience. Online retailers should put effective information search and browsing processes in place to enable consumers to shop online for a wide variety of products

- In addition to the above statement, online retailers should have clear product descriptions, simple payment instructions and accurate delivery information, resulting in a more enjoyable online shopping experience. If product descriptions

    offer exact explanations and accurate images, consumers should experience less anxiety when purchasing online.

- Online retailers could launch a smartphone app for consumers to browse and compare products as well as install digital instore tools such as interactive catalogues and price-checkers.

- Online retailers could offer live chat tools on their website through which consumers can contact and communicate with an employee immediately and in real time. The consumer will be able to send a query, while shopping online, and should receive immediate assistance to resolve the problem. Online help desks and technical assistance, such as Skype sessions with consultants, are ways through which online retailers can increase interactivity and usefulness of websites.

5.6.2.3   Convenience

An EFA revealed that only two of the seven items intended to measure *convenience* loaded together. One item intended to measure *perceived usefulness* loaded onto the *convenience* factor. Furthermore, one item intended to measure *perceived risk* loaded onto the *convenience* factor. As a result of the items that loaded together, the name of the factor remained *convenience*.

Convenience (H_3) attained the highest beta value (0,322), indicated it has a greater influence on online shopping than the two other variables. This suggests that respondents appear to agree that *convenience* influences the adoption of online shopping and has a stronger influence towards the adoption of online shopping. The empirical evidence reveals that respondents regard *convenience* of online shops as providing useful information about a product such as sales notifications, providing extensive product images, having access to products not available to them as well as returning orders without going to the physical outlets. This finding is confirmed by Thananuraksakul (2018:42) who state that *convenience* is one of the main incentives for consumers to engage in online shopping as it is related to creating benefits for users consisting of time saving which is critical in today's fast-paced environment. Consumers can easily obtain desired products through online shopping, rather than

going to brick-and-mortar stores. The convenience of online shopping involves less effort than physical shopping (Nazir *et al*. 2012:492).

It is therefore, recommended that:

- Online retailers must pay attention to the practicalities of using mobile shopping and social media. Young adults between the ages of 18-25 years have been found to use their phones for social media purposes. Young adults could be motivated to switch from browsing social media and make a purchase. Social media platforms should contain images and visible links to the retailer's websites so that consumers can make a purchase through their social media.

- Online retailers should create websites that will have 'pop up' sales notifications to inform customers about sales which in the empirical evidence it was seen as providing useful information.

- Online retailers must provide transport that will fetch orders that are being returned by the customers so that customers do not have to go to the physical store to return the goods but can return them from home.

- Online retailers can allow for online shoppers to make in-store pick-ups. Online retailers can have an alternative option instead of having the products shipped directly to their buyers they can offer in-store pick-ups. Customers will no longer have to visit or even call the store to see if a product is available. By making the purchase online, the customer is assured that he or she will be able to get the product when it is available in store.

In the following section the contribution of the study will be discussed.

5.7   CONTRIBUTION OF THE STUDY

Previous research has mostly focused on factors leading to the adoption of e-commerce. This research is important because it focused on a specific segment of e-commerce, online shopping, and the factors influencing young adults in the adoption thereof. This research has made several contributions which includes the following:

- This study has built on the existing body of knowledge by identifying specific factors that influence young adults towards the adoption of online shopping the South African context;

- This study identified specific factors that play a role in the adoption of online shopping namely, perceived riskiness, perceived usefulness and convenience;

- This study has developed a hypothesised model which illustrates the relationships between *perceived ease of use, perceived usefulness, perceived risk, convenience, trustworthiness and the adoption of online shopping*. The model can be widely used by online businesses operating in South Africa to attract and retain online customers. The hypothesised model can also be used by other researchers as a framework for further investigation of the adoption of online shopping outside of the South African context;

- This study has made available a measuring instrument suitable for determining the factors influencing young adults towards the adoption of online shopping in Nelson Mandela Bay. With some contextual adjustments, the aforementioned research instrument can be used to determine the factors influencing young adults towards the adoption of online shopping in other cities within South Africa;

- Online businesses operating within South Africa are provided with useful information to better target their online offerings to attract and retain young adult consumers. This information includes recommendations for South African online marketers to: appeal to young online shoppers by means of their marketing message; redesign their websites to easily view product information and reinforce online security for their websites to protect their consumers information.

In the following section the researchers reflect on lessons learnt whilst conducting the research.

5.8 SELF-REFLECTION

This study has allowed for a deeper perspective into the factors that influence young adults towards the adoption of online shopping which can form the basis for future studies. For the researchers, on an individual and personal level, this study has resulted in gaining greater insight and knowledge on e-commerce broadly, funnelled through to the adoption of online shopping and the influence of the factors thereof.

The greatest experience for the researchers was accomplishing the challenging task of increasing their skill and knowledge in several research areas, namely reviewing literature and executing quantitative research pertaining to this study effectively.

Lastly, this research has greatly enhanced both researchers researching, writing and analytical skills which in turn will help the researchers in both their future academic careers and further their professional lives.

In the following section the limitations of the study will be discussed.

5.9   LIMITATIONS OF THE STUDY

In this study, all the objectives as outlined in Chapter One were met. However, the present study is not without limitations, as:

- limited research on online shopping within the South African context exists. This proved to be a limitation due to having limited sources of information to draw from;

- The sample size of the study was a limitation as only 200 respondents residing in Nelson Mandela Bay were selected;

- Only five factors were selected for investigation in this study and were based on previous research. This presented a limitation as only three factors were deemed as having statistically significant relationships;

- Non-probability techniques, quota sampling and snowball sampling was used and selected based on its suitability for the purpose of this study. However, this technique may have presented minor limitations due to the uneven demographical split amongst the respondents.

In the following section recommendations for future studies will be made.

5.10   RECOMMENDATIONS FOR FUTURE STUDIES

Despite the above minor limitations, this study has added to the overall empirical body of online shopping research and has provided insight into which factors influence young adults towards the adoption of online shopping within the South African context. The limitations identified above have created many opportunities for further investigation into the area of the adoption of online shopping and are identified as follows:

- It may be advised that future researchers make use of a larger sample size in addition to including respondents in other parts of South Africa. This will allow for the collection of a more accurate set of data;

- It may be advisable for future researchers to explore additional factors relevant to the adoption of online shopping in the hopes of determining more significant relationships;

- it is recommended that a more even distribution in terms of age and racial groups needs to be purposefully included in the samples of future research in order to successfully draw a more accurate inference that represents the residents of South Africa.

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ANNEXURE A: COVER LETTER AND QUESTIONNAIRE

THE FACTORS INFLUENCING YOUNG ADULTS TOWARDS THE ADOPTION OF ONLINE SHOPPING

Dear respondent,

We are honours students currently pursuing our BCom Honours in Business Management. We are collecting data to assist us in exploring the factors affecting the adoption of online shopping amongst young adults between the ages of 18 to 25 years residing in Nelson Mandela Bay and your support and assistance will be much appreciated.

Your participation in the survey is completely **voluntary**, however it would be greatly appreciated if you could respond to the questions that follow so as to assist us to complete our treatise. The survey should take approximately 7 minutes to complete. There are no right or wrong answers. Only your **honesty** and the **perceptions** you hold are important.

Participation will be anonymous and all information will be treated with the strictest confidence.

The results of the survey will be used for publication purposes only and your identity and personal information will be kept completely confidential at all times.

The questionnaire comprises of two sections, namely:
Section A exploring the biographical data of respondents;
Section B exploring the factors influencing the adoption of online shopping; and
Section C exploring the adoption of online shopping and what encourages respondents' motivation therein.
Your participation in the study will be most appreciated,

Kaylinn Nagar   Khaniysa Lutholi
Bcom Honours Student   Bcom Honours Student
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INSTRUCTIONS

Before completing the survey please ensure that you meet the minimum requirements for participating in this study. Only individuals between the ages of 18 to 25 years old and residing in Nelson Mandela Bay can participate.

SECTION A: **BIOGRAPHICAL INFORMATION**

Please indicate your response by means of an (X).

1. Gender			
Male	1	Female	2

2. Age in years

3. Ethnic Affiliation			
Asian	1	Coloured	3
SA Black	2	White	4
Other, Specify:			5

4. Highest Education Qualification			
Matric (Grade 12)	1	Undergraduate degree	4
Certificate	2	Post-graduate diploma	5
Undergraduate diploma	3	Post-graduate degree	6
Other, Specify:			7

5. Years of Internet usage			
>1	1	11 - 15	4
2 – 5	2	16 +	5
6 - 10	3		

SECTION B: **ONLINE SHOPPING PERCEPTIONS**

Mark by means of an (X) the extent to which you regard the following as important for online shopping.

	I engage in online shopping if…	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
1	It is easier than going to a physical store	5	4	3	2	1
2	I can easily access online shops at any time of the day	5	4	3	2	1
3	It is easy to just browse through online shops	5	4	3	2	1
4	It is easy to search for the product I am looking for	5	5	3	2	1
5	I do not need assistance with my online purchases	5	4	3	2	1
6	I can easily view product information	5	4	3	2	1
7	I can easily compare the different offerings of online shops	5	4	3	2	1
8	I can compare prices amongst various online stores	5	4	3	2	1
9	I can access a greater variety of products	5	4	3	2	1
10	I am offered better prices	5	4	3	2	1
11	I can search for and buy products faster than going into a physical store	5	5	3	2	1
12	It enables me to save time	5	4	3	2	1
13	I am provided with useful information such as sales notifications	5	4	3	2	1
14	I am offered online support options such as help forums	5	4	3	2	1

15	Shipping costs are acceptable	5	4	3	2	1
16	I am guaranteed my products will not be damaged	5	4	3	2	1
17	It seems as if my delivery is will be within the promised time frame	5	4	3	2	1
18	My personal information will not be shared with other internet companies	5	4	3	2	1
19	Extensive product images are provided	5	5	3	2	1
20	Previous experience or word of mouth proof that products delivered match its online descriptions	5	4	3	2	1
21	There is a returns policy	5	4	3	2	1
22	It enables me to avoid busy crowds	5	4	3	2	1
23	I don't have to go in to a physical store to make a purchase	5	4	3	2	1
24	I can shop online regardless of my geographic location	5	4	3	2	1
25	Delivery is quick	5	4	3	2	1
26	My product can be delivered to me regardless of my location	5	5	3	2	1
27	I have access to products not available in my vicinity	5	4	3	2	1
28	I can return orders from home and not have to go into physical stores	5	4	3	2	1
29	Descriptions and images of products are accurate and authentic	5	4	3	2	1
30	Online shops have been verified by other online shoppers	5	4	3	2	1
31	Online shops have privacy policies	5	4	3	2	1
32	Online shops have a reputation of being safe	5	4	3	2	1
33	My personal information will be protected from cybercriminals	5	5	3	2	1

34	I have seen positive comments made about online shops on my social media	5	4	3	2	1
35	If trust that products match its description without having to physically inspect the products beforehand	5	4	3	2	1

SECTION C: ADOPTION OF ONLINE SHOPPING

	I expect online shopping to…	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
1	Enable me to shop in the comfort of my home	5	4	3	2	1
2	Enable me to make limitless transactions 24 hours a day	5	4	3	2	1
3	Enable me to easily switch from e-vendor to e-vendor	5	4	3	2	1
4	Provide a wide selection range of goods and services	5	4	3	2	1
5	Provide cheap deals and offer better prices	5	4	3	2	1
6	Have platforms to see review comments written by other customers	5	4	3	2	1
7	Enable me to make easy price comparisons of products	5	4	3	2	1
8	Enable me to feel more comfortable when making discreet purchases	5	4	3	2	1