THE USE OF DIGITAL PAYMENT FOR ONLINE SHOPPING AMONGST MILLENNIALS IN THE GREATER DURBAN AREA

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ABSTRACT

Digital payment performs a vital role in the transaction method of payment for online shopping. Online shopping is often the first step in gaining millennials' attention before using digital payment. With the evolution of online shopping, there is a shift from traditional payment methods to digital payment methods. Online retail stores, online marketers and banking sectors understand the force behind millennials shopping online. The purpose of this exploratory study was to determine the millennials' perceptions of using digital payment for online shopping. The cross-sectional study was undertaken using a quantitative method. Three hundred and ninety-three millennials residing in the greater Durban area of KwaZulu-Natal, South Africa completed a self-administered questionnaire. Descriptive and inferential statistics methods were utilised to summarise and analyse the results. Factors such as brand popularity and pricing influenced millennials' online shopping behaviour. Some of the challenges of the digital payment method are security, privacy, and trust issues. Therefore, there is a need to develop intervention strategies that can create awareness among consumers to address their concerns.

DECLARATION

I, the undersigned, Themba Zitha, do hereby declare that unless otherwise indicated, this dissertation is solely the result of my own work. This work has not been submitted to any other university for a degree award or other purposes and all the authors whose work contributed to this study have been accordingly referenced.

I hereby give consent for this work to be made available for inter-library loan, photocopying, and to the outside interested organisations and millennials.

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Themba Zitha **Date**

DEDICATION

This work is dedicated to the faithful God, the creator of the heaven and the earth and all that is within, who made it possible for me to commence and successfully complete this study.

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 INTRODUCTION

Numerous issues influence millennials (Generation Y) while shopping online using digital payment as a payment transaction method. Online shopping has prompted the use of digital payments and has in a way influenced the growth of electronic commerce (e-commerce). The study, therefore, endeavours to provide insight into e-commerce and the banking sector. E-commerce and banking sectors need to understand the strength behind millennial's shopping online as a result of the changes in consumer behaviour and the options available to consumers. The convenience of online shopping using digital payments saves travel time to the shops while getting better service and value for shopping. This chapter reviews the concepts of digital payment, online shopping amongst millennials in the greater Durban area and the challenges millennials face when shopping online using digital payment. This chapter includes the research problem, aim and objectives, as well as the theoretical framework of the study. It also looks at the scope of the research and clarifies the research methodology used in the study. Lastly, the study's delimitations and a brief chapter outline are given.

1.2 BACKGROUND OF THE STUDY

With increasing access to the Internet and its improved connection options that provide compatible stability, internet existence necessitates essential adjustments in human behaviour. Contact and exchange can happen in a shorter timeframe with no substantial break. The exchange of knowledge is quick and can be communicated worldwide in seconds. The Internet and technology opportunities for millennials have improved due to the developments and the introduction of wireless technology, but so have the challenges that have been brought by these developments. Nowadays digital payment plays an important role in transaction methods of payment for online shopping (Dhanapala, Vashub and Subramaniam 2015: 107). The evolution of online shopping has offered consumers an option between traditional payment methods and digital payment methods (Tontini 2016: 229). Verkijika (2018: 6) contends that traditional payment systems include

digital payment systems like the use of credit cards, debit cards and other electronic payment systems that are limiting, possibly forbidding millennials from adopting them. Digital payments are widely used methods of payment that require an internet connection (Lissitsa and Kol 2016: 305). It is crucial to evaluate millennials perceptions and their challenges on the use of digital payment for online shopping. Also, digital payment is an electronic banking system designed as a payment method for online shopping (Cardoso and Martinez 2018: 11). Therefore, the aim of the study is to evaluate the perceptions and use of digital payment for online shopping amongst millennials in the greater Durban area.

1.3 RESEARCH PROBLEM

South Africa as a country is growing in the acceptance of online shopping and digital payment (Chaney, Touzani and Slimane 2017: 182). Studies conducted by Bailey, Pentina, Mishra and Ben (2017: 628), lack answers about awareness of shopping online using digital payment amongst millennials. Hall and Towers (2017: 500) state that the assortment of the results of this area depends on the millennial's perceptions. This suggests that the lack of awareness of online retail stores is due to the complicated process of digital payments. Consequently, insufficient information on how to use the Internet effectively decreases assurance in shopping online. As put forward by Vasić, Kilibarda and Kaurin (2019: 73), customers continued using cash and cheques since they did not know the advantages of using digital payment, causing limitations for consumers who shop online as it usually requires digital payment. As previously mentioned, this study evaluates millennials who purchase online, using digital payment transactions which is an exchange for products and services. Disregarding the lack of awareness of online shopping and the use of digital payment transactions by millennials, the uptake of digitally-driven shopping and payments by millennials seems slower, presenting challenges to online marketers and retailers because they will not be able to penetrate the millennial market adequately and effectively. Hence, this study seeks to address the challenges of online shopping using digital payment amongst millennials in the greater Durban area.

The foundation of the research problem is to achieve the online digital payment method goals efficiently and improve the potential of purchasing online. Online retail stores and the banking sector must recognise the use of digital payment and its impact on millennials purchasing decisions to assimilate these perceptual attributes into their digital payment design method. The findings of this research will provide new insight to e-commerce on how digital payment impacts millennials buying choices when shopping online. The findings will help online retailers and marketers understand millennials buying behaviour, increase their understanding of millennials shopping behaviour online and using online digital payment as a transaction. This implies that, if online retail stores fail to recognise millennials perceptions of online shopping, they risk a decrease in online sales (Putri, Rahadi and Murtaqi 2017: 34).

1.4 AIM AND OBJECTIVES

The aim and objectives of the study are as follows:

1.4.1 AIM OF THE STUDY

The aim of the study is to evaluate the perceptions and use of digital payment for online shopping amongst millennials in the greater Durban area.

1.4.2 OBJECTIVES OF THE STUDY

The objectives of this study are as follows:

- To identify millennials' perceptions of using digital payment as transaction payment for online shopping;
- To identify shopping behaviours amongst millennials for shopping online; and
- To determine the digital payment usage for online shopping amongst millennials.

1.4.3 RESEARCH QUESTIONS

The research questions for the study are as follows:

- What are millennials perceptions of using digital payment as transaction payment for shopping online?
- What are the challenges experienced by millennials in shopping online?
- What is the usage amongst millennials for digital payment for shopping online?

1.5 SCOPE OF THE RESEARCH

The fast growth of online digital technologies preceded the excessive development of online shopping globally. The demographic profile and the behaviour of millennials require marketers to modify their approaches. The traditional online shopping and digital payment strategies might not be relevant to millennials as they do not offer as many conveniences as the current strategies.

Digital payments will become a new norm whereby online marketers, the banking sector and online retailers must put in more effort in terms of promoting or targeting other consumers as well as millennials. As more millennials own and integrate electronic devices such as laptops and mobile phones daily, the adoption of shopping online using digital payments will also increase. This study is critical to understand how millennials' attitudes and behaviours affect their intention to use digital payment when shopping online. This study will assist marketers, retailers, and banking sectors in evaluating the level of awareness concerning online shopping and the challenges of using digital payment for shopping online amongst millennials. Decisions of whether to address, improve or fix the challenges of shopping online using digital payment will flow from the empirical findings of this study.

1.6 LITERATURE REVIEW

This section analyses the associated literature on ideas, improvements, and outcomes from the insight of various authors and scholars with respect to millennials, reasoned

action and planned behaviour model, online shopping behaviour, awareness and digital payment.

1.6.1 MILLENNIALS REASONED ACTION AND PLANNED BEHAVIOUR MODEL

Previous research by Al-Debei, Akroush and Ashouri (2015: 709) on the theory of reasoned action (TRA) and the theory of planned behaviour (TPB) perceive online shopping and searching for information increasing as diverse forms of behaviour. However, a more detailed version of TRA proves its value in various sources of literature (Tan and Lau 2016: 19; Blake, Neuendorf, LaRosa, Luming, Hudzinski and Hu 2017: 61). Schiffman and Wisenblit (2015: 316) report that a consumer normally gets through five stages of the decision-making process. These undertakings, which form part of the study of millennials purchasing decisions, generally involve recognition, information search, assessments of alternatives, as well as the act of purchasing and post-purchase behaviour.

1.6.2 MILLENNIALS ONLINE SHOPPING BEHAVIOUR

Ordun (2015: 40) describes consumer behaviour as emotional, mental, and physical activities that people go through while shopping online using digital transaction payment methods and they use online product and services to fulfil their needs. Mangold and Smith (2012: 41) state that the buying power of the high number of millennials is impressive for the economy and are accustomed to using the online shopping system. Millennials have formed a major force on online shopping consistent with Bucic, Harris and Arli's (2012: 114) assertion a consumer or millennial considers using digital payment methods that when purchasing any product online. Nevertheless, millennials do not spend much time and thought on online shopping and the use of digital payment is accepted on impulse. Online retailers apply digital payment as an online shopping strategy that motivates millennials or other consumers to impulsive online buying. Digital payment plays a significant role in online shopping transactions at the point of sale (Elms, Kervenoael and Hallsworth 2016: 236).

1.6.3 DIGITAL PAYMENT

Putri, Rahadi and Murtaqi (2017: 34) define digital payment as a transaction method, where consumers and retailers are permitted by an electronic communications system to make payments. Regarding logistical functions of digital payment, Harjanto and Setiawan (2018: 3923) identify the mains aim of digital payment as making payments wherever you are, protecting your cash as you shop and making payment without writing a physical cheque. Bailey *et al*. (2017: 629) state that the online transaction purpose of digital payment is to encourage the online purchase decisions of millennials. It is effectively one of the main reasons that motivate millennials to use digital payment for online purchases.

According to Yu, Cao, Liu, Gong and Adeel (2018: 11) millennials use digital transactions when shopping online to consistently satisfy their needs. As SivaKumar and Gunasekaran (2017: 220) explain online store websites use current versions of the Internet and present a larger variation of products to provide value-added services to customers. Online stores offer the most recent products and services at competitive prices than in-store retailers. A study undertaken by Schneider, *et al.* (2018: 246) found that the daily internet usage among millennials is 95.7% and baby boomers is 73.7% confirming that millennials are gradually adapting to using the Internet and can adopt online shopping more than any other generation.

Two challenges of shopping online using digital payment are identified as trust and security. Trust from millennials and other generations creates a serious challenge concerning shopping online using digital payment transaction and the use of credit information (Ek Styven, Foster and Wallstrom 2017: 418). Security is the most vital element for millennials as they always want to be careful every time, they give out information (Yeh, Hsiao and Yang 2012: 13). Dhanapala, Vashub and Subramaniam (2015: 114) also contend that consumers shopping online understand risk, price and product or service quality, suggesting a negative relation to online shopping, for example, buying counterfeit products online. Trust and security of digital payment could result in a millennial's personal financial information, being open to possible hackers and misused (Yeh, Hsiao and Yang 2012: 13).

Cimperman, Harrison, Hatch, Pillar and Snipes (2018: 15) affirm that little is known about millennials shopping online using digital payment. Therefore, this study seeks to weigh the challenges of using digital payment for online shopping and understand the relationship of millennials shopping online using digital payment.

1.7 RESEARCH METHODOLOGY

This section gives a summary of the research design, research approach, target population, size of the sample, sampling method, questionnaire design, data collection method, data analysis, reliability and validity applied during the study.

1.7.1 RESEARCH DESIGN

Research design provides a rational order for a researcher that will be used to establish a link among the aims and objectives and research questions to ultimately get to the conclusion (Burns and Bush 2014: 146). Dhanapala, Vashub and Subramaniam (2015: 116) define research design as a blueprint of how academics propose to perform the study. This study is quantitative and cross-sectional. A questionnaire with closed-ended questions and one open-ended question was administered to obtain data. Verkijika (2018: 5) suggests that in quantitative research, there is a fundamental capacity of numbers and the skill to represent the world with precision.

1.7.2 TARGET POPULATION

White and Mcburney (2013: 216) classify the target population as the population of interest to the researcher. The attention of the researcher was directed towards millennials (Generation Y) in the greater Durban area in KwaZulu-Natal. The greater Durban area was chosen as it was convenient for the researcher.

1.7.3 SAMPLE SIZE

The sample size of a research study is established by the number of groups chosen from the target population (Burns and Bush 2010: 60). White and Mcburney (2013: 216) state that the sample size of a study is determined specifically by the decision of the researcher,

the budget, and the time taken to complete the studies. A sample size of 400 millennials was selected.

1.7.4 Sampling Method

Non-probability samples contain parts from the populace chosen in a non-statistical method (Al-Debei, Akroush and Ashouri 2015: 713). Purposive sampling was applied, using a non-statistical method mainly since it is simple to gather information. This method is practised as millennials form the majority of the population, and samples are simpler to format, inexpensive, and acceptable in their representativeness within the range of the specified research (Tan and Lau 2016: 21).

1.7.5 Measuring Instruments

According to Yu *et al*. (2018), measuring instruments are utilised by investigators and professionals to help review or evaluate focuses. White and Mcburney (2013: 218) mention that a questionnaire is a research tool that allows respondents to respond to the same set of questions in a pre-set directive. Questionnaires were used to collect the information. The questionnaire comprised of a five-point Likert scale that was self-administered.

1.7.6 Data Analysis

Descriptive and inferential statistics were used to describe and summarise the data. Descriptive statistics were employed in the form of frequency tables, charts, and percentages. Inferential statistics were used to test chi-square and define and identify the significance of relationships. Data was analysed using the latest version (26.0) of the Statistical Package for Social Sciences (SPSS).

1.7.7 Pre-testing

Pre-testing was carried out to determine that the questionnaire is understood by the respondents. Malhotra (2010: 124) describes pre-testing of the research as an instrument meant to perfect the defined questionnaire. For this study, ten (10) random respondents

were chosen to participate in responding to the research question to test the questionnaire.

1.7.8 Delimitations

The study was confined to millennials; students and working individuals in the greater Durban area. The study targeted millennials from only the greater Durban area due to the high costs involved in using a larger population.

1.7.9 Validity and Reliability

According to White and Mcburney (2013: 131), validity is the degree to which an instrument measures accurately what it is supposed to measure. Zheng, Lee and Cheung (2017: 716) mention that validity in a study is crucial, as outcomes will be worthless if they cannot be applied to respond to the research question, that is the key goal of the study. In an alternative view by Malhotra (2010: 186), reliability means getting equal outcomes for repeated tests in situations where the attributes assessed are the same. Cronbach's alpha test was used to measure reliability. White and Mcburney (2013: 143) assert that validity correlates with the dimension of the accurate model whilst reliability describes the reliability of the dimension. Validity was guaranteed as the instrument for data gathering, was precisely similar to the aims and objectives of the study. The questionnaire was examined by the statistician and two academics for possible changes to meet validity requirements.

1.7.10 Ethical Considerations

White and Mcburney (2013: 54) affirm that research ethics are rules, code of exercise and procedures. Ethics in this study include obtaining consent from respondents from whom data is reserved. Ethical considerations guarantee that the opinion of respondents is given generously and short on reluctance. According to Malhotra (2010: 219), the researcher has to maintain both moral and professional ethical considerations though the respondents may be unaware of the ethical obligations. All questionnaires are stored for the specified period or disposed of according to the university policy. Ethics deals with the progression of reaching a decision about what is right and wrong.

1.8 OUTLINE OF THE DISSERTATION CHAPTERS

The dissertation is organised into five chapters as follows:

Chapter One: Introduction to the study

Chapter One provides an outline of the study. This chapter offers a summary of the study aim, objectives, and scope of the research, methodology and delimitations.

Chapter Two: Literature Review

This chapter focus is on the literature on the ideas, advances, and outcomes from the perception of various scholars and authors regarding millennials, awareness, online shopping, online shopping behaviour, online purchasing, and digital payment. Types of digital payment instruments and theoretical prototypes are also provided.

Chapter Three: Research methodology

This chapter describes research plan, research method, target population, scope of the sample, sampling technique, questionnaire plan, data collection method, data analysis, reliability and validity implemented in the research project.

Chapter Four: Findings, analysis and interpretation

This chapter focuses on the outcomes and the findings gained from the quantitative data. Descriptive statistics are offered in the arrangement of graphic representations, cross-tabulations and other statistics for the quantitative data that was composed. Inferential techniques involve the use of correlations and chi-square test values that are read by means of p-values.

Chapter Five: Conclusion and recommendations

This chapter gives a summary of the study and conclusions from the empirical results. The limitations of the study are noted and areas for further research are suggested.

1.9 CONCLUSION

This chapter presented an outline of the study and discussed the research problem. The aim, objectives, and justification that inspired this study were also given. The summary of the dissertation chapters and short clarifications were offered. The next chapter is devoted to the revising of present literature and the discussion of applicable concepts that could clarify the challenges of shopping online using digital payment.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The first chapter gave a summary of the research study, an analysis and a mixture of concepts, advances and outcomes of various authors and scholars of studied literature. The aim of this chapter is to provide a theoretical insight into millennials, online shopping, digital payment, and the relationships between online shopping and digital payments. This is followed by looking into the perceptions millennials have as consumers when it comes to online shopping using digital payment systems, how much they use digital payment systems when shopping online, the review of relevant theoretical models, information-seeking behaviour and challenges of shopping online using digital payment.

2.2 DESCRIPTION OF MILLENNIALS

The term “millennials” was originally applied by Strauss and Howe (1991: 84). It implied that peers in the same age group mature with comparable attitudes and beliefs. Though the term is being widely used in this day and age, no set measurement has been formulated to calculate the exact age group (generation) that falls under this term. The majority of academics apply the term to birth ages that vary from the early 1980s to the early 2000s (Dimock 2018: 4; Ladhari, Gonthier and Lajante 2019: 114). Millennials grew up in social and financial circumstances, for example, the growth and development in digital technology and mass media that are different to prior generations (Wei Chan, Ahmad, Zaman, Omar, Ramlan and Tam 2016: 5). The previous study embodies them as being distinctive, technology savvy, mature, urbane, and learned (SivaKumar and Gunasekaran 2017: 220). Millennials are said to be impatient, highly esteemed with impractical prospects, greedy and altruistic (Al-Debei, Akroush and Ashouri, 2015: 708). Millennials are young individuals called “Generation Y”, born between 1980 and 2004 (Cimperman *et al.* 2018: 6). Different ranges of birth years have been used to bracket the millennial group, for instance, the mid-1970s to 2004 (Mun, Khalid and Nadarajah 2017: 398), 1980–1997 (Wright, Haug and Huckabee 2019: 174) and 1980–2004 (Lachman and Brett 2013: 96). For this study, the millennial Generation Y measure that will be used

is birth age from 1980 to 2004, which is a comprehensive series. Moving away from prior years as they were not born into a world that features worldwide interdependence and global engagement (Dhanapala, Vashub and Subramaniam 2015: 113).

2.2.1 MILLENNIALS AS CONSUMERS

Millennials are mostly open-minded to ethical topics, they respect multiculturalism, and are easy to voice themselves (Migliaccio 2017: 39). One can say that they are influenced by technology to shape themselves as it allows networked communication and speedy exchange of information (Myers 2016: 233).

According to Okulicz-Kozaryn and Valente (2019: 98) millennials are tremendously inquisitive, independent, contrarian, clever, attentive, able to adapt, highly esteemed and have a global orientation where the demographic revolution meets the digital revolution like digital natives who are inherent speakers of the virtual language of computers, the Internet and video games. Millennials are thoughtful and easy yet have important ways to study, work, have fun, connect, buy, and build societies that are different from their parents (Myers 2016: 234). The purchasing power that millennials have is enough to be noticed and considered an important current and future influence on world economies and they are considered the most dominant purchasers in the market (Cimperman *et al*. 2018: 16). Their access to the Internet is the main reason for this as they use it greatly (Cardoso and Martinez 2018: 10). In as much as millennials are familiar with technology and use it without referring to manuals, they still do not understand it as they would be expected to as they have minimal knowledge (Yeo, Goh and Rezaei 2017: 5). Early and recurrent exposure to technology has undesirable and desirable influences on the emotional intelligence and social characteristics of an individual.

It is not surprising that millennials' personalities are influenced by their relationship with technology. In the study done by Yang, Pang, Liu, Yen and Tarn (2015: 13) millennials participate the most in online facilities like online trading, internet banking, online shopping, and online insurance purchases. Looking at this and their extensive use of technology, it is sensible to assume that they view themselves as expert technology users and have infinite information. Millennials grew up in a time where shopping is no longer

considered an easy action of buying. The manufacturing of wholesale and production options gets incorporated into a trade society where performances of buying include modern entertainment and or experimental elements (Ashraf, Thongpapanl and Auh 2014: 72). As a result, millennials have developed a shopping style different from the older generation, as they are seen to use status-seeking standards as it shows their financial status and purchasing power (Hall and Towers 2017: 510). Millennials have easy access to lots of information, this consumption of information has improved their level of knowledge in many aspects and their focus is on technical information. They use this knowledge and information to gather enough research before making a purchase. Consequently, they are now highly conscious of advertising methods, and are wary of them unlike previous generations (Quint 2015: 31).

There is a huge reliance on technology as a provider of information and it is seen to help create awareness of online shopping systems and what it offers to millennials. Taking rash decisions without putting much thought into them is something that millennials are used to unlike other generations, they are also faster at adopting new opportunities such as online shopping, electronic payment, digital payment, and mobile payment. With growth in the millennial generation, completing university, getting into the industry and possibly starting a family, loyalty to online shopping using digital payments is evident (Burnasheva, GuSuh and Villalobos-Moron 2018: 6). Awareness is discussed in the next section.

2.3 MILLENNIALS AWARENESS (on online shopping, digital payment, and brand loyalty)

Banu Rekha and Gokila (2015: 98) believe that consciousness is a portion of human growth, and it is vital for humans to be mindful of the circumstances everywhere. Just as how millennials are aware of their purchasing powers, they would commonly spend more money as they receive it on goods and personal items (Egan 2015: 136).

With today’s consumers wanting to be seen, known, and respected more than anything else, marketers and retailers capitalise on these relationships by being empathetic, and with a deep understanding of this relationship and proper awareness of online shopping,

digital payment will succeed. A consistent relationship that understands who they are and what they want, is what millennials aim for, as they want someone who knows what makes them buy (Hall and Towers 2017: 505). Generation Y has a different decision outline on brand loyalty compared to other generations. In recent years there has been an increase in online shopping worldwide. Internet developments in geographical scale and fame are getting aware of online shopping systems and accepting them as a tool aimed at pursuing knowledge and shopping online (Karimi, Papamichail and Holland 2015: 140).

Comparing Generation X and Z to Generation Y, Generation Y has developed certain patterns that control their purchasing choices and shopping online. With hope this generation has embraced technology, it is almost impossible to reach out to them through traditional advertising as they focus more on shops available online (Burnasheva, GuSuh and Villalobos-Moron 2018: 7). With their bold behaviour of not being afraid to embrace and show who they are, millennials carry this out even in their consumption choices, they buy and use products that assist them in defining themselves, show what they value, and this will mostly reveal their personality. Millennials have the desire to get the greatest choice concerning not only the price and quality but also consider their spending.

Various authors have analysed and studied the significance millennials have to technology, the role that millennials play in online services, and they agree that they have a different attitude towards brands. The failure to shift away from traditional brand advertising and promotions by earlier generations is the cause of a lack of awareness of online shopping, digital payment, and brand loyalty (Egan 2015: 138). Online shopping is discussed next.

2.4 ONLINE SHOPPING

Online shopping is part of e-commerce that permits customers to unswervingly purchase goods or services from an online store on the Internet utilising a web browser (Kim and Krishnan 2015: 2436). The emphasis on millennial shoppers is fascinating since they are believed to possess a great tendency to utilise numerous devices online as digital natives linked to the wholesale world (Burnasheva, GuSuh and Villalobos-Moron 2018: 7).

Access to the Internet is now not only through computers and mobile devices, but it has also grown, enabling knowledge to be retrieved through any phase of a shopper's journey.

There is an increase in the focus of growth of customer repurchase behaviour online as it is increasing. Some marketing literature detail the findings of the role of value awareness on the buyback choice creating procedure in online shopping programs. For instance, Karimi, Papamichail and Holland (2015: 143) discovered that worth awareness is the greatest analyst of online shopping unwillingness. Online stores have brought about a change in customer preference and their buying behaviour, online systems make it easy to approach and communicate with customers (Chen, Huang and Davison 2017: 1568). Budiharseno (2017: 1) states that customers render online shops fun as it aligns with their everyday shopping style with the development of online store applications, they offer extra advantages and ease to customers. Online shopping applications can influence consumer shopping preferences when it comes to shopping online. In this extremely changed marketing situation, information on demographic factors will create an understanding on how shopping preferences impact market terms. Marketing specialists constantly consider key elements like demographic, economic, socio-cultural, technological, and environmental elements to realise market situations. Budiharseno (2017: 4) reveals that younger customers are more accustomed to online shopping and select online shopping as their preference which is common amongst the millennial group. Consequently, demographic factors may alter customers' preferences in shopping online.

Looking at how transactions take place in online shopping, the customer pays first before getting the product(s) belonging to them delivered and this is different to the traditional markets as with them the exchange of products and money is simultaneous meaning you get physical ownership of products as soon as you pay with no waiting period (Duarte, Costae Silva and Ferreira 2018: 164; Vasić, Kilibarda and Kaurin 2019: 78). The system of transacting in online shops makes them prone to fraudulent acts as it might not always be secure, but well-developed stores allow improvements from customer complaints and existing errors seen by them in the system.

Traditional markets (referred to as offline stores nowadays) and online stores all carry their pros and cons. Currently, most people still prefer traditional markets irrespective of the speedy development of online shops and consumers that purchase online. The core benefit of traditional markets is the robust natural contact that happens between the retailer, the consumer, and the goods. Shops are transitioning and moving with the times by offering online stores as an option to traditional shops, but this does not validate terminating traditional shops as not all customers choose to perform trades online. The analysis of online shopping favourites by Hsu, Chuang, and Hsu (2014: 341) indicates that after the convenience offered by online shopping some individuals still choose to buy traditionally. Cimperman *et al*. (2018: 17) support that millennials contribution to online shopping reveals a shift from shopping online to traditional shopping, where many would not voluntarily choose to shop online.

As of the observations of the study, it can be concluded that online shopping has an impact on digital payment preference. However, Singh and Abhinav (2014: 51) and Vasić, Kilibarda and Kaurin (2019: 74) claim that online shopping merely gets customers mindful of the readiness of brands or products and do not certainly alter their decision to buy and pay online.

2.4.1 Millennials on Online Shopping Behaviour

As previously mentioned, a higher spend, as opposed to income, has been observed in millennials unlike any other age group (Sethi, Kaur and Wadera 2018: 8). Sparks, So and Bradley (2016: 78) opine millennials consider online reviews highly before making a purchase. Banu, Rekha and Gokila (2015: 99) support that the worldwide recession has influenced millennials on their purchasing behaviour and their social media customs. Millennials are also aware of customised products, personalised services and that they can interact and purchase from suppliers worldwide (Hall and Towers 2017: 509).

Everyone is an individual and they carry individualistic traits which can be common amongst groups and these distinct characteristics are seen with the millennial generation when compared to other generations in their values, skills, and knowledge. This difference is highly noticeable in their use of technology and how knowledgeable they are

about it, possibly leading to trust and security issues while on the Internet and purchasing online. To explain online shopping in more detail concerning shopping behaviour the technology acceptance model (TAM) is used as it includes ease of use and usefulness, (Ashraf, Thongpapanl and Auh 2014: 80). This is seen in the review done by Safitri, Ginting, Rini and Lubis (2017: 153) which reveals that attitude and purpose towards online shopping are not only impacted by convenience, practicality, and pleasure, but similarly by external aspects like customer characteristics, situational factors, product features, former involvements, and trust in online shopping. Jung (2016: 31) states that trust, perceived usefulness, and ease of use convinces the customer to reuse an online store. The theory of reasoned action and the theory of planned behaviour are applied to describe online shopping behaviour (Ajzen 1988: 86).

Convenience-orientated people are more prone to be attracted to online shopping unlike price-orientated individuals and time awareness may have an impact on the individual's decision (Banu Rekha and Gokila 2015: 99). The convenience to make a purchase online instead of physically walking into a store has prolonged the potential duration and scale of the retail environment. A difference in behaviour between online shoppers and traditional shoppers has been noticed, as online shoppers are actively involved in shopper mode, with a view to making a purchase (Lian and Yen 2014: 134). A trend and change in online shopping behaviour are seen in this era as online shoppers utilise internet-enabled multi-gadgets to buy online.

2.4.2 CUSTOMER ATTITUDES TOWARDS ONLINE SHOPPING

Millennials are a strong measure of online shopping behaviour. Past research has proven that millennials (Generation Y) commonly, account for the higher percentage of online purchases, followed by Generation X and lastly, baby boomers (Hall and Towers 2017: 504; Banu Rekha and Gokila 2015: 99). According to Hall and Towers (2017: 504), millennials consider shopping a serious activity and spend a lot of time online browsing, imagining, and thinking about sales and keeping up with food and fashion blogs. Dhanapala, Vashub and Subramaniam (2015: 115) support and add that millennials are more engrossed in online activities plus social media, podcasts, blogs and digital

transactions, unlike any other generation. A change has been noticed in their search history concerning online purchasing.

SivaKumar and Gunasekaran (2017: 221) state the views of customers that online shopping holds its own benefits as opposed to traditional shopping. Online shopping allows customers to buy goods and services around the clock and wherever they are geographically located. Moreover, online shopping allows customers to buy goods directly from online stores. Hence, the skill of a customer in an online retailer signifies a consumer's authentic experience in this environment. The structure of the website has to be taken into consideration as it will influence the consumers' decision to use it again or not; it is important that it must not only look appealing and have a great design; it also must be user friendly. The approaches from customers towards the online shop are more positive if it is easier to use and the superiority of the website is greater (Kaushik and Dhir 2019: 263). Based on the experience and the quality of the website consumers will voluntarily give positive feedback about the online store (Kim and Krishnan 2015: 2439). Dai, Forsythe and Kwon (2014: 17) state that higher website quality typically results in a greater perception of confidence. This is important in building trust, even if developing trust is an actual stimulating procedure.

Research on millennials using digital payment for online shopping has contributed to the conclusion that Generation Y tends to shop online more than the older generation (Hall and Towers 2017: 506). On the contrary, Cardoso and Martinez (2018: 14) discovered that older generation customers are expected to shop more online. In conclusion to the above literature, biographic factors compared to shopping motives and attitudes in forecasting online shopping remains an open question. Online purchasing is discussed in the following section.

2.5 ONLINE PURCHASING

Consumers who value convenience and saving time are most likely to opt for shopping online. E-commerce has grown over the years. According to Shanthi and Kannaiah (2015: 19), customers are likely to prefer to purchase goods and appliances online, since they are easier to purchase based on their description and picture without physically handling

them. Consumers also choose to search online for appliances, clothing and beauty products from their homes to minimise the time and effort involved (Frasquet, Mollá and Ruiz 2015: 660).

2.5.1 ONLINE PURCHASING EXPERIENCE AND INTENTION

Hsu, Chuang and Hsu (2014: 338) explain that factors like convenience of access to shopping around the clock, ease of self-service and freedom are seen as drivers of impulsive online buying. According to Dai, Forsythe and Kwon (2014: 15), online shoppers are an impulsive and risk-driven group. Wandoko, Abbas, Budiastuti and Kosala (2017: 4) found that consumers' general impulsiveness is positively associated with online purchase intention, and was later confirmed by (Sahi, Sekhon and Quareshi 2016: 869).

For effective communication, marketers need to employ a proper marketing strategy to drive intention to purchase. Consumers go through the decision-making process after establishing a path-to-purchase, to solve an occasion-specific purchase need. The final decision could be totally different from the initial intended purchase after going through the traditional consumption development (Dai, Forsythe and Kwon 2014: 16 and Sinha and Singh 2017: 312). Customers are able to get an understanding of product details using the Internet and perform an informed purchase intention process (Faqih 2013: 69). Problem recognition, information search, evaluation of alternatives, product choice and post-purchase evaluation are the common steps consumers go through during the decision-making process.

2.5.1.1 Intention

Intention is influenced by the attitude of an individual and subjective norms. Liao, Wang and Yeh (2014: 673) mention that behavioural intention used to calculate actual usage is effective and consistent. The theory of reasoned action (TRA) explains that behaviour is expected by a person's intention to be involved. Numerous theoretical studies give a better a better explanation of the association among belief constructs and circumstances of intention by analysing approaches to breaking down attitudinal views (Moorhouse, tom Dieck and Jung 2018: 137). The theory of planned behaviour (TPB) works as an intention

measure in adopting payment habits according to assessing beliefs. Additionally, the intention model was also used by information systems researchers in social psychology to forecast a person's intention to accept technology (Hsu, Chuang and Hsu 2014: 345). Perceived behavioural control, subjective norms and attitude from the performance are used to measure behavioural intention (Wu *et al*. 2014: 2769). Intention could also influence an attitude that would make the consumer more willing to try a certain new behaviour.

2.5.1.2 Attitude

Attitude can be used to measure behaviour by assessing the levels of positives or negatives or estimate their behaviour. An idea was given by Khare and Sadachar (2014: 118) that the use of a system can be determined by an individual's overall attitude towards information technology and the application's actual purpose. Ashraf, Thongpapanl and Auh (2014: 81) support that the user's attitude can influence the user's acceptance based on the view held on digital payment and control the perceived ease of use of the application due to the attitude held about the application.

Kotler and Keller (2015: 186) opine that intellectual, tendency of action, and emotions explain attitude in three modern terms. Safitri *et al.* (2017:149) argue that attitude is an important factor that influences intention. Additionally, the intellectual factor indicates how a user thinks, belief in handling the object, and the emotional component is how a user feels about an attitude. Kirk, Chiagouris, Lala, and Thomas (2015: 4) state that an individual attitude builds user attitude to adapt to a or current technology. Adapters are after pleasure that suits the desired interest and needs from a certain technology. Ho (2014: 146) claims that in order to reveal comparable findings the user's attitude needs to be understood since it influences the user's perceived usefulness. Free access to information and services gives users more understanding about technology resulting in more joy and higher influence on future intention to adapt new technology.

2.5.1.3 Subjective Norms

Abdullah, Ward and Ahmed (2016: 82) explain that subjective norms are individual observations carried by people on approved behaviour. Subjective norms can be categorised into two parts namely, the interpersonal influence which are views from family members, friends, and relatives and external influence being the expert or mass media reviews and opinions (Tan and Lau 2016: 19). There are two dependent components from subjective norms, which are normative beliefs that are the inspiration that justifies their thoughts and injunctive norms, which are a person's beliefs about what must be done (Faqih 2016: 151). Injunctive norms are balanced by descriptive norms which are the beliefs about appropriate behaviour in social gatherings. The theory of reason action (TRA) shows that individuals must carry out a certain behaviour they would possibly observe on themselves and others, bringing a new perspective to subjective norms leading consumers to agree that subjective norms have a relationship that reflects an important influence on the awareness of online shopping using digital payment.

2.5.1.4 Perceived Ease of Use

According to Ashraf, Thongpapanl and Auh (2014: 75), perceived ease of use is when the user trusts using a certain framework as it does not require much thinking. Safitri *et al*. (2017: 150) claim that an intellectual attempt can be measured using perceived ease of use when learning new technologies. Beneficial systems and technologies are systems and technologies that are user-friendly. A significant relationship lies between perceived ease of use and intention to adopt digital payments; the easier to use these technologies, the more people will be attracted to them.

According to the discussion of the various authors above, the roles that perceived ease of use play is important to marketers, consumers, producers, and stores. The above literature support that perceived ease of use is vital and serves a significant purpose in the identification, association, and differentiation of new information technology.

2.5.1.5 Perceived Usefulness

Perceived usefulness is the degree to which a person has confidence in using a certain system which correlates to a surge in the customer's job performance (Oni *et al*. 2017: 322). Tandon, Kiran and Sah (2018: 63) further state that a measure in brand-new information technology in a detailed task linked to the context given by a person's subjective assessment of the value is perceived usefulness.

Perceived usefulness is considered to be an outside source of inspiration (Ashraf, Thongpapanl and Auh 2014: 72). Additionally, individuals are most likely to welcome technology if the overall upgrades could increase productivity and job efficiency. A properly designed website results in ease of understanding and use. Perceived usefulness influences the adoption of digital payment systems. Based on Al-Debei, Akroush and Ashouri (2015: 713), a lot of aspects are taken into consideration when referring to perceived usefulness as they are dependent on what consumers and retailers offer.

2.5.1.6 Benefit

Taylor (2016: 164) proposes benefits as highly important apparatuses for shopping online using digital payment systems usage and adoption. With digital payment systems no additional charges are incurred, the payer only pays for exactly what they are purchasing, which is a benefit as it keeps costs low.

Mujinga, Eloff and Kroeze (2018: 4) who projected electronic commerce (e-commerce) elements like the shopping area, investing, and online digital payment systems, discovered that perceived ease and financial benefits in terms of cost influenced the adoption decision; this being the main reason that users convert to digital payment. Thakur (2015: 157) supports that the perceived benefits in economic terms and transaction costs are fixed when using digital payment. Taylor (2016: 169) explains that customers incline to cash and cheques as viable payment methods, as they are still not convinced of the benefits to adopt digital payment.

In conclusion, the cited authors agree that online purchasing experience and intention are influential on online shopping evaluation. This is because consumers wish to gain knowledge and have an informed purchase intention that could impact their decision-making for future purchases. The process can be answered by the conceptual framework called the information system acceptance model which includes intention, perceived usefulness, subjective norms, attitude, perceived ease of use, and benefit. The theoretical models of information system acceptance are discussed in the following section.

2.6 REVIEW OF RELEVANT THEORETICAL MODELS

For this study, three theoretical models are discussed.

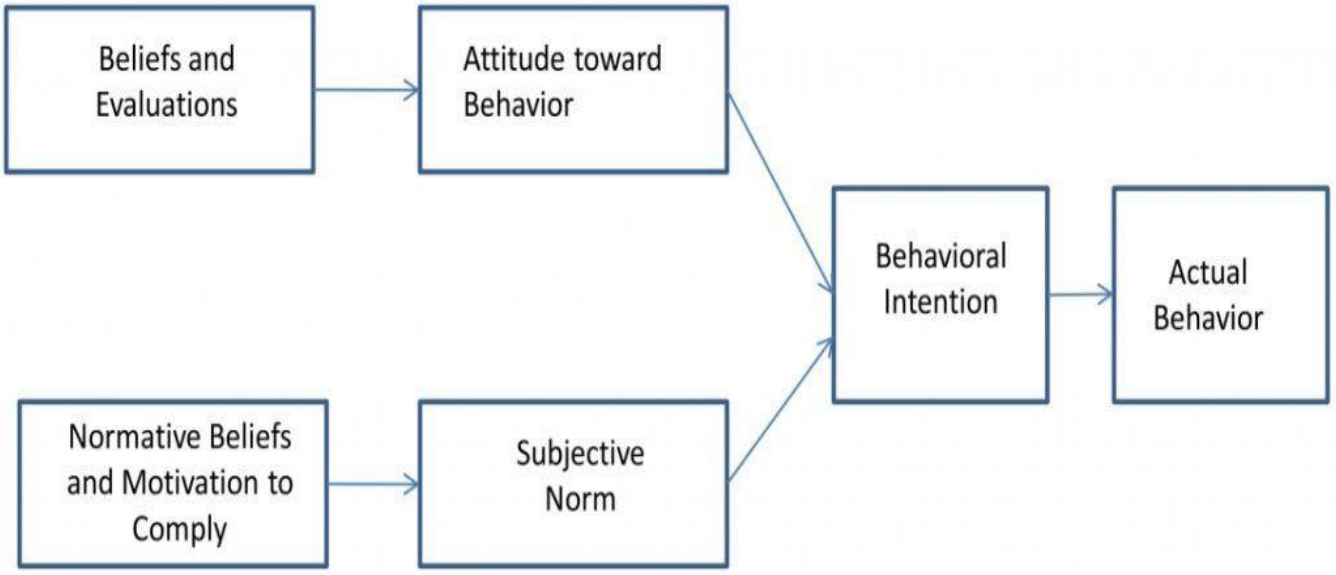
2.6.1 INFORMATION SYSTEM ACCEPTANCE MODEL

The concept for a research study and the reason for the research problem existing under a study are best described by a theoretical model structure. Consumer adoption of technology is performed to measure various well-established theoretical models. For this study, the theory of reasoned action, theory of planned behaviour and technology acceptance model are collectively employed in the theoretical model for the analysis of online shopping and online payment. According to Ashraf, Thongpapanl and Auh (2014: 72), the models used as the theoretical basis of informative system acceptance are TRA, TPB, and TAM, which have been used for over 20 years. These theories were chosen due to their applicability to the study. Next, the theory of reasoned action will be discussed.

2.6.2 THEORY OF REASONED ACTION (TRA)

TRA describes feelings in engagement on which behaviour will influence the behaviour and opinions of a person (Oni *et al*. 2017: 319). The aim of this model is to study the association of attitudes, subjective norms, and behavioural intention. Many studies encompass TRA and it has been extended in the theory of planned behaviour (TPB) (Oni *et al. 2017*: 318; and Safitri *et al*. 2017: 155).

Figure 2. 1 Theory of reasoned action

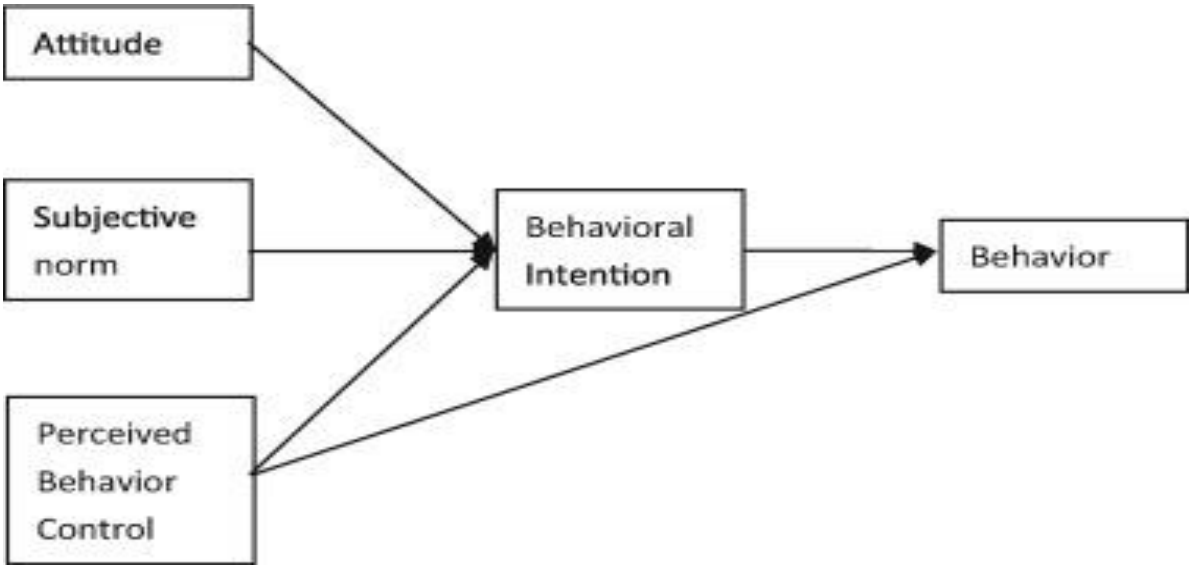


Source: (Keijzer 2015: 82)

2.6.3 THEORY OF PLANNED BEHAVIOUR (TPB)

The TRA model was the brain of the TPB model, which is defined by subjective norms, attitude and perceived behavioural control (PBC) and are all components that will influence behavioural intention (Fishbein and Ajzen 1975: 37). TPB brings a fresh new perspective which is the perceived behavioural control (PBC) as a reason for both behaviour and intention. Ashraf, Thongpapanl and Auh (2014: 78) further explain that perceived behaviour control entails specific behaviour which was discovered by existing adequate resources. Therefore, TBA is a continuous development process where consumers may be influenced in all the components of the behavioural intention.

Figure 2. 2 Theory of Planned Behaviour

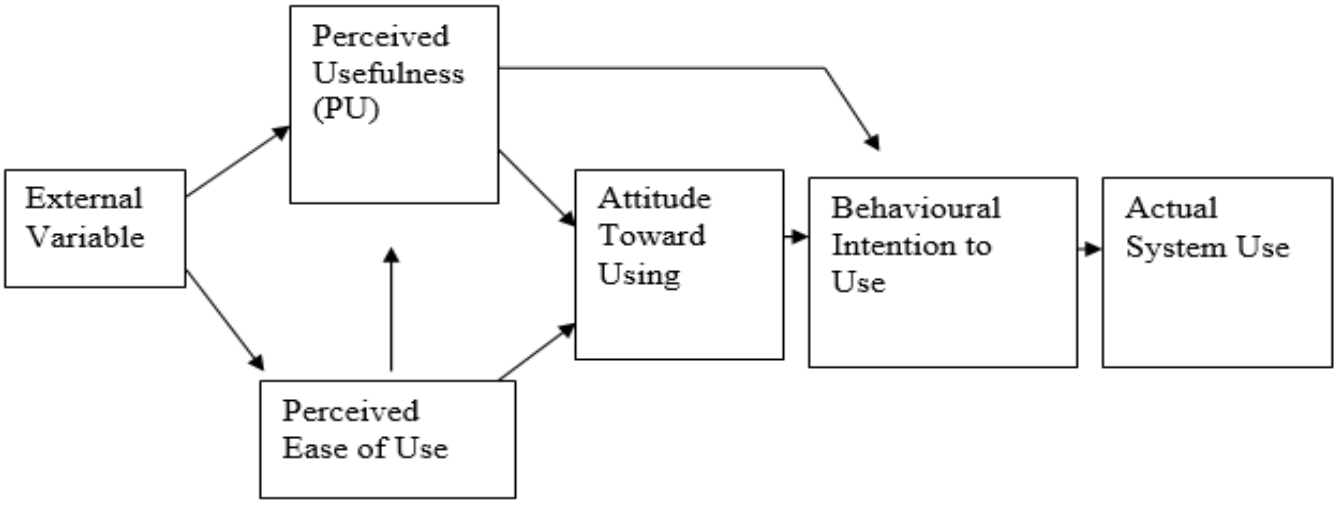


Source: (Al-Debei *et al*. 2015: 710).

2.6.4 TECHNOLOGY ACCEPTANCE MODEL (TAM)

Understanding of technology acceptance behaviour and decisions to implement e-commerce activities are established using the TAM model (Cherer, Siddiq and Tondeur 2019: 22). Frasquet, Mollá and Ruiz's (2015: 655) study on perceived usefulness and ease of use are vital for the advancement of digital payment systems used due to their consistency and relevance. Compared to TRA and TPB, TAM is a precise research framework for shopping online.

Figure 2. 3 Technology Acceptance Model



Source: (Ho 2014: 146)

Based on the authors' findings, and their argument, TRA measures feelings that influence decision behaviour, TPB brings a fresh new perspective which is the perceived behavioural control and influences intention, and TAM is used to understand acceptance behaviour and implementation decision. All these theoretical models are proven to be most important in the use of technology and consumer decision to purchase online using digital payment methods. Digital payment is discussed in the next section.

2.7 DIGITAL PAYMENT

The focus of this study is to establish the present usage level and awareness of acceptance regarding the use of digital payment devices for online shopping. The studied population are millennials (Generation Y) in the greater Durban area because they represent the population who live in the digital era and use the Internet, making them receptive to technological advancements.

Wandoko *et al*. (2017: 2) define digital payment as a form of financial instrument, where the buyer and seller are facilitated by electronic communications through a third-party payment interface between banks for real-time payment. It is when a buyer transacts by providing details of their card to complete a transaction online; it requires the card number,

expiry date and card verification Value (CVV) number from the card. A CVV is a four-digit code that is a standard and present verification security measure used to confirm that the user using the bank card online does have the card on hand (Budiharseno 2017: 2). Network payment modes for transactions between the bank and online payment platforms are provided by third party payment which is an independent organisation. For example, Skipjack which provides retailers with a few customer details allowing the bank to verify the CVV number (Maadi, Maadi and Javidnia 2016: 491). It offers two types of online payment: business-initiated and customer-initiated. On the customer's end, digital payment offers an opportunity for quick payment. With the development of online payments businesses have an opportunity to expand (Shanthi and Kannaiah 2015: 18).

Although online payment systems are more convenient, faster, efficient, and economical, there are plenty of risks with online payment systems during transactions. Lastly, law and regulation problems remain as legislations for online payment still have to be established (Yang *et al*. 2015: 17), which indicates a gap in digital payment by millennials shopping online.

2.7.1 THE DIGITAL GAP

To get the best out of online shopping, the consumer needs to adapt to the Internet. There were concerns about the equal distribution of the Internet when it was developed which raised an issue of a digital gap (Toksoz and Price 2017: 4). Cimperman *et al*. (2018: 5) opine that when a part of the population has greater access to communication systems and information (millennials, Generation Y) and knows how to use them while the other does not, a digital divide is formed. The digital divide can be grouped into two levels which are, the differences among those who are connected and those who are not; and the search trends for those who are connected. The increase in investments in internet setups also increases the digital gap, requiring people to focus on the second-level digital divide (Ghosh *et al*. 2017: 4; Saura, Palos-Sanchez and Suarez 2017: 9). Millennials, when shopping, online usually use different types of digital payment methods.

2.7.2 TYPES OF DIGITAL PAYMENT INSTRUMENT

Seven major categories of digital payment options were presented by Ghosh *et al*. (2017: 3), which are online credit card payment; online debit card payment; micropayment system; digital wallet; Bitcoin; PayPal; and In-app purchases. Furthermore, Keijzer (2015: 84) explain the digital payment instruments and classified them as online credit card transaction and online debit card payment transaction, online stored value systems, digital accumulating balance systems, digital checking payment systems, and digital payment systems. Therefore, this study focusses on the seven major categories of digital payments.

2.7.2.1 Credit card payment

One of the dominant types of digital payment for consumers is the credit card. They are issued to bank customers after creating a revolving account on their request to give them a line of credit (Fulford and Schuh 2017: 17) allowing the cardholder to borrow money when paying online. The one concern for most customers regarding credit cards is the fear that their credit card numbers will be stolen and used fraudulently.

2.7.2.2 Debit card payment

Commonly known for traditional offline payments, debit cards are now gaining momentum in online use. They work similarly to credit cards, but with fewer security risks (Hernandez, Jonker and Kosse 2017: 95) although their banking options are next to none. Cheque accounts are directly linked to the buyer's debit cards.

2.7.2.3 Micropayment system

A digital-based micropayment mechanism is a type of electronic cash that allows online purchasing ranging anywhere from a few cents to a few hundred rands. Numerous major types of micropayment systems have emerged, including digital cash approaches. Arango-Arango, Bouhdaoui, Bounie, Eschelbach and Hernandez (2018: 38) state that payment systems can be token-based by having the token represent monetary value and

notational-based systems, where values are stored as notations like stored-value smart cards and credit cards.

2.7.2.4 Digital wallet

Digital wallets are digital tools that are either software or an application where consumers store their card details or payment methods. These stored card credentials can be linked to the retail application allowing for quick and convenient payment when shopping online; other digital wallets also store loyalty programs (Kuo 2018: 6). Digital wallets offer improved checkout and payment experiences, unlike manually inputting card details with each transaction.

2.7.2.5 PayPal

An alternative to traditional credit cards and electronic checks is PayPal which allows the business to receive payment from customers. Unlike systems that wait for money transfers from one account to another, PayPal instantly transfers from one PayPal account to another PayPal (Business Insider 2017: 4).

2.7.2.6 Bitcoin

Transactions are performed using bitcoins where the buyer transfers their bitcoin ownership address by giving up their ownership of the coins to the seller (Luther 2015: 399) by passing heavily encrypted codes across computer networks online.

2.7.2.7 In-app purchases

In-app purchases can be used to sell a variety of content, where the user does not have to shop from the retail website but through the retail application. Users can make in-app purchases on iOS, iPadOS, macOS, watchOS, and Playstore which allows them to buy a variety of consumables (Hsu and Lin 2015: 51).

In conclusion to the above literature, the main structure of transacting online is that a customer will be asked to enter their debit or credit card details or any digital payment method and this information is normally stored by the site for convenience if the customer

is a frequent user. Well-developed online shops have third party security measures on their sites and at times this is enforced by the bank. The risk with online shops and their transactions is that scammers can replicate the site. Users may fall into the trap if they are not aware of internet security. Scammers will fully replicate the site, ask for your banking details and store them for the wrong use Trust plays a huge role when one decides to transact online.

2.8 RELATIONSHIPS BETWEEN ONLINE SHOPPING AND DIGITAL PAYMENTS

Trust gained from experience with a source party can be moved to the trusted party, this is also echoed by the trust transfer theory. Cardoso and Martinez (2018: 13) mention that after trust is transferred, it changes the individual's view on the parties' parallels or business ties.

To distinguish the relationship between online shopping and digital payment, perceived similarity and perceived perception are used. Al-Debei, Akroush and Ashouri (2015: 723) define perceived similarity as the extent to which digital and computer-based online payments are perceived as comparable in numerous dimensions, like purpose and action. Online shopping is a form of e-commerce that enables consumers to promptly purchase goods or services and complete transactions by using digital payment. It is necessary for service providers to readjust the limit of adapting the screen of the digital device option being used as well as the complexity of their functions accordingly (Singh and Abhinav 2014: 52).

In line with trust transfer theory, consumers easily gain and transfer trust not only to the original online payment but also extended digital payment when they consider the source and target as similar. Upon establishing a high similarity, the consumer will easily trust digital payment due to their trust in online shops. Similarly, users could have less trust in digital payment.

Trust is the main subject when studying millennial customers regarding online shopping transactions, it is understood as a crucial aspect for the success of online businesses (Vijay, Prashar and Sahay 2019: 7). Verification is not usually possible before making a

transaction when consumers network with businesses; meaning that risks are not entirely eliminated, making trust essential. Zhang and Lin (2018: 140) assure that structural assurance raises retailer trustworthiness whether the consumer is familiar with the Internet or not, as it is there to protect the consumer from online financial loss or theft. Zheng, Lee and Cheung (2017: 713) state that situational normality builds purchase intentions as consumers trust that the Internet is safe enough for business transactions. The more trust consumers hold about digital payment, the more they frequent online shopping.

2.9 MILLENNIALS PERCEPTION TOWARDS ONLINE SHOPPING USING DIGITAL PAYMENT

At some point, many internet users have refused to give their personal information to websites, the question now is why this is the case (Al-Debei, Akroush, and Ashouri 2015: 711). The suitable answer is that the consumer's security and privacy perceptions hinder them. Ahmed, Su, Rafique, Khan and Jamil (2017: 44) reveal a positive relationship between five categories of factors namely, homepage presentation, website technological characteristic, electronic stores logistical support, product characteristics and information characteristics and online shopping behaviour. Millennials base their online purchasing decisions on emotions. A decline in privacy online remains as the Internet now makes it easy for personal consumer data to be anonymously collected and added to databases (Dhanapala, Vashub and Subramaniam 2015: 114).

Some information may be collected while transacting online. The safety of e-commerce assets is the security of online shopping, protecting it from unauthorised access, use, alteration, or ruin (Dai, Forsythe and Kwon 2014: 15). Bilgihan (2016: 106) states that an important component of online shopping using digital payment is the availability of security statements, as it assures consumers and eases their fears toward digital payment. Great security reports influence consumers' decisions in using digital payment systems. Well-developed and enhanced security levels in an online system will encourage consumers to adopt digital payment systems. Challenges for shopping online using digital payment is discussed next.

2.10 CHALLENGES FOR SHOPPING ONLINE USING DIGITAL PAYMENT

The teenagers and younger adults of today fall under millennials. The process of buying and selling goods and services has been transformed by the introduction of e-commerce. Online shopping uses the Internet, network and web-based technologies have revealed numerous challenges concerning security, protection and trust (Cenfetelli and Aquino 2016: 26; Thakur 2015: 156). A few challenges related to online shopping exist especially in the range and use of digital payment as it brings new opportunities (Prashar, Sai Vijay and Parsad 2017: 9). Liao, Wang and Yeh (2014: 679) confirm trust and belief play a significant role on the retailer. just as A shopper is more prone to use digital payment when making an online purchase if they trust a retailer's credibility, reliability and trustworthiness. Four trust magnitudes for e-commerce as listed by Xu, Cenfetelli and Aquino (2016: 21) are cognition (observation)-based, effect-based, experience-based, and personality-oriented.

A growing concern regarding online shopping due to insecurity, lack of customer protection and trust which are vital for a successful online transaction between, organisations and individuals is recognised (Thakur 2015: 155). Other challenges of online shopping are online security, privacy protection, and after-sales service.

2.10.1 ONLINE PAYMENT PERCEIVED RISK

Dai, Forsythe and Kwon (2014: 14) found numerous types of perceived risk and a very common type of perceived risk. The online payment risk while shopping online was a focal risk perceived for this study and is defined as the potential risk that a consumer's private information and financial records may be exposed to potential threats and be misused (Alguliyev, Imamverdiyev and Sukhostat 2018: 216). Customers trust that the e-commerce sphere is safe and can perform risk-free digital deductions and act on this trust (Taylor 2016: 168).

Security, privacy, word-of-mouth, positive online experience, quality of information and brand name may boost consumer's confidence and be regarded as "risk relievers" (Khanna 2015: 73). Online retailers can implement encryption, authentication, and

firewalls to safeguard the consumer and itself. The risk of theft of cards and personal information by hackers is still not entirely controlled. Consumers recognise high risks in online payment methods as they carry more risks compared to in-store (traditional) payment systems (Faqih 2016: 142). Perceived risk has an influence on shopping online since consumers perceive higher risk levels during payment transactions.

2.10.2 ONLINE PURCHASING RISKS

The feeling of uncertainty about possible negative outcomes from using a product or service is termed as perceived risk (PR) (Dai, Forsythe, and Kwon 2014: 15). Elms, Kervenoael and Hallsworth (2016: 238) discover that great internet experience and using remote purchasing methods are linked to lower levels of perceived risk for online shopping, with an outcome of higher online purchase rates. Privacy concerns and online purchase intention carry a negative relationship just as security risks and online purchase intentions (Dai, Forsythe, and Kwon 2014: 21).

A few risks linked to online shopping, are time or convenience risk, privacy risk, source risk, concerns of delivery, transaction security risk and customer service risk. The researcher uses privacy risk, source risk and transaction security risk for this study as they reveal security and privacy perceptions in online shopping properly. The usage level for shopping online using digital payment is discussed in the following section.

2.11 THE USAGE LEVEL FOR SHOPPING ONLINE USING DIGITAL PAYMENT

TAM and Unified Theory of Acceptance and Use of Technology (UTAUT) have been used to measure digital payment user behaviour in its early adoption to discover digital payment acceptance drivers (Hur, Lee and Choo 2017: 355; Safitri *et al*. 2017: 152). Park, Jun and Park (2017: 79) observe a research model derived from information technology continuation, risk-trust, and affect-cognition literature, which established that user fulfilment and post-adoption perceived usefulness affect digital payment continuance intention.

Hur, Lee and Choo (2017: 356) discovered a noticeable positive impact on online shopping intention and usage on the level of internet usage. Millennials continued usage

level experiences build trust in digital payment after viewing trust and security. There was a telling difference between online buying or shopping behaviour of each gender equals due to the diverse risk perception. The risk of lack of privacy limits women from shopping online is further supported by a study performed on female shoppers by Chou, Chen and Lin (2015: 548), which revealed that the lack of reliability in online shopping raises the difficulty for female consumers.

Online reviews also play a big role in online usage as millennials rely on reviews before using online digital payment systems and shopping online. Wandosell, Parra-Merono and Banos (2019: 2) define online reviews as product information made by individuals from their personal experiences. Word-of-mouth via the Internet are simply online reviews. A key component in influencing a consumer's purchasing decision is the online reviews and they are changing market occurrence due to their growing relevance as they are voiced by other consumers from personal experience. Word-of-mouth communication has a great influence on product choice as consumers value them more than advertising (Al-Debei *et al*. 2015: 709).

Reviews can make or break a sale more than advertising; positive reviews can sway a consumer purchase decision by assuring them that the product is of good quality and/or the company is reputable; this reduces uncertainty just as negative reviews can overturn a buy. The war between positive and negative reviews are highly influential in the early stages of a product's life, as consumers would know next to nothing about it. As a product's popularity grows, the influence of reviews decreases since consumers would get information from other sources (Wei Chan *et al*. 2016: 3). Businesses that suffer most from negative word-of-mouth are businesses that build a reputation through low prices. If a business advertises its products properly online, reviews will work as support for consumers to get an unbiased understanding of a product, set a criterion for evaluating a product, make an accurate choice, and decrease cognitive costs of making a decision (Ladhari, Gonthier and Lajante 2019: 117).

2.12 CONCLUSION

This chapter reviewed the present literature on shopping online and the additional information associated with the use of digital payment. It also discussed millennials perceptions as consumers towards online shopping using digital payment, including trust and security challenges, internet usage level, elements of online services and consumer attitudes towards online shopping. For each factor, several variables were reviewed, and conclusions centred on literature from the various sources were derived. For this study, the theory of reasoned action, the theory of planned behaviour, and the technology acceptance model are shaped components of the theoretical framework that supported the research. These theories were carefully chosen due to their applicability to the study. The following chapter discusses the research methodology.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter describes the research methodology adopted for this study. The foundation of this chapter involves the steps in the marketing research process that guides the performance of scientific marketing research. The marketing research process steps are described and their use in this study are presented. The first aspect explained in this chapter is the concept of marketing research. The chapter discusses research design, as well as the research strategy. The survey questionnaire and data collection procedures, data analysis and ethical considerations are outlined.

3.2 MARKETING RESEARCH

An important element of the marketing function of an organisation is marketing research. It assists the whole marketing decision-making process giving the organisation a chance to understand its brand better (Zikmund, Bibin, Carr and Griffin 2013: 14). Marketing research is collecting and analysing information for someone else's use (White and McBurney 2013: 28). According to Kob (2018: 16), marketing research is an organisation communication link with the environment and can help marketing managers in planning and problem-solving. Therefore, it assists in providing relevant, timely and accurate information, which refines management's decision (Churchill Jr. 2018: 26). Cant and Van Heerden (2015: 126) add that it is the contribution of information for decision making, beyond assessing the decisions taken. Numerous descriptions of marketing research exist in marketing literature. Table 3. 1 presents a few of the most well-known definitions.

Table 3. 1 Definitions of marketing research

Definition	Source
Marketing research can be defined as the task that links the customer, consumer, and community to the organisation over information.	Kolb (2018: 9).
In marketing, the usual unbiased group of enhancing decision making related to the recognition and solution of problems and opportunities is called marketing research.	Malhotra, Baalbaki and Bechwati (2013: 39).
Marketing research helps suppliers to understand their customer needs better around the controlled data collection and assessment.	Hair, Jr, Celsi, Oritinau and Bush (2014: 59).

Table 3. 1 lists some of the definitions which are important in understanding marketing research as well as its role in the real-life environment. Therefore, based upon the above, and for this study, marketing research is defined as:

> *An objective identification and organisation's systematic collection of data via surveys and product testing to analyse and implement received information to help better the decision-making process in the organisation during efforts to address and resolve marketing-related problems*.

3.2.1 THE NEED FOR MARKETING RESEARCH

As previously mentioned, marketing research is an understanding of customers and more significantly recognising who they are, what products they want or product availability options, delivery and how much consumers are willing to spend on a certain product are part of the greatest important considerations that organisations must be aware of in the decision criteria (Ade Bilau, Witt and Lill 2018: 598). The organisation's decision-making process about the implementation of approaches and methods needed to satisfy customers' needs is enabled by market research. Cant and Van Heerden (2015: 125)

classify the following elements that demonstrate the essence and value of marketing research:

- There are numerous decisions that can be grouped into two separate components in marketing research to help organisations: problem identification research and problem-solving research.

- Marketing research shows the part of research in all steps of the marketing research process, supporting and controlling the marketing labours of the organisation.
- Marketing research helps an organisation to improve understanding of marketing as a process and allows an organisation to supervisor its performance in the competitive market.

3.2.2 FACTORS INFLUENCING MARKETING RESEARCH DECISIONS

Researchers need to be aware of certain aspects that may influence their competence to obtain fitting and correct results (Aaker *et al*. 2011: 19; Zikmund *et al*. 2013: 21). Here are marketing research factors that regulate the need for marketing research an organisation should consider:

- **Time**

Time is key when an organisation is planning whether to do marketing research (Burns and Bush 2014: 71). Sufficient time is required in research to get appropriate and accurate results (Zikmund *et al*. 2013: 21). Hence marketing research needs enough time to be led properly to make marketing decisions needed by the organisation (Kob 2018: 18).

- **A cost-benefit analysis**

To calculate the worth of information collected through marketing research, an organisation needs to complete a cost-benefit analysis (Aaker *et al*. 2011: 20). Burns and Bush (2014: 72) opine that if the cost of the cost-benefit analysis is greater than the value of the research, marketing research must not be performed.

- **Resources**

Resources determine whether an organisation will conduct marketing research or not based on resource availability (Aaker *et al*. 2011: 20). Monetary and human resources and the organisation's capability to use research outcomes in their everyday processes need to be established by the researchers before trying to conduct marketing research (Burns and Bush 2014: 71; Berndt and Petzer 2011: 15).

- **Nature of information required**

The type of information required determines the need to conduct marketing research (Aaker *et al*. 2011: 19). Zikmund *et al*. (2013: 21) affirm that marketing research is to be conducted only if there is a lack of fitting information from appropriate sources, if there is readily available information suitable for the organisation, marketing research should not be conducted (Burns and Bush 2014: 71).

3.3 THE SYSTEMATIC MARKETING RESEARCH PROCESS

As mentioned previously that strategic decision making is steered by marketing research, thus making it vital for the development of the organisation. Therefore, Malhotra, Baalbaki and Bechwati (2013: 42) define the marketing research process as meticulous work steps that must be achieved by an organisation to understand the entire research process in the progression of the marketing research. It chaperones an organisation to make the right strategic decision using statistical methods (Hair *et al*. 2014: 41). Uncertainty is reduced in the decision-making process, and it increases the likelihood and greatness of success if performed in a methodical, objective, and analytical manner (Malhotra, Birks and Wills 2012: 32). Including the gathering, analysis, transformation, and interpretation

of data into information which will help the organisation's decision-making process. Figure 3. 1 illustrates the stages of the marketing research process that were also trailed in this study.

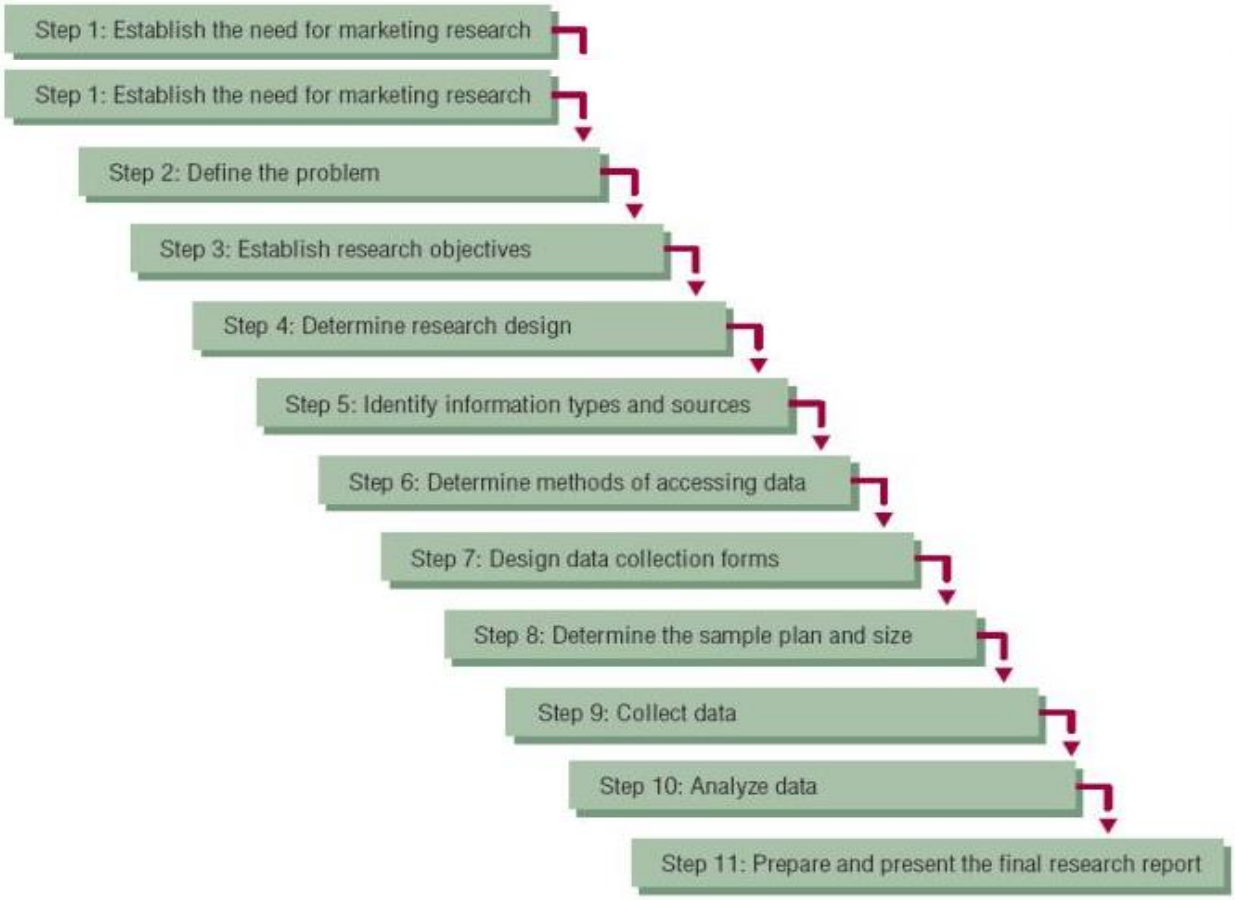


Figure 3. 1 Steps in the marketing research process

Source: Burns and Bush (2014: 46)

Aaker *et al*. (2011: 49) observe that an organisation needs to understand the entire research process to conduct effective marketing research. With proper understanding of the process, it will help the organisation to better plan its research to effectively bring in the required information. Failure to plan will result in, either the organisation not obtaining enough information to validate research cost and work, or unnecessary information will

be obtained. In summary, the research process is necessary to determine, decide, design, conduct, analyse and report. For this study, Burns and Bush's (2014: 69) marketing research process, which comprises 11 steps as shown in Figure 3. 1 was selected.

3.3.1 STEP 1: ESTABLISH THE NEED FOR MARKETING RESEARCH

For any marketing research work, the researcher needs to start by identifying and defining the problem that they are trying to solve. However, Burns and Bush (2014: 70) and Berndt and Petzer (2011: 27) specify that the need for marketing research occurs when an organisation must decide, but the information available to the organisation is insufficient.

Feinberg, Kinnear, and Tylor (2013: 28) recommend that organisations must explain the requirement for marketing research clearly to guarantee valid information is obtained to enable the marketing decision-making process.

3.3.2 STEP 2: DEFINE THE PROBLEM

Secondly, the organisation must describe the research problem. A well-defined problem is half-solved. No good research design can come out of a poorly defined problem. Feinberg, Kinnear and Tylor (2013: 68) assert that defining the problem is critical in marketing research. Therefore, the research problem shows the topic of the study and offers the required direction to perform relevant marketing research (Kob 2018: 52). The research problem needs to be explained because a blurred research problem could lead to erroneously devised research aims, which will be a waste of time and monetary resources used in the research (Malhotra, Baalbaki and Bechwati 2013: 72; McDaniel and Gates 2010: 41). Questions are formed by confronting the problems of an organisation and interpreting them into a market research problem (Podesva and Sharma 2014: 11; Wiid and Diggines 2015: 58). The questions must give a summary of the information needed to decide how to attain this information (Struwig, and Stead 2013: 12). Existing literature developed the research problem for this study and a need for information concerning shopping online using digital payment. The research problem was

acknowledged and discussed in Chapter One (refer to 1.3), and can be summarised as follows:

3.3.3 STEP 3: ESTABLISH RESEARCH OBJECTIVES

Present literature suggests that answers about awareness of shopping online using digital payment amongst millennials exists. The diversity of the results in this area depends on the millennials' perceptions. The lack of awareness regarding online retail stores is because of several settings and situations in digital payment caused by some challenges like scarcity of knowledge about how to effectively use the Internet leading to less confidence in shopping online. Customers still opt to use cash and cheques for traditional shopping due to not knowing the benefits of shopping online using digital payment, therefore, consumers are restricted from shopping online as most sites only have digital payment options.

The nature of online shopping which uses the Internet, network, and web-based technology, has advanced so has the procedure of buying and selling, opening a world of numerous challenges relating to security, protection, and trust. Another main issue is the possible lack of customers' protection and trust which are important for a successful online transaction. Therefore, almost half of the millennials who bought goods online during the past two years encountered problems with their purchase. The three most common challenges experience during online purchasing are deliveries arriving late, faulty or damaged or goods or goods not arriving at all.

To achieve the online digital payment method goals effectively and optimise the potential of purchasing and trading online, online retail stores and the banking sector need to recognise the use of digital payment and its influence on millennials purchasing decisions and integrate these perceptual attributes into their digital payment design method. Hence, the results of this study will provide new understanding to the online retailers and marketers on how digital payment influences millennials' purchasing decisions when shopping online. The results will also assist online retailers and marketers to understand millennials buying behaviour and awareness towards online

shopping and online digital payment as a transaction. This indicates that, if online retail stores fail to understand millennials perceptions of online shopping, their online sales might decrease.

Zikmund *et al*. (2013: 56) and Aaker *et al*. (2011: 54) acknowledge that the objective of the research is to provide precise statements about the goals the researcher intends to achieve by doing marketing research using appropriate terminology.

This study's objectives are to identify millennials' perceptions of digital payment as transaction payment for online shopping; to identify shopping behaviours for shopping online, and to determine the digital payment usage for online shopping amongst millennials.

3.3.4 STEP 4: DETERMINE A RESEARCH DESIGN

The process and method of performing a study is known as the research design. Research design helps by working as an overall plan of the methods used to collect and analyse data (Yin 2014: 131). Therefore, the purpose of the research aims is to find the most appropriate research strategy (Aaker *et al*. 2011: 70; Burns and Bush 2014: 98). Malhotra, Baalbaki and Bechwati (2013: 115) detail marketing research, allowing the research designs to be grouped into three types:

(a) Exploratory research
(b) Descriptive research
(c) Causal research

- **Exploratory research design**

Exploratory research makes perceptions that assist to explain the problem confronting the researcher or develops insights into consumer behaviour, perceptions, and attitudes which are not easy to acquire through other research methods (Cant and Van Heerden 2015: 133).

Hair *et al*. (2013: 56) affirm that this design contains primary and secondary data that is gathered and translated in a free manner to gain wanted insights. The pipe approach used narrows down numerous strategic problems or opportunities instead of offering defined information while guiding a specific course of action (Hair *et al*. 2014: 63; Feinberg, Kinnear and Tylor 2013: 54). Additionally, exploratory research may be done by means of literature search, assessing a few people on their experiences, case studies, and focus groups to obtain data (Cant and Van Heerden 2015: 133). Generally, the results of exploratory research as a standalone are not useful for decision-making, although they can give in-depth understanding of said condition.

- **Descriptive research design**

To get data about a population or universe in a study, descriptive research or statistical research must be performed. It includes gathering numerical data for answering research questions. This research design is performed when researchers have information or understanding of the marketing position and the association taken in the research problem (Feinberg, Kinnear and Tylor 2013: 57). Answers to who, what, when, where and how are given by descriptive information (Malhotra, Baalbaki and Bechwati 2013: 108; Kob 2018: 16). Descriptive information also includes consumer attitudes, intents, demographics, purchase behaviours, measures of present marketing mix strategies, and preferences (Burns and Bush 2014: 103 and Ho and Yu 2015: 331). Hilal and Alabri (2013: 183) observe that primary data analysis surveys, observations, panels, and other data are included in descriptive research to gather appropriate information.

- **Causal research design**

Causal research can be well-defined as research that accumulates information that allows decision-makers to control cause-and-effect relations among two or more variables (Malhotra, Baalbaki and Bechwati 2013: 115). Marketing managers are helped by causal research in their decision-making process, as this method intends to gain reasonable and effective evidence of a cause-and-effect relationship (Burns and Bush 2014: 107). In addition, Aaker *et al*. (2011: 304) and Malhotra, Baalbaki and Bechwati (2013: 115)

maintain that it is imperative to hold the variable that is assumed to cause a shift in another variable or other variables when determining casualty after measuring the shifts in the other variable(s). As this type of research is very complicated, it cannot ensure that other factors will not influence a causal relationship, particularly when associated with individuals' attitudes and inspirations (Burns and Bush 2014: 107). Casual research requires a lot of time and its characteristic nature results in managers being unwilling to perform it (Wiid and Diggines 2015: 69).

Looking at the research objectives and information requirements for this study; the descriptive research design was chosen. Applicability was noticed in this choice of study as it aims to assess millennials' perceptions of using digital payment for online shopping in the greater Durban area. The research problem and originated questions of this study verify that it is pre-planned and coordinated (Malhotra, Baalbaki and Bechwati 2013: 106). Lastly, this study seeks to reveal characteristics, for example, challenges on trust, security, and privacy that influence millennials' online shopping intention and willingness to use digital payment methods for shopping online. Therefore, employing a descriptive research design is suitable for the study. (Malhotra, Baalbaki and Bechwati 2013: 106).

3.3.5 STEP 5: IDENTIFY INFORMATION TYPES AND SOURCES

Madondo (2016: 90) states that the limited phenomenon of a research project instructs the collection of the best data collecting technique to get appropriate data. Two groups, namely primary and secondary data sources, permit researchers' access to countless data sources to gather applicable data (Kob 2018: 33; Berndt and Petzer 2011: 33). Table 3. 2 below offers a contrast of primary and secondary data.

Table 3. 2 A comparison of primary and secondary data

Characteristic	**Primary data**	**Secondary data**
Collection purpose	Problem at hand	Other problems
Collection process	Very complex	Fast and easy
Collection cost	High	Moderately low
Collection time	Long	Short

Source: Malhotra, Baalbaki and Bechwati (2013: 133) and Berndt and Petzer (2011: 42)

As detailed in Table 3. 2, primary data is gathered when the problem at hand requires tackling, while secondary data had been previously gathered to tackle a separate problem (Burns and Bush 2014: 75; Feinberg, Kinnear and Tylor 2013: 69). This study used both primary and secondary data, and the process to be followed to access both data is discussed next.

3.3.6 STEP 6: DETERMINING METHODS OF ACCESSING DATA

The next step is to figure out the sources of data to be used. The researcher needs to choose between using primary data or secondary data. Ideally, depending on the circumstance, both data sources can be combined. Burns and Bush (2014: 74) note that secondary data can be obtained cheaply, and quickly, and primary data is hard to access (as shown in Table 3. 2). Hence, the researcher should start with collecting secondary data (Aaker *et al*. 2011: 93; Burns and Bush 2014: 74). Figure 3. 2 shows primary and secondary data sources and the locations where they can be obtained.

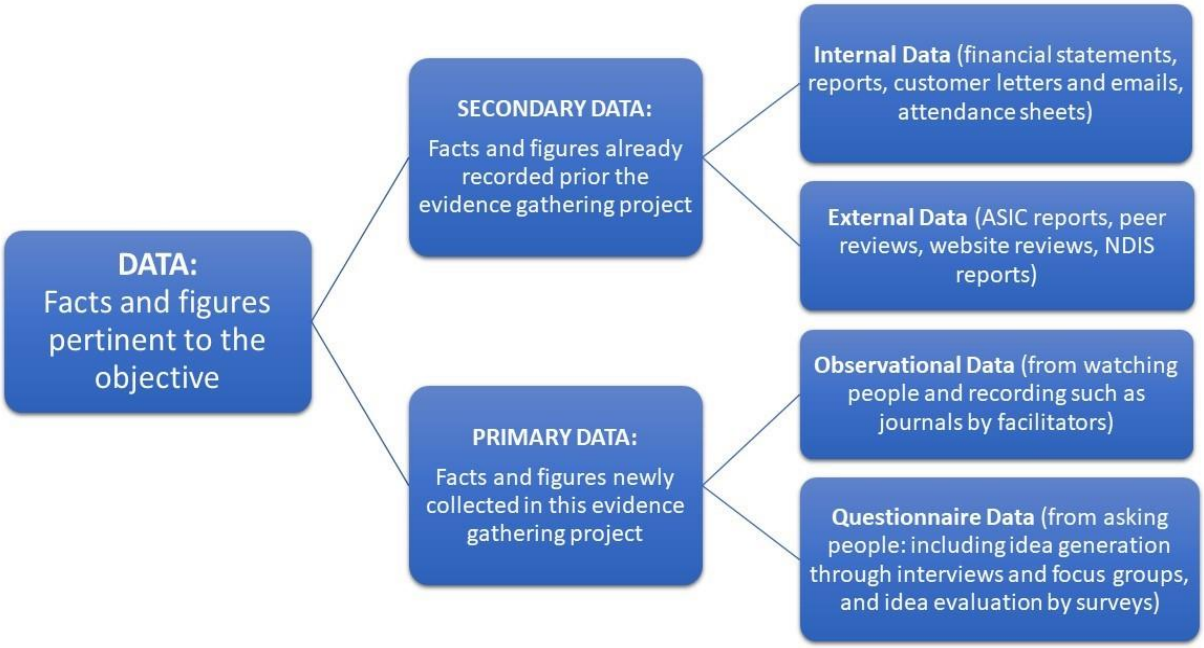


Figure 3. 2 Types and locations of data sources

Source: Cant and Van Heerden (2015: 136)

Figure 3. 2 gives a summary of several information sources obtainable to researchers. Cant and Van Heerden (2015: 136) reveal that applicability, accuracy, reliability and timeliness are important for researchers to consider before making use of secondary data sources. The two data sources accessible to researchers and how they help the research process, and its results, are subsequently discussed.

3.3.6.1 Secondary data sources

The recommendation is that researchers must start by collecting secondary data since it is already available and readily accessible (Zikmund *et al*. 2013: 127; Burns and Bush 2014: 74). Numerous researchers (Malhotra, Baalbaki and Bechwati 2013: 132; Cant and Van Heerden 2015: 136) explain secondary data as data that has been already collected and readily available from other researchers or sources. Malhotra, Baalbaki and Bechwati

(2013: 133) imply that the use of secondary data is beneficial as it saves time and money. Though, despite these benefits, numerous restrictions also exist (Aaker *et al*. 2011: 94).

Table 3. 3 Benefits and limitations of secondary data

Benefits	**Limitations**
It is time saving.	Accuracy of information and data is not guaranteed. Checking sources of the data is necessary.
It is economical. It saves efforts and expenses.	A small size sample was used to generate secondary data.
Primary data collection makes more sense, with the assistance of secondary data, gaps and deficiencies are noted and any additional information needed to be collected.	General and vague terms could be used in secondary data, making it of no use for companies when they need to make decisions.
It helps to improve the understanding of the problem.	The data may be old and out of date.
It provides a basis for comparison for the data that is collected by the researcher.	The company publishing the data may not be reputable.

Zikmund *et al*. (2013: 127) suggest that secondary data is a great benefit for researchers as it is quick and cost-effective, especially when it is obtainable electronically. Table 3. 2 shows that if the relevance and accuracy does not concern the problem at hand the use of secondary data is restricted (Aaker *et al*. 2011: 94). Consequently, researchers must assess the limits of secondary research throughout the secondary research data collection process, which must be fully used prior to gathering primary data (Malhotra, Baalbaki and Bechwati 2013: 133).

For this study, the literature review (Chapter Two) was presented from a wide variety of secondary research using academic sources. The academic sources are made up of marketing journals (Journal of Marketing, Journal of Marketing Research, Journal of Internet Commerce, Journal of Retailing, and Consumer Services) and textbooks. The concepts recognised from the secondary data involve shopping online, the usage level of digital payment challenges such as trust, privacy, and security. Consequently, the literature review includes an investigation of research done in the past in related fields, specifically online shopping, digital payment, and millennials perceptions. The secondary data attained from the literature review was then combined in the advancement of the primary research instrument (Appendix A) used in this study.

The secondary data might have to be complemented by primary data that was sourced precisely for the current study many times. A few common types of primary data are:

- Demographic and socioeconomic characteristics
- Psychological and lifestyle characteristics
- Attitudes and opinions
- Awareness and knowledge - for example, brand awareness
- Intentions - for example, purchase intentions. While useful, intentions are not a reliable indication of actual future behaviour.
- Motivation - a person's motives are more stable than their behaviour, so the motive is a better forecaster of future behaviour than past behaviour.

3.3.6.2 Primary data sources

Communication and observation are some of the channels to get primary data. The communication method is flexible since one can ask for information either verbally or in writing (Malhotra, Baalbaki and Bechwati 2013: 171). Communication is a quicker and cheaper option than observation. Various tasks are involved in observations like the recording of actions either by a person or electronic device. Primary data originates from research performed to address the specific research problem at hand (Kob 2018: 46).

Qualitative research or quantitative research are the two comprehensive categories where primary data is obtained (Berndt and Petzer 2011: 45). According to Burns and Bush (2014: 146), qualitative research is unstructured exploratory research that entails the gathering, analysis, interpretation, and study of what individuals do and say. On the other hand, quantitative research calculates data by applying some form of statistical analysis (Malhotra, Baalbaki and Bechwati 2013: 171). Table 3. 4 summarises the differences between qualitative and quantitative research.

Table 3. 4 Qualitative versus quantitative research

Characteristic	Qualitative research	Quantitative research
Objective	Advance in the qualitative comprehension of the fundamental causes and incentives.	Measuring data and simplifying outcomes from the trial to the population of curiosity.
Theoretical	Gain an understanding of human behaviour from the informer's viewpoint.	Done to discover facts regarding social phenomena.
	Take on a dynamic and negotiated truth.	Take on a fixed and measurable truth.
Methodological	Collection of data is through interviewing and observing participants.	Collection of data is through measuring things.
	Analysis of data is according to subjects from descriptions by informants.	Analysis of data is via numerical contrasts and statistical inferences.
	Informant language is used to report data.	Statistical analysis is used to report data.

Source: Malhotra, Baalbaki, and Bechwati (2013: 171).

Feinberg, Kinnear, and Tylor (2013: 128) note the difference in data collection methods for both qualitative and quantitative research. The following techniques explain the difference in these data collection techniques.

- ***i.Quantitative data collection techniques***

Quantitative research is the methodical study of originalities by collecting quantifiable data and executing statistical, mathematical, or computational techniques (Feinberg, Kinnear and Tylor 2013: 128). Furthermore, as explained by Burns and Bush (2014: 146) and Salazar, Mills and Verı´ssimo (2018: 251) the main advantage of using the quantitative

approach is cost-effectiveness and it is less time consuming because the data can be analysed by the researcher using computer statistical software, for example, Statistical Package for Social Sciences (SPSS). Verkijika (2018: 5) claims that quantitative research has fundamental control of numbers and competence to portray the world accurately. Meanwhile, Dhanapala, Vashub and Subramaniam (2015: 116) suggest that quantitative research is described by data that is computable. These measurable data collection methods, specifically surveys and observations are accordingly discussed below.

- **Surveys**

A survey is used to study or examine a sample of the population as opposed to selection by using a sampling technique (Burns and Bush 2014: 176). Al-Debei, Akroush and Ashouri (2015: 715) advocate surveys are a current feature in social science research. Table 3. 5 below summarises data collection techniques of different types used in survey research.

Table 3. 5 Data collection and computer technology

Characteristic	**No Computer**	**Computer**
No interviewer	Self-administered	Computer-administered
Interviewer	Person-administered	Computer-assisted

Source: Burns and Bush (2014: 175).

Table 3. 5: shows that survey data gathering is a mix of out-of-date, low-technology methods and current, high-technology methods (Burns and Bush 2014: 175). Person-administered surveys refers to surveys in which the respondents are interviewed in person or telephonically and requires no high-tech equipment as noted in Table 3. 4 (Zikmund *et al*. 2013: 162; Berndt and Petzer 2011: 48). Malhotra, Baalbaki and Bechwati (2013: 213) assert that person-administered questionnaires may be characterised as individual in-home interviews, mall-intercept personal interviews and computer-assisted personal interviews. Computer administered surveys are an example of information technology. Electronic surveys have quicker response times, unlike traditional surveys.

A self-administered survey is designed and has a sequence of closed-ended and open-ended questions (Cant and Van Heerden 2015: 141). A respondent administers the survey with no assistance from the interviewer. A list of possible options is listed for closed-ended questions, where respondents choose pre-set answers. Respondents have an opportunity to give answers they deem appropriate and in their own words in open-ended questions. After reading all the possible responses and themes have been assigned, responses will be recorded. The benefits of self-administered surveys are the reduction of costs, convenient for respondents, and there is no interviewer-evaluation discomfort (Burns and Bush 2014: 178).

- **Observations**

The organised data process of a researcher is also considered as observations; where the researchers differ the behaviour of entities, items, or proceedings are recorded (Feinberg, Kinnear and Tylor 2013: 28; Kob 2018: 124). Observation involves human or mechanical observation of people's actions or events that take place while buying or consuming. As per Aaker *et al*. (2011: 188), observation as a research method has its disadvantages and advantages, since researchers are not able to observe individuals' motives, attitudes, or intentions. Devices like cameras, tape recorders, computers, and qualified humans are responsible for recording the respondents' behavioural patterns (Blumberg, Cooper and Schindler 2011: 353). Babin and Zikmund (2016: 162) distinguish the advantages and disadvantages of the observation method:

Advantages of the observation method

- By observing and recording events, researchers do not only have to rely on the determination and experiences of respondents to report correctly.
- It reduces and possibly eliminates any chances of being biased. More accurate and objective data is acquired through observation.

Disadvantages of the observation method

- The incapability to observe things like attitudes, motivations, customers or consumers state of mind, their buying motives and their images is the most limiting factor in observation.
- Waiting for a certain action to take place is time-consuming for the investigator.
- Personal and intimate activities, like watching television late at night, are better discussed through questionnaires than observation.
- Price is a disadvantage for the observation method. Observation data is commonly the most expensive to get, unlike other survey data. Unproductive time is a high cost as the observer waits, doing nothing for an event to occur.

ii. Qualitative data collection techniques

According to Zikmund *et al*. (2013: 106), there are three important types of research interviews: structured, semi-structured and unstructured. Verbally run questionnaires, basically are structured interviews, as a list of prearranged questions are asked, with little or no difference and with no room for further questions to responses that need more explanation (Berndt and Petzer 2011: 46). Structured interviews are quick and easy to conduct and are particularly useful if a description of some questions is needed or if respondents have literacy or numeracy difficulties. Limited participant responses and no depth is required due to their nature. Malhotra, Baalbaki and Bechwati (2013: 174) and Feinberg, Kinnear and Tylor (2013: 218) note that focus groups, interviews and observation methods are usually the most utilised technique to gather qualitative data. The three types of qualitative data collection techniques are discussed below:

- **In-depth Interviews**

To get more insight on experiences, views, opinions, or beliefs on specific matters, in-depth interviews are useful. Therefore, the data can be studied and compared to others, to gain a better understanding of the underlying structures or beliefs (Malhotra, Baalbaki and Bechwati 2013: 185). Furthermore, there are multiple ways of arranging the interview: structured, semi-structured or open or in-depth, depending on the elements of the

interview chosen by the researcher. Usually, the researcher creates a topic list prior to starting the interview and can be used flexibly. However, it is important to think about the type of transcript of audio tapes. The intent of the research interview is to discover the views, experiences, beliefs and/or incentives of people on certain topics (Aaker *et al*. 2011: 166). Qualitative methods, such as interviews, are thought to provide a deeper understanding of the social phenomena that would be found from purely quantitative methods, such as questionnaires.

- **Focus group discussions**

A discussion between a group of respondents is defined as a focus group, which results in the researcher possibly getting ideas or solutions that are applicable to the marketing problem (Aaker *et al*. 2011: 167). The researcher can initiate a discussion to study how social knowledge is produced, ideas are developed and operate with each group (Zikmund *et al*. 2013: 109). Focus group discussions are more than merely collecting data from people at once in, they share several common features with less structured interviews, (Malhotra, Baalbaki and Bechwati 2013: 174). Focus group discussions are guided, monitored, and recorded by a researcher.

- **Projective techniques**

A situation where respondents are positioned in imitation activities with the hope that they respond in detail, revealing more than they would have normally done if directly asked is termed projective techniques (Burns and Bush 2014: 159). Respondents get an opportunity to understand a situation through their personal experiences, personalities, and attitudes in this research technique (Zikmund *et al*. 2013: 114). Aaker *et al*. (2011: 177) specify that word-association tests, sentence-completion tests, picture tests, cartoon or balloon tests and role-playing are used by researchers in projective techniques.

For this study, self-administered surveys were used, through questionnaires created on a word document. Since questionnaires can be done using a pen or pencil, a broad range of question types are accessible with no extra costs incurred. These benefits made the word document a logical choice for the researcher. The questionnaires were dispersed to

400 millennials (generation Y) within the greater Durban area. As for this study, the targeted population of millennials was selected. The sample was split evenly between the male and female respondents. The responses of participants were completely anonymous and targeted a relatively small representative population of the greater Durban area. Respondents had to complete and return a questionnaire to gather information concerning the research objective of this study.

3.3.7 STEP 7: DESIGN DATA COLLECTION FORMS

Surveys or questionnaires are data gathering tools applied to ask respondents questions to acquire the needed information. There are several ways to carry out surveys it could be by mail, telephone, computer, or in person (Sparkes and Smith 2014; 196). Surveys that were utilised to obtain the primary data for this study required a standardised data collection process to guarantee the constancy of the data and to allow consistent and comprehensible analysis. A survey is a defined data collection process that is intended to gather data from respondents by a string of either written or verbal questions (Feinberg, Kinnear and Tylor 2013: 264). Burns and Bush (2014: 214) stipulate six main purposes of a survey, namely: (a) It assists to change the research objectives into comprehensive questions answered by respondents; (b) To ensure that respondents bear the same stimuli, and questions and response categories are standardised; (c) The phrasing, question flow and appearance of the questionnaire are structured to motivate cooperation in respondents; (d) Questionnaires are seen as permanent archives of research; (e) Data analysis process is fast-tracked, more so when data is gathered online; (f) To measure quality control, researchers use questionnaires. Below a summary of the various measurement scales and question response formats facilitated to allow the development of the study questionnaire are provided.

3.3.7.1 Scales of measurement

Aaker *et al*. (2011: 249) explain measurement as an activity process including statistics or more symbols allocated, as per pre-specified rules, on a particular feature of the items that the researcher wants to determine. The efficiency of data taken by different measurement scales is rough (Zikmund *et al*. 2013: 242; Hair *et al*. 2014: 153). Statistics

have four data measurement scales: nominal, ordinal, interval, and ratio. These measurement scales are easy ways to sub-categorise various types of data (Malhotra, Baalbaki and Bechwati 2013: 281; Creswell 2013: 6).

Examples are the best ways to understand the four measurement scales, as highlighted below.

- **Nominal Scales**

Nominal scales are used for classification variables, with no numerical value (Feinberg, Kinnear and Tylor 2013: 119). Variables that are non-numeric or where numbers have no value are dealt with using a nominal scale (Zikmund *et al*. 2013: 248). In other words, they can be arranged and put in any order, and it would not matter. For example, variables measured on a nominal scale include gender, race, and random numbers (Aaker *et al*. 2011: 250; Malhotra, Baalbaki and Bechwati 2013: 282).

- **Ordinal scales**

Ordinal scales permit researchers to place a position order to respondent's answers (Burns and Bush 2014: 205). In ordinal scales, the order of the values is important, but the difference between each one is not known (Babin and Zikmund 2016: 162). Ordinal scales often measure non-numeric concepts like satisfaction, happiness and discomfort. (Malhotra, Baalbaki and Bechwati 2013: 283). Researchers are assisted by ordinal scales to establish if an object holds more or fewer characteristics than other objects (Zikmund *et al*. 2013: 272) to help describe the ordered relationship between objects (Feinberg, Kinnear and Tylor 2013: 119).

- **Interval scales**

Interval scales are numeric scales about the order and the precise variations between values (Hair *et al*. 2014: 56; Feinberg, Kinnear and Tylor 2013: 122). A Celsius temperature is a classic example of an interval scale since the variance in each value is equal. Numbers are used to rate objects in this scale in a way that an equal numerical

distance on the scale indicates the equal distances in the characteristic that is being measured (Zikmund *et al*. 2013: 258).

- **Ratio Scales**

Ratio scales deliver a range of potentials when it comes to statistical analysis. These variables can be expressively added, deducted, multiplied, or divided (ratios) (Zikmund *et al*. 2013: 251). Researchers get to identify, classify, rank objects, and compare intervals or changes between objects in ratio scales (Malhotra, Baalbaki and Bechwati 2013: 285). The values could be ordered, have a meaningful difference, and doubling is also meaningful. They are based on a “true zero” point.

The questionnaire design applied in this study comprised nominal, ordinal and interval measurement scales. The application of nominal data allowed the achievement of descriptive statistics, comprising the expansion of a comprehensive outline of millennials in the greater Durban area. A 5-point Likert scale was used for interval scales allowing order to be established in participants’ responses for the vital constructs of the study, but no fixed zero points were available. Furthermore, ordinal scales were utilised to collect data concerning the parts that most attracted millennials to use digital payment when shopping online.

3.3.7.2 Question response formats

According to Feinberg, Kinnear and Tylor (2013: 272), depending on the research structure, researchers can choose between two response formats in a questionnaire that they wish to enact on respondents' responses. Therefore, Malhotra, Baalbaki and Bechwati (2013: 340) claim that unstructured (open-ended) and structured (fixed alternative) questions are the two response formats. Free-response and open-ended questions are called unstructured questions. These two types of questions allow respondents to give answers in their own words (Zikmund and Babin 2013: 286). Open-ended questions are beneficial for the researcher when following the exploratory research design (Hair *et al*. 2014: 180). It also assists the researcher in getting a deeper understanding of a topic as spontaneous answers produce richness and depth of

information that fixed-alternative questions would not reveal (Zikmund *et al*. 2013: 283; Berndt and Petzer 2011: 187). However, researchers such as Malhotra, Baalbaki and Bechwati (2013: 340) and Hair *et al*. 2014: 56; Feinberg, Kinnear and Tylor (2013: 175) identify certain advantages and disadvantages associated with open-ended questionnaires. These advantages and disadvantages are tabulated in Table 3. 6 below.

Table 3. 6 Advantages and disadvantages of open-ended questions

Advantages	**Disadvantages**
Open-ended questions eliminate two types of response errors.	Open-ended questions are time demanding since respondents give detailed answers.
Open-ended questions allow respondents to include extra information, feelings, attitude, and comprehension of the research.	Interviewer experience could affect the data, being likely bias when respondents' answers are noted. Recording of answers when verbatim answers are needed is essential.
Extra information from the respondent is obtained via open-ended questions.	Costs could be high as coding and analysis of open-ended questions need researchers to acquire specialist knowledge.

Fixed-alternative questions that have limited options of answers are structured questions, the researcher is able to get precise information required to address the research problem, Berndt and Petzer (2011: 187) specify that these are also called structured questions. Therefore, Malhotra, Baalbaki and Bechwati (2013: 341) note that fixed-alternative questions can be discerned as multiple choice, dichotomous or a scale. These are further described below.

- **Multiple-choice questions**

Multiple-choice questions (objective response) are a fixed list of answers in which respondents are asked to select only one answer from the choice of multiple answers (Feinberg, Kinnear and Tylor 2013: 276). A respondent could be asked to pick one or more of the different answers that best signify their opinion (Miles, Huberman and Saldana 2014: 261).

- **Dichotomous questions**

According to Feinberg, Kinnear and Tylor (2013: 276) and Babin and Zikmund (2016: 309), dichotomous questions are when respondents have two possible answers to respond to, namely yes or no. Alternative responses are often added using unbiased replacements, including ‘no’ and ‘do not know’ (Zikmund *et al*. 2013: 306).

- **Scale questions**

Scale questions include questions that are structured in a way that the contradictory answer selections calculate the respondents’ strength of feeling to the counted study (Struwig, and Stead 2013: 241). Malhotra, Baalbaki and Bechwati (2013: 267) and Hair *et al*. (2014: 166) explain comparative scale as a scaling method where an encouragement study is scaled to ensure that this study is self-determining from the other incentive study in the incentive set. Non-comparative scales represent two items and require the respondent to pick an item by set criteria (Malhotra, Baalbaki and Bechwati 2013: 287). Malhotra, Birks and Wills (2012: 214) note that non-comparative techniques can be classified as constant and itemised rating scales and are generally used in marketing research. Table 3. 7 presents these non-comparative scales.

Table 3. 7 Basic non-comparative scales

Scale	Basic characteristics	Advantages	Disadvantages
Continuous rating scale	Participants rate an element by marking on a continuous line	Easy to construct	Scoring can be cumbersome except if done by computer
Itemised rating scale:			
Likert scale	Participants show their level of agreement on a 5-point scale, varying from 1-5 (strongly disagree-strongly agree)	Easy to create, administer, and understand	Extra time-consuming
Semantic differential scale	Scale has bipolar adjective on each end and rating is on a 7-point scale where participants rate an item	It is multipurpose	Controversy exists to whether the data are interval
Stapel scale	A ten-point, unipolar scale with no impartial point	Easy to construct and administered telephonically	Application is problematic and puzzling

Source: Malhotra, Baalbaki and Bechwati (2013: 304).

Fixed-alternative questions were used in this study's survey design. These questions take up less time and are easier for participants to understand and answer (Berndt and Petzer 2011: 187). Moreover, these questions relieved the researcher of the coding, arrangement and translation of the gathered data (Zikmund and Babin 2013: 282).

The survey encompasses all three of the fixed-alternative formats, namely dichotomous, multiple-choice and scale questions. One open-ended question which needed participants to give an opinion on what they think should be done to tackle the challenges or perspectives stated previously concerning shopping online using digital payment were included. The survey ended with Likert-scale questions which were asked to measure respondents' agreement with the statements that measured the study's hypotheses (shopping online, the usage level of digital payment, challenges such as trust, privacy and security).

3.3.7.3 Question sequence

The order of the questions in the survey ought to inspire contribution and collaboration when doing the survey. Hence, the need to keep the survey simple, thought-provoking, and clear (Burns and Bush 2014: 225). Order bias can be reduced by developing the survey in a way that the question sequencing does not affect respondents' answers (Zikmund and Babin 2013: 292). Aaker, Kumar, Leone and Day (2013: 281) recommend these basic guidelines about the sequencing of a survey:

A funnel technique should be used when structuring the questionnaire. This approach starts by placing general questions first about a topic prior to focusing on more detailed questions about the topic.

- The questionnaire should be kept short and to the point to have a rational drift by first questions about one topic before proceeding to the next topic.
- The questionnaire should be worded in simple terms. This helps ensure your respondents understand your questionnaire.
- The questionnaire should not contain sensitive and difficult questions, or they must be positioned at the end of the questionnaire.

3.3.7.4 Questionnaire layout

Malhotra, Baalbaki and Bechwati (2013: 349) claim that the structure of the questions should be from general questions to specific questions. A self-administered questionnaire

was created for this study with limited interaction between the researcher and the respondents. According to Zikmund *et al*. (2013: 306), the three factors relating to the respondents that determine the length of the survey are the level of commitment, interest, and responsibility in finishing the survey, this function was incorporated to ensure complete information.

3.3.7.5 Pre-testing

Before the publication of the questionnaire, a performance of the survey was trialled on a small sample of respondents to detect any problems like unclear wording or the questionnaire being lengthy; this process is called pre-testing (Burns and Bush 2014: 351). Malhotra, Baalbaki and Bechwati (2013: 351) indicate that it is important for all aspects of the questionnaire to be tested in the pre-test, including the difficulty levels of the questions, form, sequence and layout, and question phrasing and content.

For this study, identification of problems that respondents could encounter when doing the survey was tested on ten (10) respondents from the targeted population. Certain adjustments had to be done as reflected in Table 3. 8, from the feedback gained from the pre-test respondents.

Table 3. 8 Adjustments made to the questionnaire

Section	Pre-test questionnaire	Final questionnaire
Section B Question 8 and Question 12	• How often did you shop online in the past year? (6- 10 times a year) • What are the challenges of shopping online? (Malware attack)	• How often did you shop online in the past year? (More than a year) • What are the challenges of shopping online? Malware attack (Computer Virus)
Section C - Statement explanation	• I intend to use digital payment because it provides a wide range of products online. Kindly indicate your level of agreement or disagreement with the following statement, on a scale of 1 to 5.	• Online shopping makes it easier for me to make online product choices and judgments. Kindly indicate your level of agreement or disagreement with the following statement, on a scale of 1 to 5.
Section D - Statement explanation	• I prefer to use digital payment that provides security insurance. Kindly indicate your level of agreement or disagreement with the following statement, on a scale of 1 to 5.	• I feel that digital payment methods are secure. Kindly indicate your level of agreement or disagreement with the following statement, on a scale of 1 to 5.

3.3.7.6 Overview of the final questionnaire

The questionnaire created for this study gave attention to the following: (1) the secondary data that was gathered and deliberated in Chapter 2; (2) guidelines given by comparable studies on the subject of online shopping behaviours, digital payment, trust challenges, security challenges, privacy challenges and usage level of digital payment for shopping online; (3) the research objectives that were formed and detailed in Chapter 1. Appendix A is a copy of the final questionnaire utilised in this study. It consisted of five (5) sections.

- Section A intended to gain basic demographic information from respondents, being their gender, ethnicity, age, employment status, and level of education.
- Section B set out to acquire information concerning millennials shopping online behaviours and the usage level of digital payment for online shopping.
- Section C established respondents' degree of agreement with statements concerning shopping online behaviours.
- Section D measured respondents' degree of agreement with statements concerning the use of digital payment.
- Section E is an opened-ended question.

Sources used to attain statements for the study are summarised in Table 3. 9. Furthermore, response formats and applicable levels of measurement utilised for each statement are shown in the table. Relevant research objectives are shown where applicable.

Table 3. 9 Summary of questions in relation to sources used, response format, measurement level and primary objective

Question/ statement	Source	Response format	Level of measurement	Primary objective
Section A: Demographic information				
Please indicate your age group Please indicate your gender Please indicate your occupation Please indicate your race Please indicate your type of income Please indicate your type of income brackets	Self-generated	Multiple-choice	Nominal	-
Section B: Usage level of digital payment for online shopping				
How often do you use the Internet?	Cardoso and Martinez (2018: 19).	Multiple-choice	Nominal	1
How often did you shop online in the past year?		Multiple-choice	Nominal	
Which Digital payment methods have you heard off? (multiple answers possible)		Multiple-choice	Nominal	
Which digital payment method do you find the most secure?		Multiple-choice	Ordinal	
What are the challenges preventing you from shopping online using digital payment?		Open-ended	Nominal Ordinal	

Section C: Online shopping behaviours				
Statement 13 to 20	Hur, Lee and Choo (2017: 359).	Multi-item scale; Likert-type	interval	2
Section D: Digital payment				
Statement 21 to 31		Multi-item scale; Likert-type	interval	3
Section E: Millennials' perceptions of digital payment for online shopping				
What do you think should be done to address these challenges or perspectives mentioned in the previous concerning shopping online using digital payment?	Self-generated	Open-ended	Nominal-Ordinal	4

3.3.8 STEP 8: DETERMINE THE SAMPLE PLAN AND SIZE

Sampling is when a demonstrative set of people are picked from the entire population under study and using their primary information for research uses (Babin and Zikmund 2016: 337). Feinberg, Kinnear and Tylor (2013: 298) state that this process does not follow concepts concerning probability in picking fundamentals from the target population when using this method of sampling. Aaker *et al*. (2011: 339) state that it is important for researchers to consider several factors when deciding to use a sample to gain information. Figure 3. 3 below shows the stages in the sampling design process and are discussed next.

Figure 3. 3 The sampling design process

Source: Malhotra, Baalbaki and Bechwati (2013: 368).

3.3.8.1 Step 1: Define the target population

Figure 3. 3 shows that the first step in choosing a sample is to identify the target population. Al-Debei, Akroush and Ashouri (2015: 714) state that a target population is a set of individuals that the researcher is usually interested in. Aaker *et al*. (2011: 336) and Malhotra, Birks and Wills (2012: 151) emphasise the importance of getting samples from one geographical place in studies aimed at examining culturally sensitive behaviour.

According to Malhotra, Baalbaki and Bechwati (2013: 368) and Berndt and Petzer (2011: 171), it is crucial that the target population chosen for a research study is distinct in these elements: sampling units, extent, and time. The target population of this study includes millennials living in the greater Durban area, who are aware of and use the Internet for shopping online using digital payment. For this study, the target population consisted of 400 millennials (Generation Y) from the greater Durban area.

3.3.8.2 Step 2: Determine the sampling frame

A sampling frame is determined to easily get to know the various elements in the target population. A map, list of emails or telephone numbers could be used as sources for a sampling frame (Berndt and Petzer 2011: 317). To avoid sampling errors researchers, need to confirm the sampling frame accounts from the target population (Zikmund and Babin 2013: 318; Burns and Bush 2014: 240).

In this study, due to privacy rights in South Africa a sampling frame could not be obtained, making getting information on millennials online shopping and digital payment information level impossible. Due to the lack of a sampling frame and the use of a self-administered

survey, invitations to participate in the survey were distributed in many areas in Durban where millennials reside (**see Appendix B and C**).

3.3.8.3 Step 3: Select a sampling technique(s)

This provided a series of techniques that allows the researcher to decrease the quantity of data needed by studying data only from a smaller group instead of all likely cases (Cherry 2014: 4). The various sampling techniques available can be categorised into two main types, namely probability and non-probability sampling (Zikmund *et al*. 2013: 323). It is imperative to choose which of the sampling techniques to apply and adhere to it throughout the research process (Brown, Suter and Churchill Jr. 2018: 218).

Probability sampling is a method in which samples from a larger population are chosen using a technique based on the theory of probability (Aaker *et al*. 2011: 342; Burns and Bush 2014: 242). In contrast, non-probability sampling depends on the researcher's selected samples based on the decision of the researcher rather than random selection (Malhotra, Baalbaki and Bechwati 2013: 372; Feinberg, Kinnear and Tylor 2013: 304). Table 3. 10 below describes the difference between probability and non-probability sampling techniques.

Table 3. 10 Probability and non-probability sampling techniques

Probability sampling	
Simple random sampling	A random method of picking a sample where each element and each mixture of elements in the population have the same opportunity to be chosen as a part of the sample (Zikmund *et al*. 2013: 326).
Systematic sampling	An advance on simple random sampling requires complete information about the population to select one unit from the sampling frame (Malhotra, Baalbaki and Bechwati 2013: 378).
Cluster sampling	Aaker *et al*. (2013: 286) explain cluster sampling as a well-organised technique of random sampling where the population is first separated into clusters, and then randomly a sample is chosen from the clusters.
Stratified sampling	Stratified Random Sampling requires subsamples that reveal some essential features, samples are taken from each section of the target population by simple random sampling (Zikmund and Babin 2013: 328).
Multi-Stage Sampling	This sampling method draws the sample and uses a mixture of numerous methods (Burns and Bush 2014: 234). In this method, the population is separated into groups at several levels (Cherry 2014: 6).

Non-probability sampling

Convenience Sampling	In this sampling, researchers choose participants as per their convenience (Feinberg, Kinnear and Tylor 2013: 304). The researcher picks the nearest people alive as respondents. Consequently, in convenience sampling, subjects who are easily approachable or available to the researcher are chosen (Zikmund *et al*. 2013: 328).
Purposive Sampling	Participants are chosen by the researcher's judgment, considering the drive of the study (Malhotra, Baalbaki and Bechwati 2013: 374). It utilises the judgment of a professional in selecting a certain element of the target population with a specific purpose in mind (Burns and Bush 2014: 255).
Quota Sampling	This sampling technique permits basics to be comprised in the sample on grounds that they meet the researcher's selection criteria, usually demographic (Feinberg, Kinnear and Tylor 2013: 305).
Snowball sampling	Snowball sampling includes respondents that are originally selected randomly, and more respondents are chosen via referrals or information given by original respondents (Malhotra, Baalbaki and Bechwati 2013: 376).

Non-probability, purposive sampling was used for this study. Due to not having a database available that could assist to construct a sampling framework the non-probability sampling form proved to be more ideal, and purposive sampling allowed the researcher to collect the suitable number of millennials shopping online using digital payment to achieve the objectives (Feinberg, Kinnear and Tylor 2013: 304).

3.3.8.4 Step 4: Determine the sample size

The sample size in this research study denotes the number of people in the study. As decreed, the larger the sample, the smaller the sampling error (Andrew, Pedersen and MacEvoy 2011: 134). Madondo (2016: 102) refers to the sample size of a study to be the number of items that are picked from the target population. Furthermore, they note the sample size and how many elements of the population will be included in the study as the size of the sample and resource restrictions must be counted when the sample size is decided. Additionally, the use of either probability or non-probability sampling methods influences the sample size of the study (Hair *et al*. 2013: 141). There is no need for sample formulas when non-probability sampling is used since non-probability sample sizes are decided by subjective means and instinctive decisions founded on previous academic or industry research and the scope of the research presented (Burns and Bush 2014: 266; Hair *et al*. 2013: 151).

This study may be defined as problem-solving in nature, and according to Andrew, Pedersen and MacEvoy (2011: 141), requires a random sample of 390 to 500 (millennials) to ensure accurate findings of the study. This supported the researcher's decision to have 400 millennial respondents as the sample size.

3.3.8.5 Step 5: Execute the sampling process

Lastly, the process needs to be implemented by stipulating the conditions of the sample design, including the sampling frame, unit, technique, and size that will be used (Wiid and Diggines 2015: 224). Table 3. 11 outlines the sample plan for the study.

Table 3. 11 Sample plan of this study

Population	Millennials living in the greater Durban area who are aware of online shopping and able to use a digital payment method as a transaction.
Sampling frame	No sampling frame was accessible.
Sampling element and unit	Millennials who seek to purchase online using a digital payment method for shopping convenience.
Sampling method and technique	Non-probability sampling method, purposive sampling technique.
Sample size	400 respondents.

3.3.9 STEP 9: COLLECTION DATA

Previously, in the marketing research process, the target population was recognised from which information would be gathered. The actual information needs to be assembled from the target population in this stage (Berndt and Petzer 2011: 202). Zikmund and Babin (2013: 65) discuss the numerous methods, as previously stated, that all need diverse methods of data gathering. As researchers need to do fieldwork, field workers should be chosen, trained, and monitored during the data collection process (Malhotra, Baalbaki and Bechwati 2013: 248).

In this study, self-administered questionnaires were distributed by the researcher to the identified respondents in the greater Durban area from 1 July 2019 to 30 August 2019. The questionnaires had a brief overview of the study, a description of the study's objectives, and the respondent’s privacy rights. 393 questionnaires were completed and represented the sample fulfilment rate.

3.3.10 STEP 10: DATA ANALYSIS

Schneider *et al*. (2018: 245) remark that following the gathering of research data, a need arises to establish order, structure and meaning to the form of gathered data. While Burns and Bush (2014: 228) describe data analysis as the breaking down of existing intricate

elements into easier sections for interpretation. The captured responses to the closed-ended structured quantitative questionnaire (Appendix C) were used to form a data set. Hair *et al*. (2014: 295) state that the early data formulation process includes editing, coding, transcribing, and cleaning of data, and are reviewed below.

- Coding is the process of identifying a passage in the text or other data items, normally being in mathematical form, in each of the likely answers to each question in the survey (Malhotra, Baalbaki and Bechwati 2013: 453; Aaker *et al*. 2013: 182; Malhotra, Birks and Wills 2012: 249).
- Data cleaning is an important part of the process involved in preparing data for analysis that includes the research surveyed carefully to classify reliability and address missing responses (Malhotra, Baalbaki and Bechwati 2013: 455).
- Editing is essential to upgrade the quality of research and remove all flaws as much as possible (Zikmund and Babin 2013: 65). Researchers need to return incomplete or unclear questionnaire(s) to respondents to finish during this process or they may discard those (Hair *et al*. 2011: 296).
- Transcribing is an important process in the qualitative analysis of language data and is widely employed in basic and applied research across the data statistical program (Hair *et al*. 2014: 246).

In each questionnaire, completeness, consistency, and accuracy were physically examined by the researcher. To ensure that respondents submitted completed questionnaires, the questionnaire structure was set in such a manner that prompts would appear if a respondent did not complete the questionnaire. Coding of data was done manually. The latest version of the Statistical Package for Social Sciences (SPSS) version (26.0) was utilised to capture and construct the data set.

The data preparation process has been concluded and the data analysis techniques used in the study will be discussed next.

3.3.11 DATA ANALYSIS TECHNIQUES USED IN THIS STUDY

Burns and Bush (2014: 317) note that marketing researchers can use five data analysis techniques to analyse data sets, namely descriptive analysis, inferential analysis, difference analysis, association analysis, and predictive analysis. Techniques used in the data analysis for this study are discussed in the next sections.

3.3.11.1 Descriptive statistical analysis

Summaries of the sample and opinions made are given as descriptive statistics (Burns and Bush 2014: 318). The summaries could be either quantitative (summary statistics), or visual (graphs) (Pallant 2013: 36). The foundation of the original description of the data as part of a more detailed statistical analysis could be formed from these summaries, or they could be enough for a study (Aaker *et al*. 2011: 446). Statistics is concerned with the scientific method by which information is collected, organised, analysed and interpreted for reports and decision-making.

Two subdivisions exist in the statistical method: (a) Descriptive Statistics – entails the methodology of analysing data and the presentation of numerical facts, or data, in either table or graph form. (b) Inferential Statistics - includes methods for creating inferences about the entire population formed from samples during observations (Trafimow and MacDonald 2017: 211). Babin and Zikmund (2016: 320) show that usually applied frequency linked statistics involve the calculation of location or central tendency (mean) and the calculation of inconsistency and dispersion (standard deviation).

Table 3. 12 shows the descriptive techniques that were applied in this study.

Table 3. 12 Descriptive statistical techniques to be used in this study

Descriptive statistical techniques	Definition
Mean	Discusses to the average value of a set of numbers (Burns and Bush 2014: 320). To calculate mean: add up all the figures and divide by the total number of values. Formula calculation ΣX / N (McDaniel and Gates 2010: 406).
Standard deviation	A calculation of variability conveyed in identical units as the data (Feinberg, Kinnear and Tylor 2013: 398). Standard deviation and variance measure inconsistency (Malhotra, Baalbaki and Bechwati 2013: 481).
Frequency	The number of times that a data value occurs in a data group (Mazzocchi 2011: 369).
Percentage	The percentage is another way of expressing a proportion. A percentage is equal to the proportion times 100, usually represented in % (Aaker *et al*. 2011: 387).

For this study, the frequencies and percentages of the sample outline of respondents will be assessed and for each statement that measured the main concepts of this study for example usage level of digital payment, shopping online challenges such as trust, security, and privacy.

3.3.11.2 Assessing reliability and validity

Marketing researchers pursue the use of dependable and reasonable measurement scales while performing research (Burns and Bush 2014: 214). Reliability is the amount of constant results a scale can give when a particular characteristic is recurrently measured on the scale, showing internal consistency in the measurement (Malhotra,

Baalbaki and Bechwati 2013: 317). Malhotra, Baalbaki and Bechwati (2013: 317); Feinberg, Kinnear and Tylor (2013: 132) show the approaches that can be applied to measure reliability and are discussed below:

- **Test-retest reliability**

Test-retest reliability is a determination of reliability found by administering identical tests twice completed at a certain time to a set of individuals (Feinberg, Kinnear and Tylor 2013: 132). Correlation coefficients are used to determine the similarity in the results. High test-retest reliability is concluded from a high similarity (Hair *et al*. 2011: 234).

- **Alternative-forms reliability**

Occurs when a person partaking in a research or testing setup has two unique editions of one test at various times (Malhotra, Baalbaki and Bechwati 2013: 317).

- **Internal consistency reliability**

Internal consistency reliability measures how fit a test or analysis is in assessing what needs to be measured (Malhotra, Baalbaki and Bechwati 2013: 318). It is used to define the similarity of a scale (Zikmund *et al*. 2013: 256). The split-half method calculates interior reliability by dividing a multi-item scale into similar groups and comparing the outcomes of the groups (Feinberg, Kinnear and Tylor 2013: 132). A high comparability result is considered reliable. Cronbach's alpha is the average of all potential split-half coefficients that stemmed from the various ways the scale item was split (Malhotra, Baalbaki and Bechwati 2013: 318).

For this study**,** the reliability of the concepts (online shopping behaviour, digital payment and usage level of digital payment for online shopping) was measured using Cronbach's alpha values. Concepts were measured with scales that were deemed reliable since the Cronbach's alpha value is 0.70 or exceeds 0.70 (Zikmund and Babin 2013: 258; Malhotra, Baalbaki and Bechwati 2013: 318).

Babin and Zikmund (2016: 281) mention that a decent scale must be exact and correct. Validity is the degree to which scale scores genuinely reflect the measured characteristics (Burns and Bush 2014: 214). Perfect validity will have no measurement error (Malhotra, Baalbaki and Bechwati 2013: 318). Feinberg, Kinnear and Tylor (2013: 130) show the three elementary types of validity, namely:

- **Content validity**

Content validity is a rational process where connections between the test items and the job-related tasks are recognised (Hair *et al*. 2013: 156). Additionally, content validity provides some indication of the authenticity of a test measurement (Malhotra, Baalbaki and Bechwati 2013: 318). Necessitates the assessment of all test items for their importance on the planned construct, for instance, if the items are plainly and properly worded (Feinberg, Kinnear and Tylor 2013: 131).

- **Criterion validity**

Criterion validity measures how well one measure predicts an outcome for another measure (Zikmund *et al*. 2013: 248). Criterion validity includes representing a relationship among the measurement of interest and other instruments or standards that is a precise pointer of identical concepts or constructs that are measured (Malhotra, Baalbaki and Bechwati 2013: 318).

- **Construct validity**

Construct validity is the level at which inferences can reasonably be derived from the operationalisations in a study to the abstract constructs on which the operationalisations were grounded (Hair *et al*. 2013: 239). Construct validation is implicated every time a test is to be translated as a rate of a certain trait or quality which is not operationally described (Feinberg, Kinnear and Tylor 2013: 130). According to Zohrabi (2013: 258) and Gray (2014: 258), the issue encountered by the researcher is, "What constructs account for variance in test performance?" Construct validity demands no new scientific approach.

Content and construct validity were measured for this study. Content validity was recognised by creating the questionnaire on scales modified from past research collected from the literature review in Chapter Two. Besides (per discussion section 3.3.7.5), the questionnaire was pre-tested with 10 respondents. The key concepts of this study, such as the usage level of digital payment, shopping online, challenges such as trust, security, and privacy were further supported by performing confirmatory factor analysis. The process of factor analysis and confirmatory factor analysis used in this study to determine the construct validity is described below.

3.3.11.3 Multivariate data analysis

Zikmund *et al*. (2013: 458) and Malhotra, Baalbaki and Bechwati (2013: 461) specify that multivariate techniques are utilised to examine groups of data in customer and market research, quality control and quality assurance, process optimisation and process control, and research and development. Multivariate techniques permit researchers to investigate associations among variables in a predominant way and to measure the association among variables (Gray 2014: 262). Unlike multivariate techniques, they are complex and include complex mathematics that needs a statistical program to examine the data. To get meaningful results from multivariate techniques a large sample of data is needed; or else, the outcomes are worthless because of high standard errors (Zohrabi 2013: 258: 261). Standard errors control confidence from results, more confidence can be gained in results from a large sample than a small one (Creswell 2015: 292). Picardi and Masick (2014: 251) highlight that although performing statistical programs is upfront, they need a statistician to translate the outcomes. Multivariate techniques may be described as interdependence or dependence techniques (Hair *et al*. 2011: 359). Lacobucci (2013: 214) describes multivariate techniques as an interdependence technique that involve relating a set of variables to allow the clarification of data structure, exclusive of a difference being complete if these variables are done to forecast other variables.

Feinberg, Kinnear and Tylor (2013: 485) denote the three steps that are vital when looking for a factor analysis solution:

Step 1: Factor abstraction includes the search for a group of factors that establish a lined mixture of the variables in the correlation matrix (Feinberg, Kinnear and Tylor 2013: 485). Yin (2014: 241) states that the key apparatus study is the most frequently used abstraction method. Primary mechanisms examination is the most normally used abstraction method. Primary mechanisms examination receipts into thought the overall difference in the data (Malhotra, Baalbaki and Bechwati 2013: 629). Additionally, Feinberg, Kinnear and Tylor (2013: 485) note that it is vital that the issues are uncorrelated throughout the process of factor withdrawal.

Step 2: Factor revolution methods can be used to allow the clarification of the factor matrix (Feinberg, Kinnear and Tylor 2013: 485; Brennen 2013: 147). Revolution techniques may be considered as orthogonal or sloping procedures, where the varimax orthogonal rotation technique is the most regularly applied (Malhotra, Baalbaki and Bechwati 2013: 228). The varimax process enables the interpretation of factors over high loads on factors to minimise the value of variables (Malhotra, Baalbaki and Bechwati 2013: 631). Furthermore, Birks, Malhotra and Wills (2012: 361) claim that high loadings on a specific factor enable the factor-naming method, which must be complete when the factors have been recognised.

Step 3: Request and clarification include a complete scale factor analysis of the data collected from the survey (Sparkes and Smith 2014: 226). For this study, confirmatory factor analysis was accomplished to approve the researcher's theoretical prospects and perceptions about the factor construction and to establish if the theory of the factors constructs suits the observations done in the study.

This study applied factor analysis as a multivariate interdependence method. Factor analysis is the overall explanation for a group of measures that mainly happens to lessen and summarise a huge number of variables (Cant and Van Heerden 2015: 126). Malhotra, Baalbaki and Bechwati (2013: 623) specify that factor analysis could be categorised as exploratory factor analysis or confirmatory factor analysis. Researchers do a confirmatory factor analysis when they want to statistically test specific hypotheses regarding the structure and association among dormant variables underlying the data (Mazzocchi 2011:

378). In distinction, factor analysis is performed when researchers do not perform any previous theories on the factor loadings (Bowen and Guo 2011: 241).

3.3.12 Step 11: Reparation and Presentation of the Final Research Report

Burns and Bush (2014: 77) declare that the last stage of making and producing the last research report is vital since it is usually the first record of the research project the customer is attracted to read. Chapter Four discusses the core aim and objectives of this study, trailed by the closing chapter (Chapter Five) that recaps the key findings, conclusions, and recommendations.

3.4 CONCLUSION

The chapter discussed the details of the research methodology adopted for this study. The motivation for the selection of the research approach was provided. The chapter indicated that a survey design was selected for this study, and this was followed by an explanation of the sampling design. The survey questionnaire and data collection procedures were also reported on, including the data analysis methods employed for the study. The next chapter discusses the research results.

CHAPTER FOUR

FINDINGS, ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

Chapter Three discussed the research design, data collection methods and questionnaire design. The main purpose of this chapter is to clarify and examine the outcomes of this research. This chapter starts with an analysis of the data and offers an insight into the results of the research. The information gathered from the responses was analysed using the Statistical Package for the Social Science (SPSS) edition (26.0). The final section then presents the statistical validity results for the study.

4.2 RESPONSE RATE AND REPRESENTATIVENESS

The test for this research comprised 400 respondents. Questionnaires were handed out to 400 respondents, using a purposive sampling method and 393 respondents returned the questionnaire, giving a 98.25% response rate. Data was collected in the greater Durban area of the province KwaZulu-Natal.

4.3 THE RESEARCH INSTRUMENT

The research instrument had 56 points, through a level of dimension at the nominal and ordinal levels. The survey had four parts, namely, demographics information, the usage level of digital payment for online shopping, online shopping behaviours, and digital payment.

4.4 DESCRIPTIVE STATISTICS

This section offers descriptive statistics founded on the demographic data of the respondents. As per Dhanapala, Vashub and Subramaniam (2015: 117), descriptive statistics describe the organising, summarising, and explaining of quantitative data. Demographic information consists of traits such as gender and race which are depicted graphically.

4.4.1 SECTION A: DEMOGRAPHIC DATA

The questionnaire required demographic information of the respondents. Demographics describe the characteristic information of any individual from a perspective (Forthun, Strandberg-Larsen and Wilcox 2018: 1298). The relationship of variables regarding the demographics of respondents is illustrated graphically.

4.4.2 CHARACTERISTICS OF RESPONDENTS

It is important to see the millennials using different types of digital payment for online shopping, through their age and gender, as this plays a critical role in many online stores. As reflected in Table 4. 1 the proportion of males to females is roughly 2:3 (40.5%: 59.5%).

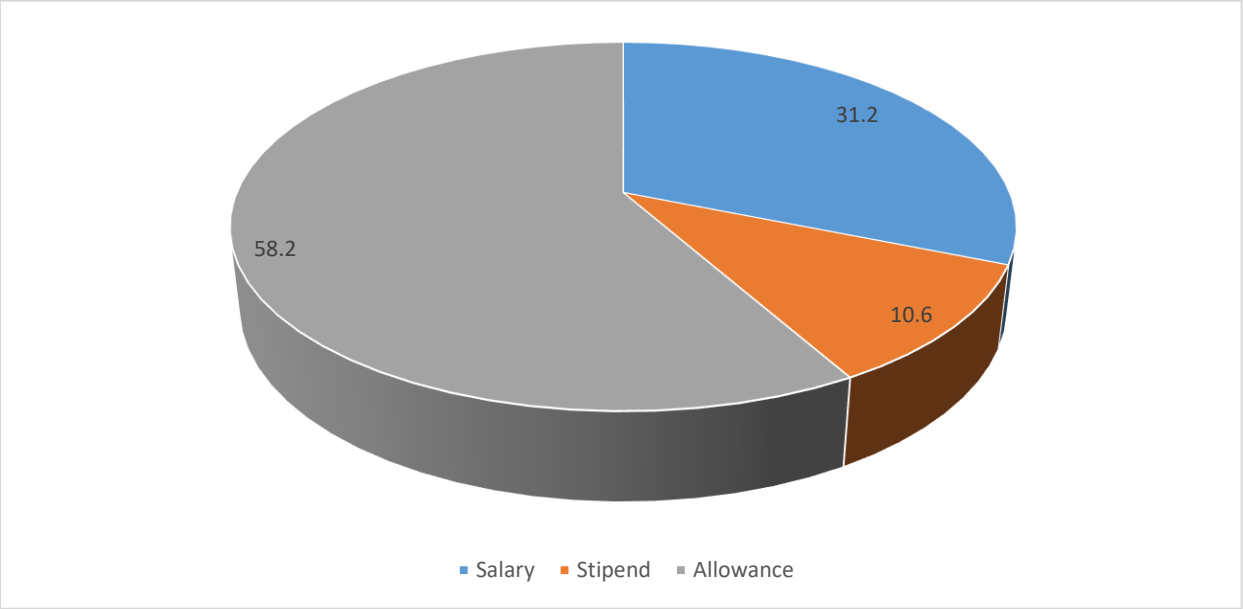
Table 4. 1 Gender distribution by age

		Gender		Total
Age		Male	Female	
19 – 22	Count	69	110	179
	% within Age	38.5%	61.5%	100.0%
	% within Gender	43.4%	47.0%	45.5%
	% of Total	17.6%	28.0%	45.5%
23 – 26	Count	44	51	95
	% within Age`	46.3%	53.7%	100.0%
	% within Gender	27.7%	21.8%	24.2%
	% of Total	11.2%	13.0%	24.2%
27 – 30	Count	18	29	47
	% within Age	38.3%	61.7%	100.0%
	% within Gender	11.3%	12.4%	12.0%
	% of Total	4.6%	7.4%	12.0%
31 – 34	Count	21	25	46
	% within Age	45.7%	54.3%	100.0%
	% within Gender	13.2%	10.7%	11.7%
	% of Total	5.3%	6.4%	11.7%
35 – 39	Count	7	19	26
	% within Age	26.9%	73.1%	100.0%
	% within Gender	4.4%	8.1%	6.6%
	% of Total	1.8%	4.8%	6.6%
Total	Count	159	234	393
	% within Age	40.5%	59.5%	100.0%
	% within Gender	100.0%	100.0%	100.0%
	% of Total	40.5%	59.5%	100.0%

Table 4. 1 shows that females have the higher response rate (Figure 4. 1), in all the age groups being 61.5%, 53.7%, 61.7%, 54.3% and 73.1%, respectively. It seems online shopping is more popular amongst female shoppers than male shoppers. Ladhari, Gonthier and Lajante (2019: 118) discovered that Generation Y (millennials) contribute to the top ratio of online shopping, supported by Generation X and baby boomers. The biggest number of participants (45.5%) was between the ages of 19 and 22 years. This is anticipated regarding the traits of the population, which was made up of millennials while comparing traditional shopping to online shopping. Usually, millennials between the

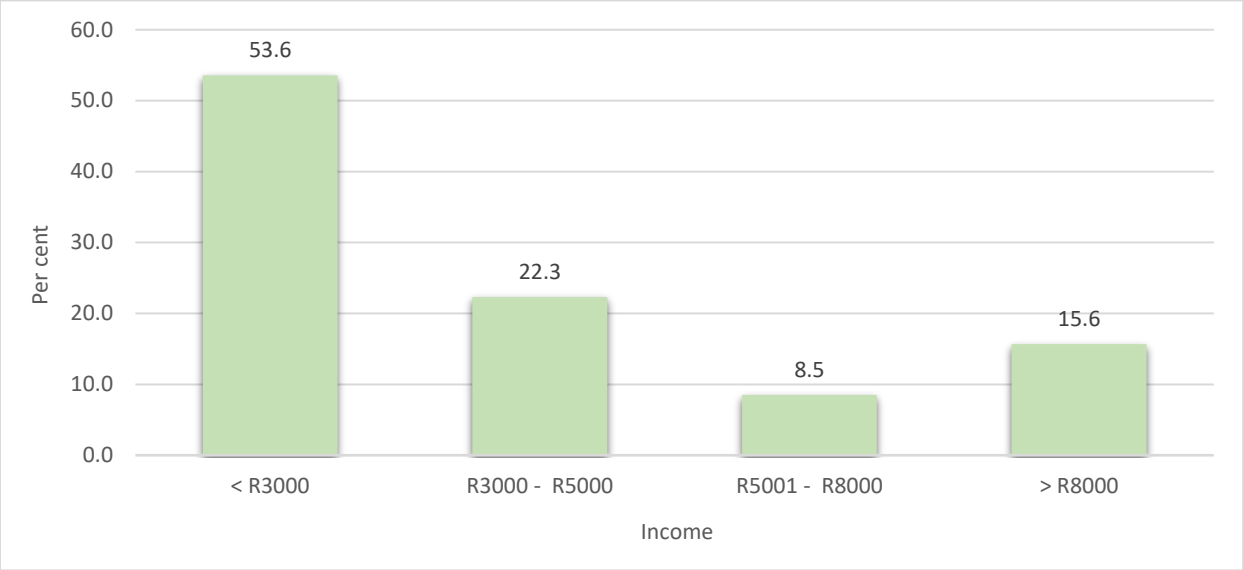
ages of 19 and 22 believe that online shopping is convenient unlike conventional shopping (Farivar, Turel and Yuan 2017: 588). In many African countries, few millennials use the Internet for shopping online and the digital payment method (Hamari, Hanner and Koivisto 2019: 7). Bilgihan (2016: 109) contends that more millennials are shifting to severe usage of the Internet as the availability of technology, the disposal of information, and the skill to cooperate via the Internet has improved and grown. Internet-based facilities extend several benefits to suppliers and customers. In addition, the author asserts that millennials take shopping seriously and spend substantial time online exploring, imagining, pondering flash-sale offers, examining what celebrities are dressed in and then envisioning themselves in comparable clothes.

Figure 4. 1 Type of Income



As displayed in Figure 4. 1; most respondents receive an allowance as compared to those who received a salary or stipend. Moreno, Lafuente, Carreon and Moreno (2017: 8) affirm that most millennials in higher education institutions receive high allowance income than the salary paid from internships. The type of income of the respondents was analysed to assess if income influences the online purchasing behaviour of millennials. The type of income millennials receives the most is an allowance.

Figure 4. 2 Income Brackets



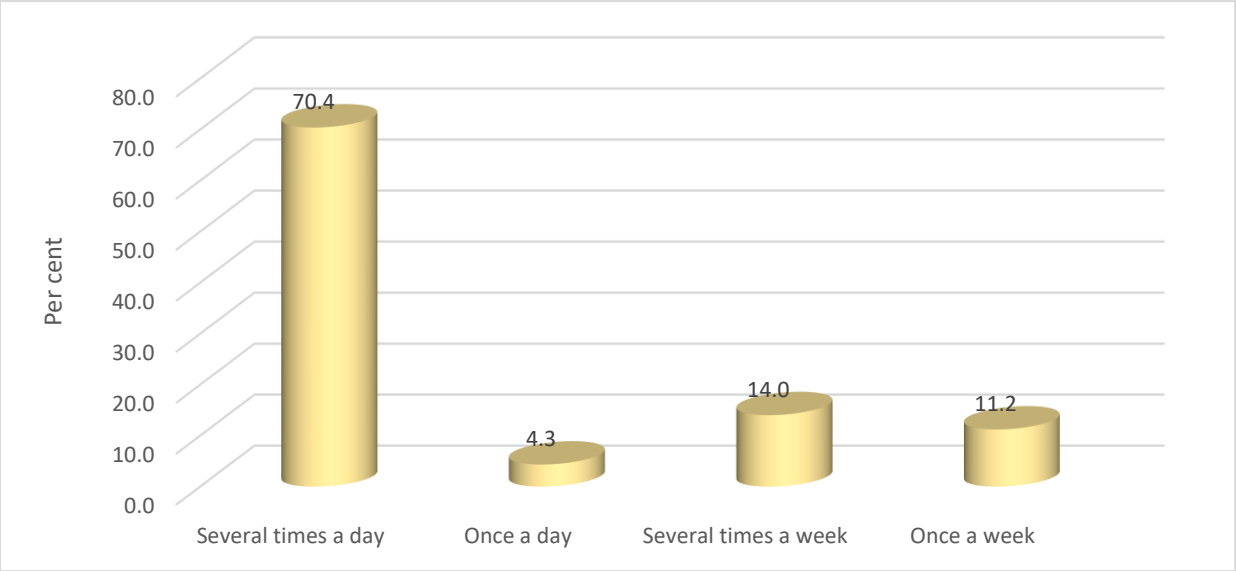
Displayed in Figure 4. 2 is a clear grouped reflection of the respondent's income from the highest to the lowest group, also converted into percentages. The results of the study show that most online shoppers earn an income of less than R3000. Millennials earning less than R3000 shop online more than other income brackets.

4.4.3 SECTION B: USAGE LEVEL OF DIGITAL PAYMENT FOR ONLINE SHOPPING

This section deals with the usage of digital payment for online shopping. One aim of this analysis is to determine digital payment usage for online shopping.

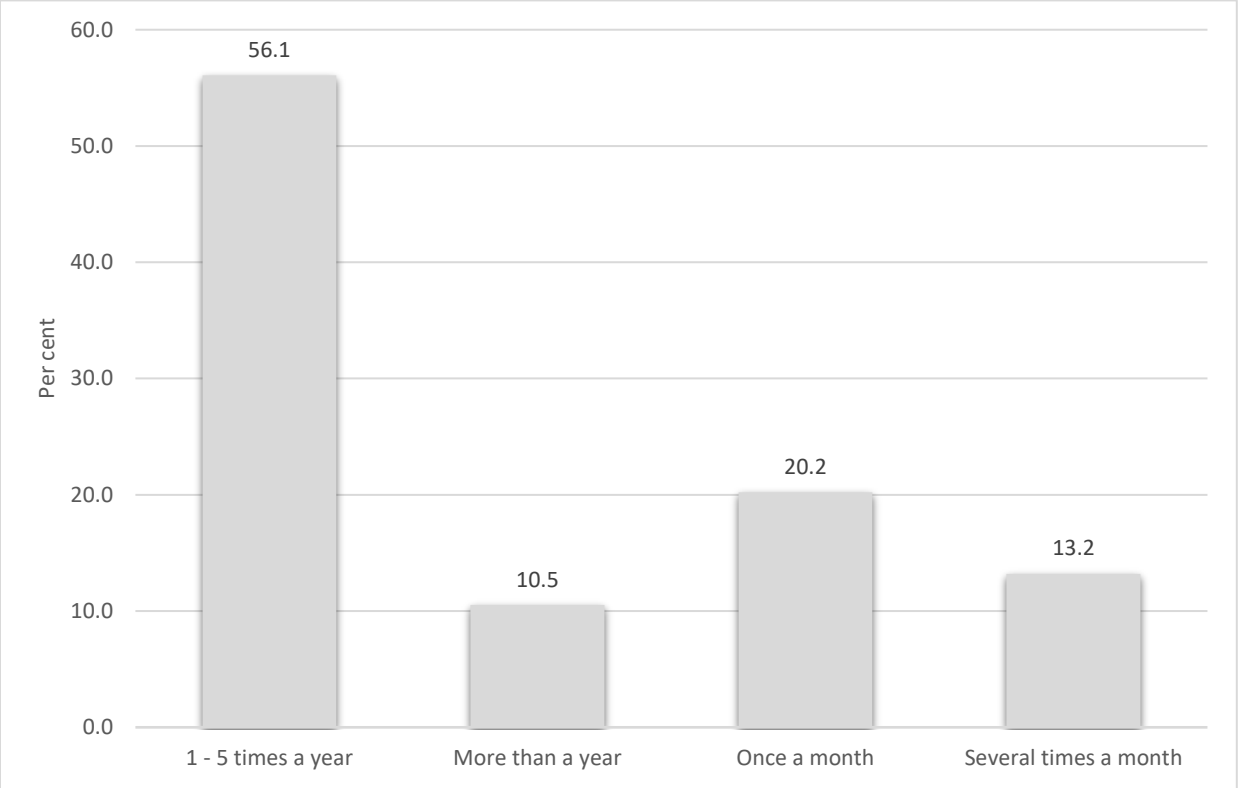
4.4.3.1 The frequency of internet usage.

Figure 4. 3 Internet Usage



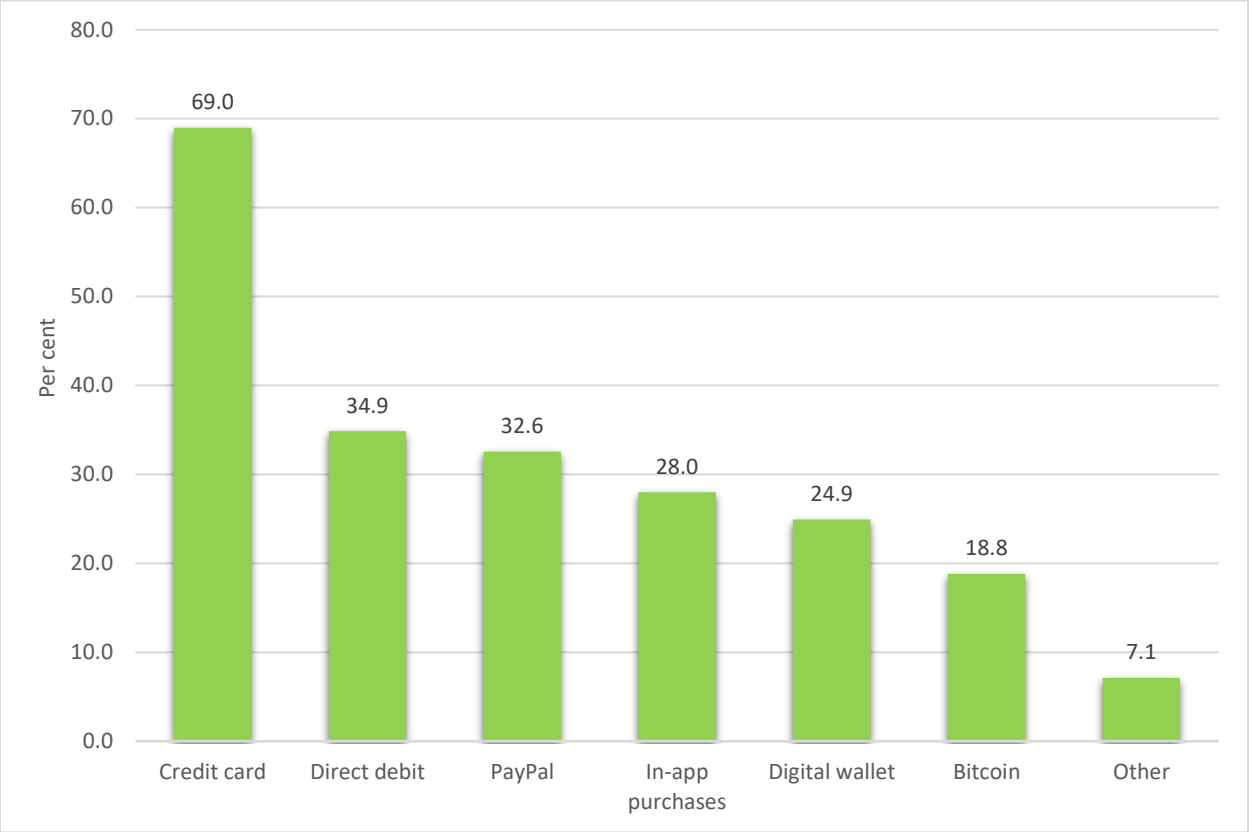
The outcomes of the investigation show that many of the millennials utilise the Internet several times a day. The majority of respondents (70.4%) utilise the Internet several times a day, whilst 14.0% of the respondents utilise the Internet several times a week. This shows that the Internet has moved into the normal awareness of society. Moreno *et al*. (2017:10) affirm that it is estimated that 50% of inhabitants globally are Internet users, established on the Internet Usage and World Population Statistics. Companies employ the Internet to deliver, converse and distribute knowledge, to advertise a product, to get feedback and to run happiness evaluations with clients (Balaji and Roy 2017: 10). Consumers use the Internet not only to buy merchandise online but also to match costs, product types and after-sale assistance they will get if they buy the merchandise from a certain shop (Yerpude and Singhal 2018: 554). The purpose of analysing internet usage was to determine the use of the Internet for social purposes or browsing websites or any form of online search. Millennials are using the Internet frequently, but not necessarily for online shopping.

Figure 4. 4 Online Shopping



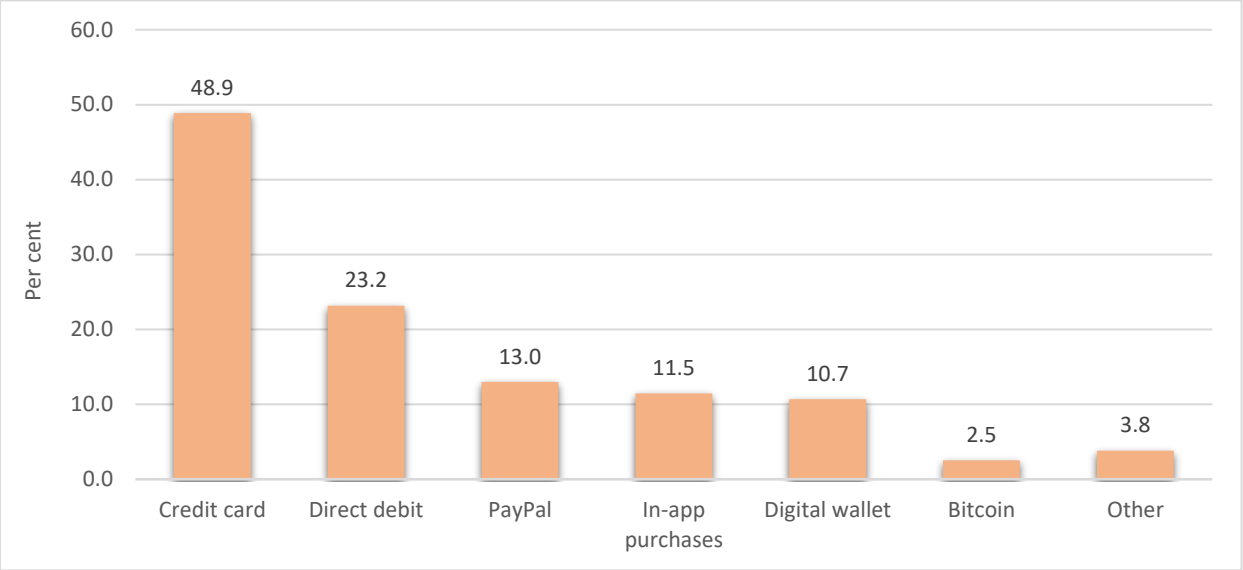
As portrayed in Figure 4. 4; most of the participants (56.1%) shopped online between 1 to 5 times a year. According to Lian and Yen (2014: 138), online shopping is essential to many customers, as it requires less work compared to buying at brick and mortar stores. The importance of analysing online shopping was to get information on how many times millennials shop online, and this will help online retailers identify the awareness of millennials who shop online. Online shopping is becoming a way of life. Hamari, Hanner and Koivisto (2019: 7) support that altered purchase patterns, among other issues, create financial possibility for businesses that have websites to expand and provide online acquisition facilities 24/7.

Figure 4. 5 Awareness of Digital Payment Methods



The results indicate that millennials are aware of digital payment, they have grown and evolved with technology and are highly connected to the different types of payment methods. Wu *et al*. (2014: 2770) found that 72.4% of millennials use digital payment for online shopping. Most of the millennials are using credit cards for digital payment. The findings agree with Ossolinski, Lam and Emery (2014: 3) that digital payments are generally secure, especially when you are shopping online with major retailers, but people do occasionally get their card numbers stolen.

Figure 4. 6 Most Secure Digital Payment Methods



The findings indicate that most of the respondents (48.9%) believe that a credit card is a more secure digital payment method. Bitcoin was found to be less secure than any other digital payment method as Bitcoin servers or systems are not safe adequately to stop the invasion of information moochers, spammers, spyware, malware and hackers; buyer information could be taken and distorted (Bergmann, Dreibigacker, Skarczinski and Wollinger, 2018: 87). However, a payment gateway, alternatively identified as the processor or credit card processor, links the retailer's site and shopping cart, the buying bank (retailer's bank), and the dispensing bank (client's bank). Wandoko *et al*. (2017: 7) found that payment gateways are safe and dependable since they conform to the basic information protection rules and converse with banks and credit card corporations utilising highly safe techniques and machinery. The two main aspects of credit card handling, authorisation and payment resolution, the payment gateway is a vital connection in an electronic transaction. Throughout authorisation, credit card information from the retailer's site is forwarded to the payment gateway by the shopping cart, which authenticates the card information and then transmits a bid to the individual's bank for the card to be used (Plateaux, Lacharme and Vernois 2018: 106). Assessing secure digital payment methods was to identify the most secure type of digital payment method and this will help

millennials as customers and the retailers. A credit card is more secure than any other payment option because of payment gateways. The results agree with the literature.

Figure 4. 7 Factors Preventing Millennials from Shopping Online

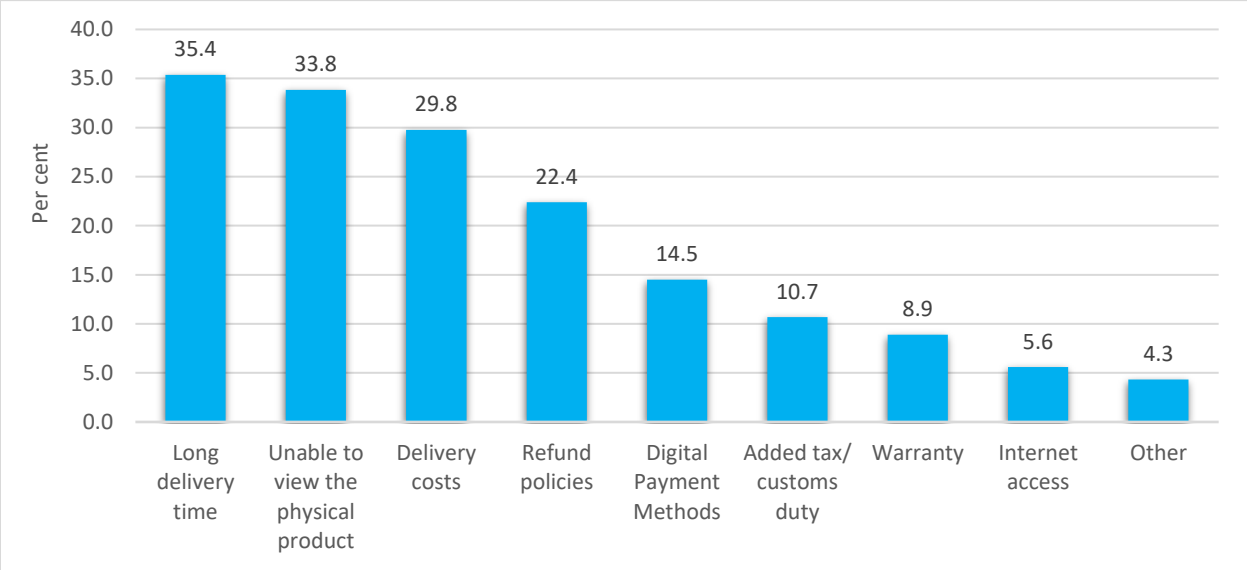


Figure 4. 7 reflects the factors preventing millennials from shopping online. The factors preventing millennials from shopping online are long delivery service (35.4%) and being unable to physically view the product (33.8%). They face factors such as trust, security, and product guarantee that is considered to be preventing them from shopping online. According to SivaKumar and Gunasekaran (2017: 224), it is the duty of the online store's website to help their consumers who are oblivious of the online buying procedure, payment technique, and dispensing of the goods. Rahman, Islam, Esha, Sultana and Chakravorty (2018: 15) agree that fear of non-delivery and losing money are amongst the things that prevent millennials from shopping online. Aside from the customer's overall view, online shopping has also cultivated shops to concentrate on consumer desires, morals and means to appease consumers to continue in the shop. The main factors that are preventing millennials from shopping online are delivery service, unable to view a physical product, delivery costs and refund policies.

Figure 4. 8 Online Shopping Challenges

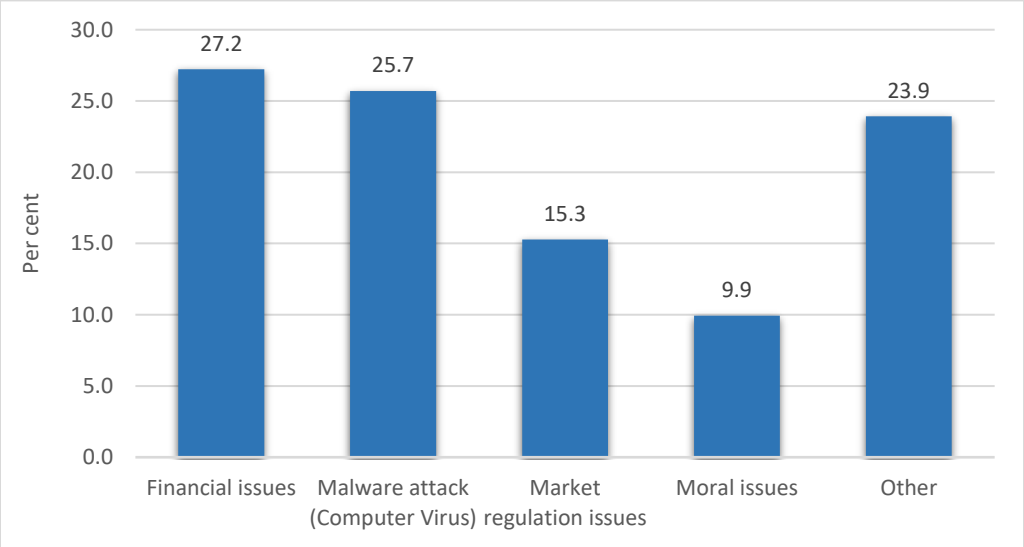


Figure 4. 8 reflects the challenges respondents face when shopping online. The study focusses on four frequent challenges of shopping online which millennials face. It was found that financial issues and malware attacks (computer viruses) (27.2%; 25.7%) are the most common challenges millennials face. The increasing unemployment rate and lack of a strong financial resource for the household have caused customer buying power to diminish, forcing people to revise their shopping method (Falayi, Shackleton, Kemp, and Shackleton 2019: 93). Hollowell, Rowland, Kliestik, Kliestikova and Dengov (2019: 15) found that in 2018 online retail had a decreasing growth and in 2019 it reached increasing negative growth.

Online buyers have less available credit to finance their purchases (Van Steenburg and Naderi 2020: 100). This credit crunch is a decline in the broad accessibility of credits or a rapid reduction of the terms needed to get credit from financial institutions. Millennials face numerous challenges when shopping online, financial issues and malware attacks are the most common challenges faced by millennials, affecting the usage level of shopping online.

4.4.4 SECTION C: ONLINE SHOPPING BEHAVIOURS

This section evaluates the shopping behaviours amongst millennials using the digital payment method. The aim is to identify shopping behaviours amongst millennials for shopping online. Table 4. 2 presents the outcomes acquired from the experimental analysis.

Table 4. 2 Online Shopping Behaviours Patterns

		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Chi-Square
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	p-value
I have used the Internet for online shopping in the last 6 months	C13	108	27.6%	67	17.1%	57	14.6%	66	16.9%	93	23.8%	< 0.001
My experience purchasing online was positive	C14	53	13.6%	50	12.8%	100	25.6%	119	30.5%	68	17.4%	< 0.001
I trust online stores to keep my best interests in mind for online purchase	C15	49	12.6%	57	14.7%	147	37.8%	88	22.6%	48	12.3%	< 0.001
I trust online stores to keep my personal information secure	C16	61	15.7%	70	18.0%	121	31.2%	78	20.1%	58	14.9%	< 0.001
I am very likely to provide the online stores with the information it needs to better serve my needs	C17	39	10.0%	51	13.1%	129	33.2%	121	31.1%	49	12.6%	< 0.001
Online shopping makes it easier for me to make online product choice and judgement	C18	36	9.2%	56	14.3%	118	30.2%	120	30.7%	61	15.6%	< 0.001
Online shopping minimises the time I usually spent on shopping	C19	31	8.0%	39	10.1%	93	24.0%	109	28.1%	116	29.9%	< 0.001
Online shopping provides simple wide range of different products online	C20	22	5.7%	32	8.3%	92	23.8%	139	36.0%	101	26.2%	< 0.001

The outcomes in Table 4. 2 reflect that 29.9% of the respondents strongly agree that online shopping minimises time spent on shopping. Lian and Yen (2014: 137) assert that online shopping is perceived as easier to use by several consumers, needing lesser energy compared to buying at brick and mortar stores. The findings of the study indicate that respondents consider shopping online to be easier to use. Additionally, the outcomes of this analysis are supported by Hasan's (2016: 228) findings where respondents recognised online shopping as an influential style of shopping. Buying online needs less energy unlike buying goods at the usual brick and mortar store (Lian and Yen 2014: 135). The average level of agreement is 28.1% that reflects online shopping appeals to consumers' convenience. Rahman *et al*. (2018: 11) add multiple reasons why consumers like online shopping, including that they can view and contrast the results of retailers and goods in a comparatively quick timeframe.

Table 4. 2 reflects, 75.8% of the respondents concurred that online shopping provides a simple wide range of products, online shopping appeals to a greater extent to millennials. Generally, it can be concluded that the respondents can compare features. Moreover, in Durban most millennial customers have turned into omnichannel buyers; they choose to pick, acquire, and albeit channel with varying strengths and weaknesses. SivaKumar and Gunasekaran (2017: 226) support the findings by stating that online shopping in South Africa has grown rapidly as internet speeds and the ability to shop using online devices has risen. Consumers find it advantageous to be able to shop from the palm of their hands without having to physically be at the shop.

Dhanapala, Vashub and Subramaniam (2015: 116) state that the simplicity of browsing and purchasing online, also with the shortage of social strains and lack of delivery attempts, might grow customer complaints. This implies that retailers will start to be progressively clear, enabling the facility of data, and allowing consumers to be aware of the costs, elements, and value of goods to allow them to be matched with more goods. Consumers will be allowed to request and pay for goods electronically and fetch them at retail shops; this change will close the disparity between online and offline trade. Other motives exist for why electronic trade is the way of business in the virtual world, whilst the

Internet works as a merged stage that links consumers and retailers. Retail stores have conducted business for consumers, by the distinctive class of buying electronically, circumstances have changed or improved their motive. Frasquet, Molla and Ruiz (2015: 658) state that with the expansion of the Internet and electronic commerce, online shopping has developed into a common and important interest in day-to-day living. Also, most businesses globally have created an online shopping facility to exploit the possibility of consumers buying everywhere and any time on their mobile devices. Though, regardless of the possible gains of using a cell phone for buying online, it still trails significantly behind using computer-based shopping.

The findings of the study indicate a higher level of disagreement on the use of the Internet for online shopping in the last six (6) months with a proportion of 27.6%. Most of the respondents disagree on the use of the Internet for online shopping in the last six (6) months with a percentage of 17.1 as well. The findings of the study are supported by the results of Lian and Yen (2014: 135) where customers believe so much more in shopping in-store or traditional as compared to an online store that does not offer their own communication details with the shopper that to assure the security supplied data.

The outcomes additionally show a 28% average of respondents is unsure about the statements of online shopping behaviours pattern. Ho and Chen (2014: 152) supported the results of the study where millennials have an increasing concern over online shopping and online transaction. The use of the Internet for online shopping in the last six months is also regarded as important with 17% respondent rates. Online stores are convenient, time-saving, and easy to use. In addition, Singh and Abhinav (2014: 56) report that almost half of customers that purchased commodities online over the previous two years cited complications about their online purchases.

Dhanapala, Vashub and Subramaniam (2015: 119) argue that virtual safety, confidentiality, safeguard, and after-sales assistance are also issues of online shopping. Consumers normally utilise product name and retailer name as a substitute for merchandise value to lower consequences and ease their buying choice, mainly while buying online, since several merchandise qualities cannot be analysed clearly. Assessing the online shopping behaviour patterns for millennials was to identify the trust and security challenges for shopping online. It can be concluded that the purchasing process indicated a high challenge to millennials when shopping online, this complexity was evident in the trust and security issues millennials showed in their shopping behaviour patterns.

4.4.5 SECTION D: DIGITAL PAYMENT

This section looks at digital payment use by millennials for online shopping. Another objective of the analysis was to recognise millennials' perceptions of digital payment for online shopping. Table 4. 3 reflects the results.

Table 4. 3 Perceptions of Digital Payment Methods

		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Chi-Square p-value
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	
My experience using a digital payment method when shopping online was positive	**D21**	33	8.7%	26	6.8%	117	30.8%	138	36.3%	66	17.4%	< 0.001
Digital payment methods are easy to learn and use	**D22**	17	4.5%	34	8.9%	111	29.1%	150	39.4%	69	18.1%	< 0.001
Digital payment provides various payment methods when shopping online	**D23**	13	3.4%	21	5.6%	112	29.7%	154	40.8%	77	20.4%	< 0.001
Digital payment system save time for travelling and money when shopping online	**D24**	17	4.4%	19	5.0%	70	18.3%	153	39.9%	124	32.4%	< 0.001
I find shopping online using digital payment to be trustworthy	**D25**	30	7.9%	54	14.2%	171	44.9%	74	19.4%	52	13.6%	< 0.001
I feel that digital payment methods are secure	**D26**	23	6.0%	60	15.7%	151	39.5%	103	27.0%	45	11.8%	< 0.001
I trust the digital payment method I use when shopping online	**D27**	33	8.7%	51	13.5%	162	42.9%	104	27.5%	28	7.4%	< 0.001
The most digital payment provides adequate payment security	**D28**	21	5.5%	47	12.3%	146	38.2%	129	33.8%	39	10.2%	< 0.001
I use digital payment; the terms and conditions are clear	**D29**	30	7.8%	35	9.1%	159	41.5%	125	32.6%	34	8.9%	< 0.001
Speed of digital payment system flow faster than traditional payment system when shopping online	**D30**	16	4.2%	32	8.4%	134	35.3%	139	36.6%	59	15.5%	< 0.001
I find digital payment system easier to use when conducting online transaction	**D31**	18	4.7%	27	7.0%	135	35.1%	149	38.7%	56	14.5%	< 0.001

As reflected in Table 4. 3, the median point of settlement is 40.8%, meaning almost the majority agree with the statements. The greatest proportion of 44.9% of the respondents has the view that they are not sure if shopping online using digital payment is trustworthy. The results are supported by Masihuddin, Khan, Mattoo and Olanrewaju (2017: 9) who found that a consumer's compensation knowledge typically debit or credit card details and giving it to a vendor through digital payment opens confidential monetary data to numerous dangers.

Another perception is that millennials are also neutral as about 42.9% trust the digital payment method they use when shopping online and only about 41.5% agree that digital payment terms and conditions are clear. Toksoz and Price (2017: 6) found that digital payment was ranked as the most untrusted payment method. Further adding that mobile networks are not secure as broadband networks can cause protection challenges, like concerns on cash security and confidentiality incursion threat. Financial threats are likely through the transaction activity. On account of the customer, it offers more than an opportunity for fast settlement while buying online. Moreover, it similarly averts the possibility of money transfer and most of the customers do not like taking chances when it comes to money transfer. Ho and Chen (2014: 150) state that confidence is more vital when it is linked strongly to monetary matters, mainly when the trades are done by a wireless network and confidence can be a strong assembling in forecasting the user’s behaviour of digital payment.

The findings of the study indicate that when customers use a digital payment system when shopping online, they save money by 39.9%. The study also indicates that 39.4% of the respondents believe that digital payment methods are easy to learn and use. Digital payment lets consumers make payment transactions around the clock from any place with the help of internet networks. This convenience can accelerate their practice of digital payment.

The study shows that most digital payment methods provide adequate security with 38.2% of the respondents not being sure about the statement and 33.8% of the respondents agreeing with the statement. Safety plays a key part in obtaining buyer trust

in the payment tool. It is obtained from, amongst other factors, the degree of protection given by technology, jointly with its advertising. If the system could present persuasive solutions on matters of approval, verification, confidentiality, reliability, redress mechanisms, and processes for evaluating and revising incorrect transactions, a lofty degree of confidence in the system would result. This result indicates a low percentage of 5.5% who strongly disagree with the statement, showing that millennials are provided with adequate payment security when completing a digital payment. Most millennials feel that digital payment methods are secure with 39.5% not sure about the statement, 6.0% strongly disagree and 11.8% strongly agree with the statement.

The results show that even though millennials are not sure about the statement, there are those who strongly agree as well. There has been an increasing demand for alternative payments due to the result of a high number of millennials still not sure about the security of online payment. Compared to baby boomers, millennials are more likely to use mobile payments, and they prefer different channels of communication, for example, texting as opposed to phone calls. The stream of data turns out to be extremely quick and could still transmit data from all parts of the globe in a shorter period. Overall, it can be concluded that most of the millennials believe using digital payment for shopping online to be trustworthy; this is drawn from the results of most respondents in support of online shopping using digital payment. Most millennials are using the digital payment method as opposed to cash on delivery when shopping online. Furthermore, they find digital payment systems easier to use when conducting an online transaction.

In addition, most of the respondents find digital payment systems easier to use and more secure when performing a transaction with a known online retailer. Certain websites present numerous choices for safe payment, irrespective of business like Takealot, Bid or Buy, Boardriders, CottonOn and MRP Sport. Kannan and Li (2017: 23) state that big online stores like Amazon and Apple all take several payment ways, as do extra conventional stores, like Argos. The additional ease of utilising customer desired payment method may seal or halt a transaction, and even businesses in the service and leisure industry are extending further opportunities all the time, like online casinos, CasinoEuro, that present numerous ways, just like Netflix. Involved in the former’s choices are Visa,

Mastercard, PayPal, Skrill, Neteller, and Paysafe, which carry their own safety measures set for every time a customer makes an electronic payment. This guarantees that customers can play or view a selected site utilising their chosen payment method, giving you extra peace of mind. Having a variety of payment options has come to be a serious issue; also allowing cryptocurrencies such as Bitcoin to be further received generally, and Microsoft is now accepting Bitcoin as a legitimate payment option. Companies that are safety-alert prosper, as they develop the status of reliable supplier. Failure to remain safe could mean websites fail to be credible and, when this occurs, it is difficult to reclaim an individual's faith (Wandoko *et al*. 2017: 5).

4.4.6 SECTION E: OPEN ENDED QUESTION

The respondents were asked an open-ended question about the challenges or perspectives concerning shopping online using digital payment. The study used thematic analysis to analyse the research questions. Thematic analysis is used accordingly in multiple research designs, to help better understand respondents' similar responses and the frequency and depth of such responses (Berndt and Petzer 2011: 189). This study is structured on participant response similarities and different categories ranging from small to large which lead to a ranking structure of code, subthemes, and theme.

It was different in the sense that it required respondents to answer in the form of a paragraph, giving views, opinions, and knowledge about the aim of the study. The pertinent suggestions made by respondents are as follows:

Security, delivery, information on the products and prices online were the most common responses from the respondents.

4.4.6.1 Security responses

One of the issues identified by the respondents was security and the following encapsulates the core concerns:

Responses

- *First, respondents suggested that websites should inform customers about details to look out for to be able to distinguish the real store website and a fake one, for customers to feel more protected. A website should prompt customers to change their account passwords frequently after a certain period. An authenticator needs to be used to verify not only the website but also the customer.*
- *Second, the website should avoid prediction texting so that information can be captured correctly for integrity.*
- *Third, banks and websites should work together to protect card details.*
- *Fourth, websites should detect networks with a security breach to protect customers and their details. Websites should be user friendly and simple to avoid security concerns.*
- *Fifth, customer accounts should not store card details and customer details should not auto-populate to minimise phishing risks. The customer account should have an option for double verification for extra security.*

The issues identified show that most of the respondents have concerns about the retail stores' websites. Durmus, Ulusu and Akgun (2017: 103) state that electronic commerce safety should involve a group of processes, systems, and computer programs for verifying the supply of data and assuring the procedure. Khan (2016: 20) supports electronic commerce to ensure confidentiality, integrity, and availability of information, online retailers' websites can choose from a variety of tools such as Square's payment platform. Square's payment platform assimilates effortlessly with prevalent transaction software and online retailer sources to minimise interruption for your daily commerce (Bailey *et al.* 2020: 145). With Square, you can accept both in-person and online payments that are organised into one dashboard. Each of these tools can be utilised as a part of an overall information-security policy. The online market is seen as less of a substitute for traditional trade as it is an accolade and customers are combining the network into their multichannel buying endeavours (Rahman *et al*. 2018: 9). Additionally, on Internet infringement fears, consumers are also concerned regarding the safety of their private data. Customers might be in danger of losing their individual data as they might be ignorant of the protection part of online trade. Consequently, it is extremely crucial to get the Internet secure for

purchasing and offering goods online. Respondents may be satisfied if online retailers can offer a variation of tools to protect customer information on websites to gain trust in online shopping.

4.4.6.2 Delivery responses

The second issue identified by the respondents was delivery issues and the following encapsulates the core concerns:

Responses

- *First, most of the respondents suggested that online systems need to provide an accurate delivery time that drivers can follow for better customer service.*
- *Second, a schedule for delivery needs to be available to the customer to pick delivery at their convenience.*
- *Third, options should be available for customers who are not comfortable with a stranger coming into their homes to use the post office instead.*
- *Fourth, delivery costs should be available and clear on the website to avoid confusion and misconduct from drivers. Delivery personal should be easily visible to distinguish against any possible criminality.*
- *Fifth, contactless delivery options should be available as an option.*
- *Lastly, delivery person details should be made available in advance to the customer, to address any delivery complaints.*

Respondents have delivery concerns about online stores. Research done by Crawford, Butler-Henderson, Rudolph and Glowatz (2020: 4) during the South African lockdown due to COVID-19 noted a rise in the use of accessible online shopping options, particularly for food, medication, and other essentials. Throughout the previous couple of weeks, customers choose not to shop in store and have gradually decided on these decreased touchpoint options. This expansion shows an exciting move in shopping behaviour. SivaKumar and Gunasekaran (2017: 223) support and add that formerly style, tourism and leisure groups have remained the favourites for customers to go into the online wholesale domain, with grocery classifications, mainly boxed and new things, being

denser to get a grip. The lockdown brought a faster acceptance of online shopping for a few of these groups. One more critical consideration was that delivery fees did not count for consumers, unlike delivery time options. Cai (2019: 80) discovered that individuals wished that the groceries be brought on time, and this was the most persuasive element that drove the consumers to online shopping entry. Deliveries were also being slowed considerably by the return of load-shedding, which interferes greatly with traffic. Accommodating delivery is a crucial motivation for online buyers. Though many online stores extend free delivery for purchases over a specific total; most respondents agree that inexpensive or more accommodating delivery might convince them to shop online frequently.

Customers frequently do not realise when the merchandise will be sent. Regularly, these purchases take longer to be sent than anticipated. Buyers need to have realistic hopes and an idea of when they can expect their purchases. People need to know when their merchandise will arrive to schedule their time appropriately. The respondents also indicate that some of the delivery services do not communicate prior to arrival for delivery. The best way to monitor deliveries as a customer is to verify with the online retailer or site regarding the approximate delivery time of goods prior to making a purchase. Most of the respondents' concerns require online retailers, to communicate to the consumer when the purchase is dispatched and when it is likely to be provided allowing the consumer to prepare to receive it.

4.4.6.3 Information on the products and prices online responses

The next major concern respondents raised was that of information on the products and price issues. The following encapsulates the core concerns:

Responses

- *First, the respondents indicated that there should be no hidden costs, all costs should be detailed on the product and accordingly added onto the cart before payment.*

- *Second, the size of products should be listed according to country code to reduce exchanges due to the wrong size, warranty or terms and conditions should be listed under the specific product.*
- *Third, every product should include reviews to influence the purchase decision.*
- *Fourth, price conversion should be automated on the website to avoid conversion confusion and discounted prices should be listed on the viewed item if applicable.*
- *Fifth, product information should be in detail to include a useful guideline if clothing items should also be displayed to get a good idea of the style.*
- *Lastly, products should be authentic and detailed on the website as to policies, warranty and terms and conditions.*

Online issues are not just only counterfeit products and concealed expenses. Consumers like to buy from websites that present them with suitability, customer friendliness, are visually pleasing and offers related knowledge. Once the site is not optimised accurately, it results in forsaken carts, order terminations or refunds. A study by Dhanapala, Vashub and Subramaniam's (2015: 109) supports this by stating that though 43% of the buyers are swayed by online information, online sales make up just 9% of in-store transactions. Merchandise value is a very popular issue encountered by consumers who are regular online shoppers. The condition of the merchandise is usually not up to standard as compared to the pictures shown (Changchit *et al*. 2019: 18). As the rivalry is rising in the electronic commerce business, numerous sites turn into a market for vendors to market their goods. This invariably results in an increase in fraudulent sellers. It can be concluded that retailers are failing to conduct quality checks due to higher demand on production which is concerning to customers.

4.5 INFERENTIAL STATISTICS

Inferential statistics correlate to the simplifications of the outcomes from a trial to all people it also helps determine if the variances between the means, proportions or percentages are actual or not (Gilbert, Juraska and decamp 2017: 16). The following section reports on the inferential statistics applied in this study:

4.5.1 RELIABILITY STATISTICS

The two major qualities of accuracy are consistency and legitimacy. Reliability is calculated by getting some dimensions of identical issues. A reliability figure of 0.70 or more is deemed “acceptable” (Uzun, Gilbertson, Keles and Ratinen 2019: 82).

Table 4. 4 Cronbach’s alpha

	Section	Number of Items	Cronbach's Alpha
C	Online shopping behaviours	8	0.841
D	Digital payment	11	0.911

The reliability scores for every section surpasses the endorsed Cronbach’s alpha value, indicating a level of adequate, reliable recording for these parts of the study.

4.5.2 FACTOR ANALYSIS

Factor analysis is when quantifiable and visible variables can be decreased to less hidden variables that split a frequent discrepancy, are unobservable and categorised as cutting dimensionality (Shi, Maydeu-Olivares and Rosseel 2019: 4). These unobservable features are not calculated to accuracy but are estimated concepts that are applied to signify variables (Maydeu-Olivares, Fairchild, and Hall 2017: 498). Factor analysis is also used to assess if there is a link among each other in this quantity of variables. Large data consisting of numerous variables can be cut by monitoring ‘sets’ of variables, for example, factor analysis puts joint variables into narrative groups. Factor analysis is helpful for research that involves limited or loads of variables, elements from surveys, or a series of assessments that may be lowered to a lesser set to uncover a fundamental idea and enable clarifications (Shi, Maydeu-Olivares and Rosseel 2019: 5). It is simpler to concentrate on a few crucial aspects instead of needing to think of several variables which might be insignificant, making factor analysis ideal for putting variables into important groups. For this study factor analysis is used to include data transformation, hypothesis-testing, and scaling.

The matrix tables are preceded by a summarised table that reflects the results of Kaiser-Meyer-Olkin (KMO) of Sampling Adequacy and Bartlett's Test of Sphericity. According to Maydeu-Olivares, Fairchild and Hall (2017: 501) the requirement is that the KMO rate is a guide utilised to learn the importance of factor analysis to quantity sampling competence that an amount greater than 0.6 is sufficient. The KMO rate that is nearer to 1 shows substantial sampling competence. Barlett's test is a sign of the power of relations among variables.

Factor analysis is performed solely for the Likert scale objects. Some parts are split into better parts. The rotated component matrix below clarifies this.

Table 4. 5 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.931
Bartlett's Test of Sphericity	Approx. Chi-Square	3444.607
	Df	171
	Sig.	0.000

Every circumstance is gratified for factor analysis. The Kaiser-Meyer-Olkin Amount of Specimen Suitability value must be bigger than 0.500 and Bartlett's Test of Sphericity sig. the rate must be less than 0.05. Meaning that the variables that established the study instruments were great calculators of the factor. Generally, it can be deduced that the segments of the study instrument calculated exactly what it was meant to calculate.

4.5.3 COMPONENT ROTATED MATRIX

Factor analysis is a numerical method, and its key purpose is information cutback. Factor analysis is usually used to examine a study, where an academic hopes to embody several queries with a small number of theoretical reasons. Regarding Table 4. 6 above, the principal factor assessment has been utilised as the removal technique, and the interchange technique was Varimax with Kaiser Normalisation. This is an extraneous cycle technique that diminishes the number of variables that have elevated loads on every

element. Making it easier to clarify elements. Factor analysis/filling reflect inter-correlations among variables. Pieces of queries that loaded alike suggest size near a related element. An analysis of the subject of items satisfying at or over 0.5 (and applying the greater or greatest loading in cases where items cross-loaded bigger than this amount) was successfully calculated along with the numerous elements.

The statements that constituted Sections C and D (Online shopping behaviours and Digital payment) set effortlessly alongside with a specific element each. Implying that the accounts that formed these units easily calculated anything it is placed to calculate. The abstraction technique utilised is the main component analysis.

Table 4. 6 Section C and D (Online shopping behaviours and digital payment)

Rotated Component Matrix	Component	
	Online shopping behaviours	**Digital payment**
I have used the Internet for online shopping in the last 6 months	0.094	0.647
My experience purchasing online was positive	0.272	0.675
I trust online stores to keep my best interests in mind for online purchase	0.238	0.788
I trust online stores to keep my personal information secure	0.216	0.681
I am very likely to provide the online stores with the information it needs to better serve my needs	0.209	0.734
Online shopping makes it easier for me to make online product choice and judgement	0.287	0.666
Online shopping minimises the time I usually spent on shopping	0.348	0.458
Online shopping provides a simple wide range of different products online	0.372	0.484
My experience using a digital payment method when shopping online was positive	0.522	0.501
digital payment methods are easy to learn and use	0.574	0.380
The digital payment provides various payment methods when shopping online	0.598	0.365
Digital payment system saves time for travelling and money when shopping online	0.660	0.259
I find shopping online using the digital payment to be trustworthy	0.534	0.460
I feel that digital payment methods are secure	0.662	0.279
I trust the digital payment method I use when shopping online	0.686	0.400
Most digital payment provides adequate payment security	0.740	0.275
I use digital payment; the terms and conditions are clear	0.692	0.215
Speed of the digital payment system flow faster than traditional payment system when shopping online	0.773	0.065
I find the digital payment system easier to use when conducting an online transaction	0.773	0.167

This section measures the online shopping behaviour and digital payment of the respondents. As reflected in Table 4. 7 the section is loaded along with two (2) components equally. The abstraction method used is the main component analysis. The rotation technique used is Varimax with Kaiser Normalisation. Rotation converged in three repetitions. This portion loads along with two elements as displayed in Table

4. 7. Implying that the respondents found diverse meanings in the section. The splits in the section are colour coded as shown in Table 4. 7.

4.5.4 CHI-SQUARE TEST

This section presents the scoring patterns of the respondents for each variable. Results were examined by the significance of the assertions. To establish if the scoring patterns for each statement were substantially different for each choice, a chi-square test was performed. The highlighted significant value (p-value) is less than 0.05 (the degree of impact), implying that the allocations were incomparable. That is, the differences between the way respondents scored (disagree, strongly disagree, neutral, agree, strongly agree) was significant.

Table 4. 7 The Chi-square test

Pearson Chi-Square Tests

		Age	Gender	Race	Occupation	Type of Income	Income Brackets	How often do you use the Internet?	How often did you shop online in the past year?
I have used the Internet for online shopping in the last 6 months	Chi-square	20,347	12,175	36,949	38,074	17,143	26,119	21,945	46,438
	Df	16	4	16	20	8	12	12	12
	Sig.	0,205	.016*	.002*	.009*	.029*	.010*	.038*	.000*
My past experience purchasing online was positive	Chi-square	26,723	14,161	33,143	38,708	31,626	32,281	11,120	27,355
	Df	16	4	16	20	8	12	12	12
	Sig.	.045*	.007*	.007*	.007*	.000*	.001*	0,519	.007*
I trust online stores to keep my best interests in mind for online purchase	Chi-square	32,923	4,596	34,275	59,042	42,976	23,942	8,899	33,192
	Df	16	4	16	20	8	12	12	12
	Sig.	.008*	0,331	.005*	.000*	.000*	.021*	0,712	.001*
I trust online stores to keep my personal information secure	Chi-square	12,701	4,183	21,323	33,637	17,951	14,062	10,214	21,312
	Df	16	4	16	20	8	12	12	12
	Sig.	0,694	0,382	0,166	.029*	.022*	0,297	0,597	.046*

I am very likely to provide the online stores with the information it needs to better serve my needs	Chi-square	17,163	6,968	16,643	46,682	15,413	19,553	6,021	14,322
	Df	16	4	16	20	8	12	12	12
	Sig.	0,375	0,138	0,409	.001*	0,052	0,076	0,915	0,281
Online shopping makes it easier for me to make online product choice and judgement	Chi-square	11,621	4,166	15,401	26,317	19,955	11,510	14,150	19,437
	Df	16	4	16	20	8	12	12	12
	Sig.	0,77	0,384	0,496	0,156	.011*	0,486	0,291	0,079
Online shopping minimises the time I usually spent on shopping	Chi-square	23,801	0,832	10,807	32,480	11,924	11,609	5,650	12,237
	Df	16	4	16	20	8	12	12	12
	Sig.	0,094	0,934	0,821	.038*	0,155	0,478	0,933	0,427
Online shopping provides simple wide range of different products online	Chi-square	22,295	4,733	11,785	32,227	22,682	9,841	8,698	10,520
	Df	16	4	16	20	8	12	12	12
	Sig.	0,134	0,316	0,759	.041*	.004*	0,63	0,728	0,57
My past experience using a digital payment method when shopping online was positive	Chi-square	32,588	4,154	17,572	40,450	34,223	28,134	9,809	19,324
	Df	16	4	16	20	8	12	12	12
	Sig.	.008*	0,386	0,35	.004*	.000*	.005*	0,633	0,081

digital payment methods are easy to learn and use	Chi-square	22,710	5,692	17,886	38,470	41,583	27,993	13,444	20,890
	Df	16	4	16	20	8	12	12	12
	Sig.	0,122	0,223	0,331	.008*	.000*	.006*	0,338	0,052
Digital payment provides various payment methods when shopping online	Chi-square	9,714	4,823	17,330	47,437	18,032	19,813	19,843	14,965
	Df	16	4	16	20	8	12	12	12
	Sig.	0,881	0,306	0,365	.001*	.021*	0,071	0,07	0,243
Digital payment system save time for travelling and money when shopping online	Chi-square	19,453	0,517	11,090	32,320	14,922	11,035	13,848	5,514
	Df	16	4	16	20	8	12	12	12
	Sig.	0,246	0,972	0,804	.040*	0,061	0,526	0,31	0,939
I find shopping online using digital payment to be trustworthy	Chi-square	16,350	2,070	13,007	28,958	15,731	16,494	11,107	20,755
	Df	16	4	16	20	8	12	12	12
	Sig.	0,429	0,723	0,672	0,089	.046*	0,17	0,52	0,054
I feel that digital payment methods are secure	Chi-square	26,560	0,165	15,008	24,837	12,799	17,641	5,879	6,091
	Df	16	4	16	20	8	12	12	12
	Sig.	.047*	0,997	0,524	0,208	0,119	0,127	0,922	0,911
I trust the digital payment method I use when shopping online	Chi-square	21,844	3,018	26,709	32,217	15,918	15,761	7,759	19,689
	Df	16	4	16	20	8	12	12	12

	Sig.	0,148	0,555	.045*	.041*	.044*	0,202	0,804	0,073
Most digital payment provides adequate payment security	Chi-square	13,936	4,047	15,801	25,843	14,573	19,288	5,912	16,128
	Df	16	4	16	20	8	12	12	12
	Sig.	0,603	0,400	0,467	0,171	0,068	0,082	0,92	0,185
I use digital payment; the terms and conditions are clear	Chi-square	14,874	2,044	11,694	20,856	7,565	8,668	10,555	9,283
	Df	16	4	16	20	8	12	12	12
	Sig.	0,534	0,728	0,765	0,406	0,477	0,731	0,567	0,679
Speed of digital payment system flow faster than traditional payment system when shopping online	Chi-square	16,293	3,387	18,000	34,186	13,206	19,613	10,508	10,489
	Df	16	4	16	20	8	12	12	12
	Sig.	0,433	0,495	0,324	.025*	0,105	0,075	0,571	0,573
I find digital payment system easier to use when conducting online transaction	Chi-square	25,906	1,931	14,595	35,126	14,253	14,619	16,919	8,528
	Df	16	4	16	20	8	12	12	12
	Sig.	0,055	0,749	0,555	.019*	0,075	0,263	0,153	0,743

To establish if any statistically significant relationships exist between variables (rows vs columns) a Chi-square test was performed on the study results. Table 4. 7 summarises these Chi-square test results.

The p-value between “Gender” and “I have used the Internet for online shopping in the last 6 months” is (p=0.016). Meaning that a significant relationship exists between the variables highlighted in yellow. Alhouti, Johnson and Souza (2016: 26) report that the influence of gender on the probability to buy online was mixed and varies with the product type. As like the measure used in other studies. For example, Falkenreck and Wagner (2017: 184) also use the number of online purchases in the past 12 months and frequency to calculate internet shopping.

A significant relationship was noted between “age” and “My experience purchasing online was positive”, results being (p=0.045). Meaning that there is a significant relationship between age and purchasing online. It showed that age has an influence on purchasing online. Salegna (2018: 76) opines an increase in the probability of purchasing online as the consumer’s experience with the Internet increased. Chiu, Bool and Chiu (2017: 249) reported a positive relationship between online purchasing behaviour and experienced internet users.

There was, therefore, a significant relationship between “I trust online stores to keep my best interests in mind for online purchase” and “age” (p=0.008), which indicated that age plays an important role in millennials purchasing online and trust online stores to keep their best interests in mind for online purchase.

A significant relationship between “age” and “Online shopping minimises the time I usually spent on shopping” (p=0.094) exists. This showed that the age of millennials is the key role from shopping online and that consumers therefore considered online shopping because of the minimum time spent when shopping online. A lot of consumers consider shopping as an important personal and social activity. Enjoyment, convenience, and social interaction are attributes of the shopping experience that influence shopping behaviour (Chiu, Bool and Chiu 2017: 251). Another major influence on the purchasing

online decision was the perceived convenience presented by internet vendors. Not forgetting effort and time saved by consumers (Falkenreck and Wagner 2017: 186). Recently in South Africa, the survey was performed on ages that 50-60% ranged between 20 and 30 years which was older than the recently observed survey (Changchit, Cutshall, and Lee 2014: 4). A significant relationship between "Occupation" and “Online shopping minimises the time I usually spent on shopping”. This indicates that occupation also has a vital role in online shopping minimising time usually spent on shopping.

There was also a significant relationship between “My experience using a digital payment method when shopping online was positive” and “age”, with a result of (p=0.008). Millennials, therefore, are very careful when it comes to purchasing online because of their age, they trust online stores to keep their best interests in mind when purchasing online. Credit and debit cards allow an easier and safer payment option as opposed to cash resulting in a willingness to pay amongst millennials. More customers are paying using cards instead of cash when shopping online, making digital payment a much more sought-after payment method. This shows that age plays an important role in “my experience using a digital payment method when shopping online was positive”. Furthermore, it arose that a meaningful association happened among “Type of Income” and “Digital payment provides various payment methods when shopping online”, which indicates that millennials consider digital payment when shopping online since it provides various payment methods.

The Chi-square test outcomes revealed no substantial association among “Type of Income” and “I feel that digital payment methods are secure”, with an outcome of (p=0.119). Indicating that millennials did not certainly contemplate the type of income as they feel that digital payment methods are not secure.

It similarly occurred that no substantial association exists among “How often do you use the Internet?” and “I feel that digital payment methods are secure”, based on the result (p=0.922). Reflecting on the question “How often do you use the Internet” did not have a significant effect, millennials feel that digital payment methods are safe as the respondents often do not use the Internet. The highly operated digital payment manner

was the usage of credit cards. Primarily, the safety matters delayed the acceptance of credit and debit cards for creating digital payments; however, later with the establishment of extra security elements to safeguard all transactions rendered, consumers established faith in the usage of credit cards (Roy and Sinha 2014: 179). A huge benefit of a credit card is that they are simple to utilise, functionality with doing online transactions fast and wherever. Vally (2018: 1261) found that the cardholder verification process is similarly easy, by giving a name, credit card number, and expiry date. Roy and Sinha (2014: 179) report that for the protection of customers' private data, credit card corporations have created numerous harmonising schemes containing MasterCard Secure Code and Authenticated by Visa. These structures permit handlers to make a PIN and use it while shopping online with their credit cards.

There is no significant relationship between “How often did you shop online in the past year?” and “I feel that digital payment methods are secure”, with a result of (p= 0.911). This shows that previously millennials did not shop online since they felt that digital payment methods are not secure.

There was a significant relationship between “Type of Income” and “I find shopping online using the digital payment to be trustworthy”, with a result of (p=0.046). This implies that millennials use their type of income as they find shopping online using digital payment to be trustworthy. Abdinoor and Mbamba (2017: 9) found that online shopping is dependent on trust, it starts with the website since consumers tend to use sociable recognisable websites, websites they have used before or heard friends mention as trustworthy. Changchit, Cutshall, and Lee (2014: 30) also reported that in online shopping, the website and digital payment provider play a big role and purchases are normally made when the consumer perceives both as being trustworthy, where a trustworthy digital payment provider will improve the perceived trust on the website. Salegna (2018: 79), found that payments completed over wireless gadgets such as smartphones are considered to offer extra handiness, cut costs for the transaction, and improve the safety of digital payment.

The results show that other types of digital payment methods have no significant relationships with gender. There was no significant relationship between ‘Gender” and “I use digital payment; the terms and conditions are clear”, with a result of (p= 0.728). Chiu, Bool and Chiu (2017: 253) found that, for customers to embrace and utilise digital payments, they ought to feel safe from dangers like the failure of secrecy, disclosure to scam, terms and conditions have to be clear and illegal charges. Meaning that service suppliers must proactively initiate ways to guard their customers and that officials must guarantee sensible customer protection controlling support. Kaushik and Dhir (2019: 259) agree and support that most types of digital payment methods have guidelines when shopping online and the familiar kinds of digital payment facilities offered to the financially underserved like electronic money transaction accounts. In an inclusive digital payments ecosystem, all online retailers need to take a share in guaranteeing that digital payments terms and conditions are clear and are rendered sensibly.

It likewise appeared that there was no substantial correlation between “Race” and “I use digital payment; the terms and conditions are clear”, built on the outcome (p= 0.765). Also, no significant relationship between “Type of Income” and “I use digital payment; the terms and conditions are clear” was discovered to be present, with an outcome of (p= 0.477). Moreover, no substantial correlation occurred among “Income Brackets” and “I use digital payment; the terms and conditions are clear”, centred on the effect (p= 0.731). Meaning that these types of digital payment methods were not significant in influencing millennials to use digital payment when shopping online.

4.5.5 CORRELATIONS

The strength of association between two variables and the direction of the relationship are measured by a bivariate analysis which is correlation analysis (Zhou, Jiang, He, Sun and Xie 2019: 28). Regarding the intensity of the association, the value of the correlation factor differs among positive (+1) and negative (-1). A value of ± 1 specifies a perfect level of relationship among the dual variables. Feng, Zhu, Zhuang, and Yu (2018: 4) mention that Pearson’s correlation frequently calculates the link between ratio-scaled random variables. The outcomes indicate the subsequent patterns. Positive values imply

a directly proportional relationship among the variables and a negative value implies an opposite association. All significant relationships are shown by a * or **. Bivariate correlation was also performed on the (ordinal) data obtained for the study. Table 4. 8 presents the bivariate correlation.

Table 4. 8 Bivariate correlation

Correlations

			I have used the internet for online shopping in the last 6 months	My past experience purchasing online was positive	I trust online stores to keep my best interests in mind for online purchase	I trust online stores to keep my personal information secure	I am very likely to provide the online stores with the information it needs to better serve my needs	Online shopping makes it easier for me to make online product choice and judgement	Online shopping minimise the time I usually spent on shopping	Online shopping provides simple wide range of different products online	My past experience using a digital payment method when shopping online was positive	digital payment methods are easy to learn and use	Digital payment provides various payment methods when shopping online	Digital payment system save time for travelling and money when shopping online	I find shopping online using digital payment to be trustworthy	I feel that digital payment methods are secure	I trust the digital payment method I use when shopping online	Most digital payment provides adequate payment security	I use digital payment; the terms and conditions are clear	Speed of digital payment system flow faster than traditional payment system when shopping online	I find digital payment system easier to use when conducting online transaction
Spearman's rho	I have used the internet for online shopping in the last 6 months	Correlation	1.000																		
		Sig. (2-tailed)																			
		N	391																		
	My past experience purchasing online was positive	Correlation	.539**	1.000																	
		Sig. (2-taile	0.000																		
		N	389	390																	
	I trust online stores to keep my best interests in mind for online purchase	Correlation	.387**	.496**	1.000																
		Sig. (2-taile	0.000	0.000																	
		N	388	387	389																
	I trust online stores to keep my personal information secure	Correlation	.279**	.326**	.637**	1.000															
		Sig. (2-taile	0.000	0.000	0.000																
		N	388	386	385	388															
	I am very likely to provide the online stores with the information it needs to better serve my needs	Correlation	.375**	.418**	.518**	.558**	1.000														
		Sig. (2-taile	0.000	0.000	0.000	0.000															
		N	388	387	387	385	389														
	Online shopping makes it easier for me to make online product choice and judgement	Correlation	.320**	.382**	.510**	.411**	.506**	1.000													
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000														
		N	390	389	388	387	388	391													
	Online shopping minimise the time I usually spent on shopping	Correlation	.231**	.379**	.355**	.258**	.340**	.357**	1.000												
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000	0.000													
		N	386	385	384	383	384	386	388												
	Online shopping provides simple wide range of different products online	Correlation	.244**	.359**	.333**	.253**	.394**	.398**	.495**	1.000											
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000	0.000	0.000												
		N	384	383	382	382	382	384	384	386											
	My past experience using a digital payment method when shopping online was positive	Correlation	.438**	.545**	.485**	.341**	.363**	.355**	.363**	.384**	1.000										
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000											
		N	379	378	376	376	376	378	378	376	380										
	digital payment methods are easy to learn and use	Correlation	.349**	.380**	.409**	.337**	.312**	.335**	.301**	.316**	.553**	1.000									
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000										
		N	379	378	377	376	377	379	378	377	374	381									
	Digital payment provides various payment methods when shopping online	Correlation	.334**	.422**	.362**	.249**	.298**	.352**	.382**	.411**	.468**	.520**	1.000								
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000									
		N	376	374	373	374	374	375	374	374	372	372	377								
	Digital payment system save time for travelling and money when shopping online	Correlation	.216**	.365**	.303**	.229**	.288**	.317**	.468**	.411**	.438**	.455**	.535**	1.000							
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								
		N	382	381	380	379	381	382	380	378	376	377	374	383							
	I find shopping online using digital payment to be trustworthy	Correlation	.289**	.322**	.471**	.448**	.438**	.475**	.292**	.289**	.474**	.424**	.367**	.359**	1.000						
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000							
		N	380	378	377	377	378	379	379	377	377	375	374	378	381						
	I feel that digital payment methods are secure	Correlation	.195**	.270**	.362**	.413**	.345**	.354**	.279**	.186**	.361**	.398**	.312**	.367**	.610**	1.000					
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000						
		N	380	379	378	377	379	380	380	378	377	376	374	379	380	382					
	I trust the digital payment method I use when shopping online	Correlation	.270**	.355**	.471**	.483**	.457**	.447**	.322**	.327**	.478**	.458**	.430**	.424**	.612**	.643**	1.000				
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
		N	378	376	377	376	377	377	375	374	372	373	372	376	374	374	378				
	Most digital payment provides adequate payment security	Correlation	.244**	.295**	.342**	.372**	.393**	.343**	.266**	.344**	.435**	.424**	.390**	.370**	.563**	.566**	.649**	1.000			
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				
		N	380	379	378	377	379	380	380	377	376	377	373	379	379	380	374	382			
	I use digital payment; the terms and conditions are clear	Correlation	.234**	.325**	.320**	.300**	.329**	.322**	.301**	.307**	.420**	.419**	.376**	.356**	.438**	.429**	.478**	.503**	1.000		
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
		N	381	380	379	378	380	381	381	378	377	377	374	380	379	380	375	380	383		
	Speed of digital payment system flow faster than traditional payment system when shopping online	Correlation	.145**	.279**	.239**	.231**	.232**	.219**	.315**	.229**	.356**	.309**	.410**	.383**	.312**	.371**	.421**	.487**	.459**	1.000	
		Sig. (2-taile	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
		N	379	377	377	376	378	378	378	375	375	374	372	377	377	377	374	377	378	380	
	I find digital payment system easier to use when conducting online transaction	Correlation	.241**	.309**	.303**	.227**	.298**	.332**	.301**	.252**	.432**	.475**	.442**	.428**	.382**	.378**	.516**	.516**	.505**	.609**	1.000
		Sig. (2-taile	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		N	384	382	381	381	382	383	382	380	379	379	377	382	381	381	378	381	382	380	385

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

The results showed the following patterns:

A positive correlation value was established among “My experience purchasing online was positive” and “Digital payment provides various payment methods when shopping online” with the results (r=0.422; p=0.000). This is a directly related proportionality. This indicated that the more digital payment options they have, the more positive their online experience is likely to be, and vice versa.

Additionally, there was a fairly positive correlation among “I trust online stores to keep my personal information secure”, and “I am very likely to provide the online stores with the information it needs to better serve my needs”, as well as the outcomes (r= 0.558; p=0.000). Indicating that millennials trust online stores to keep their personal information secure as they are highly prone to offer online stores the information it requires to improve their requirements.

Another fairly positive association between “My experience using a digital payment method when shopping online was positive” and “Digital payment methods are easy to learn and use”, was noticed with outcomes of (r=0.553; p=0.000). This means that millennials’ experiences of shopping online are significantly related to the ease with which they learn and use the digital payment method. Additionally, another moderately positive association among “Digital payment provides various payment methods when shopping online” and “Digital payment methods are easy to learn and use”, was discovered with outcomes of (r=0.520; p=0.000). This indicates that various payment methods are important when millennials are shopping online

There was also a weak positive correlation between “Digital payment provides various payment methods when shopping online” and “My experience using a digital payment method when shopping online was weakly positive”, with outcomes of (r=0.468; p=0.000). This indicates that millennials have a negative experience in using various payment methods when shopping online.

The outcomes revealed a weak positive association among “My experience using a digital payment method when shopping online was positive” and “I feel that digital payment methods are secure”, with results of (r=0.361; p=0.000). Being an indication that security is crucial as millennials shop online using digital payment. It transpired that a weak positive association existed among “My experience using a digital payment method when shopping online was positive” and “I trust the digital payment method I use when shopping online”, with scores of (r=0.478; p=0.000).

Furthermore, a weak positive association between “My experience using a digital payment method when shopping online was positive” and “Most digital payment provides adequate payment security” was noticed to occur, with scores of (r=0.435; p=0.000). This indicated that security offered by online stores were not enough to protect millennial’s information.

4.5.6 PRACTICAL IMPLICATIONS

This study offers several implications, it enriches digital payment literature by evaluating the use of digital payment for online shopping amongst millennials. This study indicates that discretion and safety opinions, measured by the perceived risk of online shopping, remain a current topic. This could be one of the motivations why brick-and-mortar shops are still common and are not completely substituted by online stores yet. Businesses that have online shops, must take this study into consideration when advertising online. The focus of perceived risk, as a level of discretion and safety insights, and its undesirable association with online shopping behaviour is not different. However, it appears that there is a group of individuals who are cautious about purchasing online due to the potential protection and secrecy breaches when using digital payment. The first step for companies would be to get their online shops as secure as possible. Therefore, businesses must guarantee that confidential data is merely kept for the planned use and third-party groups cannot have access to such information.

The businesses and their marketers are to convey the security principles to their consumers and prospective consumers. It can be corresponded via their site on the online shop or via their commercials. This may result in prospective consumers feeling safe

when utilising that specific online shop. This will grow the number of online purchases using digital payment. It could be concluded that considering the apparent risks of online shopping using digital payment can work as a feasible benefit for the business. Marketers need to have greater focus on converting millennials to a buying alternative. Hence, marketers must encourage millennial consumers to participate and make suggestions via social media. The robust influence that social media has is the key source of information on goods and services for millennials.

4.5.7 CROSS-TABULATIONS

A cross-tabulation test was performed as a method of organising knowledge in a tabular method to convey the mutual effect of one variable on an alternative. A cross-tabulation was performed where demographic variables were assessed alongside each other and further aspects to determine if there is a link among two different associated variables. The cross tabulations test in Tables 4.10 and 4.11 is attached in (Appendix E).

The results presented in Table 4. 10 show that most of the respondents use the Internet at various times based on their gender; looking at how often they use the Internet is an important factor with respect to gender. The majority of female respondents utilise the Internet often as they feel it is important for them to use the Internet daily. However, the majority of male respondents did not see anything important about the Internet as a thing to consider using several times a day, but rather as something that they can use once a week.

The results presented in Table 4. 11 show that the majority of millennials often shop online, making shopping online very important for females. It can be concluded that females are more online shoppers than males. Females tend to be clever customers, merely since they dedicate less time and power needed to investigate and equate goods online. Frasquet, Molla and Ruiz (2015: 661) report that gender variance in online shopping behaviour does not work in a void and is usually exposed to impact from a variety of extra demographic factors (nation, age, ethos) that will all take part in diverse aspects between men and women’s online shopping behaviours.

4.6 CONCLUSION

This chapter presented the empirical results regarding the data collected from millennials on the use of digital payment for online shopping. The questionnaire was deemed to be a reliable instrument and achieved the objective of the study. The data was analysed using descriptive and inferential statistics. The findings indicate that online shopping needs attention and improvements on security measures, privacy, trust, delayed delivery, delivery costs and refund policies. The improvements in security measures will be made in the following chapter. The next chapter summarises the research results and discusses the conclusions and recommendations of the study.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS, LIMITATIONS AND POTENTIAL FUTURE RESEARCH

5.1 INTRODUCTION

The previous chapter reported the research results. This chapter provides a summary of the study and is arranged in six sections. Section 5.1 provides an introduction and a chapter outline. Section 5.2 summarises the study, outlining the purpose and objectives of the study. Section 5.3 covers the attainment of research objectives, while Section 5.4 acknowledges the limitations of the study. Section 5.5 includes suggested recommendations, based on the research results and Section 5.6 identifies areas for further research.

5.2 SUMMARY OF THE STUDY

The aim of the study was to evaluate the perceptions and use of digital payment for online shopping amongst millennials in the greater Durban area. A conceptual framework of the study was shown. The dissertation was organised into five chapters. The first chapter provided the problem statement, research objectives, summary of literature and overview of the methodology employed.

The second chapter provided a literature review on digital payment and online shopping. The chapter provided a summary of accessible literature associated with the challenges of online shopping and the digital payment method, explaining the challenges of shopping online using digital payment. The study looked at what challenges millennials face when shopping online from the viewpoints of various authors and reviewed the challenges millennials face when using the digital payment method. These challenges included trust, privacy and security, delivery cost and late delivery. Based on each of these challenges, some variables were examined, and conclusions were drawn founded on similarities with the examined literature. Opinions were further reached on how these challenges affected millennials, online store platforms and banking sectors. The theory of reasoned action (TRA) and the theory of planned behaviour (TPB) model, the foundation for the theoretical

framework applied in performing this study and were chosen due to their applicability to the study.

Chapter three presented an outline of the research techniques employed to perform the empirical research for the study and concentrated on research design, data sampling, analysis, and collection.

Chapter four studied the data, translated it and produced the outcomes of the study. The research was quantitative, with 393 questionnaires utilised to gather information from respondents from the greater Durban area. The results about the usage level of digital payment for online shopping, online shopping behaviours, and digital payment were examined.

5.3 ATTAINMENT OF RESEARCH OBJECTIVES

This section discusses the conclusions drawn from the objectives.

5.3.1 CONCLUSIONS ON OBJECTIVE ONE

The first objective identified millennials' perceptions of using digital payment as transaction payment for online shopping. The findings indicate that millennials do not hold the same perceptions towards the digital payment methods used by online retailers and banking sectors. The majority of millennials perceive that digital payment provides various payment methods when shopping online but also the majority are not sure about the use of digital payment methods (Table 4. 3). Millennials also perceive that shopping online using digital payment is trustworthy. The millennials identify online stores or websites before purchasing and check the reputation and reviews before shopping online using digital payment.

Millennials understanding may have a negative or positive influence. Therefore, retailers need to understand the whole concept of perception to easily recognise what inspires customers to buy. Results also reflect that millennial's perception affects consumer purchasing behaviour. The customer's (millennials') perception is an influential element in deciding the triumph or collapse of the online or traditional business. Everyone is

influenced by one or two of these various digital payments. A negative customer's perception can develop a bad reputation for the retailer.

The findings also indicate that the majority of millennials hold the same perceptions towards digital payment systems when shopping online and are easy to learn. Millennials perceive that digital payment permits them to make payments around the clock, worldwide with the support of internet networks and terminals. Security plays a crucial role in gaining customer confidence in the payment instrument. Results also reflect millennials have different perceptions about security issues. If the system can give substantial solutions on matters of approval, verification, confidentiality, truthfulness, rectify processes, and practices for assessing and revising erroneous transactions, then a great degree of confidence in the system would arise. The study reveals what would motivate millennials to engage in online shopping using the digital payment method and how they see online shopping. Trust, privacy and security are the key factors for the digital payment method for both online shoppers and non-shoppers.

5.3.2 CONCLUSIONS ON OBJECTIVE TWO

Objective two identified online shopping behaviour amongst millennials. The findings indicate that confidentiality and safety challenges measured by perceived risk of online shopping is still a topic for research. As depicted in Figure (4. 8), millennials consider financial issues, malware attacks (computer viruses), market regulation issues, moral issues, and other issues as challenges they face when shopping online. All these challenges affect the decision-making method of millennials, and they bring diverse influences of significance for the final choice.

Financial issues were identified as the most challenging issue for shopping online. Millennials also identified malware attacks (computer viruses) as being challenging in their online shopping. This could be one of the motives why physical retailers are still prevalent and have not been completely substituted by online retailers. The topic of perceived risk, a measure of privacy and safety challenges, and its undesirable affiliation with online shopping behaviour is not new. For instance, millennials are also known to be very careful about perceived risk due to online shopping.

Millennials also identified other challenges as other issues not identified in this study that they are facing when shopping online. Results also reflect that moral regulation issues were identified as the most recognised issue for online shopping. Since cognisance is a must for the growth of ethical standards, consumers have to be knowledgeable and retold that acquiring choice has moral suggestions and ethical consequences. According to results from Tables (4.2 and 4.3) Figures (4.6 and 4.7) it can be concluded that millennials face numerous challenges when shopping online. Financial issues and malware attacks are the most common challenges faced by millennials, affecting the usage level of shopping online. The findings indicate that using digital payment when shopping online has challenges due to the probable safety and confidentiality issues. Many respondents shop from online stores that develop their online shops to be secure as possible. Respondents believe that personal data is only kept for the projected use and neither third parties nor hackers have access to that data. The majority of the respondents also believe that communicating via the site of the online store, or their advertisements contribute to a greater extent in creating safety. All digital payment methods are extremely efficient even with rare usage of some of them like Bitcoin and digital wallets. Correlation testing also shows that the respondents thought that online shopping behaviours and digital payment are influenced by the provision of more security features to protect every transaction made.

5.3.3 CONCLUSIONS ON OBJECTIVE THREE

Objective three determined the digital payment usage for online shopping amongst millennials. The findings indicate that internet usage is very important in assessing the usage level of digital payment for online shopping. As depicted in Figure (4. 3), millennials identified several times a day as the number of times they used the Internet for shopping online using digital payment. The results indicate that the Internet is also part of the normal awareness of development. The findings also indicate that the Internet is highly valuable in evaluating consciousness formation. The online reviews are word-of-mouth via the Internet to create awareness to a greater extent about digital payment for online shopping. The majority of millennials use more than one digital payment method while shopping online or paying at the point of sale. Many millennials use credit cards more

than any other digital payment method Figure (4. 5). Though an educated consumer is expected to utilise many digital payment methods, the association from understanding credit card, direct debit, PayPal, In-App purchase, digital wallet, and Bitcoin usage is restrained. Also, those who utilise only one payment method utilise money regardless of their knowledge and though alertness encourages a move to expend several payments, the move means that some start to use digital payment as their prime technique of paying, while the others start to practice it as their tributary technique.

As reflected in Figure 4. 6, millennials identified the credit card as the most secure digital payment method. Many credit cards present fraud safety and additional protection features. All these digital payment methods impact the decision-making method of the millennials, and they hold various secure significances on the ultimate choice of purchasing online. Direct debit was identified as the second most secure digital payment method, while PayPal, In-App purchases, and digital wallet follow, respectively. PayPal is unquestionably one of the more prevalent facilities, although the rest are also gaining recognition in In-App purchases like Apple Pay, Google Pay, Amazon Pay, Venmo and Payoneer. These services may give an additional level of protection. Instead of offering a credit card number or bank account information to all sites wherever you buy, you give it strictly to the payment service, that you utilise for online buys. If you buy on several sites that you are inexperienced with increases the risk of falling into phishing sites and getting scammed. It is wise to decrease the number of sites you use to reduce the risk of hackers finding your information.

Moreover, the millennials also identified Bitcoin as the least secure digital payment method. As money is stored or cards in an actual wallet, bitcoins are kept in a digital wallet. The digital wallet may be either hardware-centred or web-centred. The wallet could similarly inhabit a mobile phone, a computer desktop, or remain secure by printing the confidential keys and are utilised for entry on paper. The highest risk in bitcoin safety is the single user may misplace the confidential key or may be robbed. With no private key, the client will certainly not get their bitcoins again. A client may likewise lose their bitcoin by computer failures (collapsing a hard drive), hacking, or actual computer theft that the digital wallet inhabits.

Online reviews can be described as word-of-mouth via the Internet to create awareness to a greater extent about digital payment for online shopping (Figure 4. 7). The majority of millennials get information about shopping online using digital payment from acquaintances and family via online reviews as word-of-mouth via the Internet and social media platforms. Social media is now a common instrument for exchanging information and interaction, also affecting the decision-making method. Customers are taking reviews sent on social media and further channels to encourage their buying decisions. Results of these online reviews provide the usage level of digital payment for online shopping. Social media platforms reinforce brand awareness for shopping online using digital payment. The majority of millennials consider the fact that commenting online about products that are purchased online on social media networks provide a larger reach. The respondents believe that specific offers, markdowns, and deals offered by online retailing sites inspire millennials to buy online. It is also important that more millennials promote online shopping amongst each other so that there will be no absence of awareness on millennials shopping online using digital payment.

5.4 LIMITATIONS OF THE STUDY

The geographic situation of the research is of the greater Durban area of KwaZulu-Natal. The research is restricted to millennial customers only and leaves out individuals in the age group of 40–55 that also add to the large volume of online shopping. The research was also limited to millennials (Generation Y) yet shopping online and digital payment methods are also used by some of the generations such as X, Z and baby boomers, even if it is not required. With these limits, the outcomes of the research may only be relevant to the target population.

5.5 RECOMMENDATIONS

The subsequent recommendations are proposed:

- Online retailers must do more to secure websites or online shopping platforms. The online retailers must also consider providing more awareness to the challenges of shopping online which are late delivery, cost of delivery and delivery

of damaged products. Online stores should consider user-friendly websites to preserve stability and to enhance the value of service.

- Retailers should focus on consumer education to make consumers aware of the highly secure nature of current tap-and-go digital payment systems. Hence, retailers should also ensure that millennials have positive experiences with the use of digital payment when shopping online, as these positive experiences could translate to positive attitudes and use intentions.
- The online retailers should manage the needed asset in third-party accreditations and payment benefactors astutely. Online retailers should broaden their point-of-sale payment choices besides debit and credit cards to include other digital payment methods comprising prepaid cards, gift cards and replacement payments.

5.6 SCOPE FOR FURTHER RESEARCH

The study presents some opportunities for future research. This research focused exclusively on millennials (Generation Y) in the greater Durban area of KwaZulu-Natal. The research has revealed that sellers ought to know the aspect engaged in the digitally linked customer journey. Further research can be done in other cities in various provinces in South Africa. The study was performed utilising a quantitative research design and non-probability sampling for ease. More studies employing a qualitative research method could be performed that can create further views and data-rich replies on millennials experiences of the use of digital payment methods when shopping online.

Further studies, concentrating on millennials' motives for participating in online shopping or not, in a South African perspective must be done, utilising a wider test size.

5.7 CONCLUSION

This chapter presented an overview of the research study, the summary and achievement of the objectives of the study. In addition, the limitations of the study were identified. The chapter concludes with recommendations and possible future research.

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APPENDICES

Appendix A: Editing certificate

Sury Bisetty Academic Editing Services –

CIPC No. 2021/360666/07

To whom it may concern,

I have edited the thesis entitled: THE USE OF DIGITAL PAYMENT FOR ONLINE SHOPPING AMONGST MILLENNIALS IN THE GREATER DURBAN AREA by ZITHA THEMBA, student number: 21450526. A thesis submitted in fulfilment of the requirements for the degree of Master of Management Sciences: at the Marketing Department of Marketing and Retail Management, FACULTY OF MANAGEMENT SCIENCES at the Durban University of Technology.

Sury Bisetty
Linguist and Professional Language and Technical Editor
11 October 2021

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Disclaimer: Please note I provided language,proof reading and technical editing as per discussion with the client. The content of the thesis was not amended in any way. The edited work described here may not be identical to that submitted. The author, at his/her sole discretion, has the prerogative to accept, delete, or change amendments/suggestions made by the editor before submission.

NB In keeping with POPIA all documents relating to this thesis will be deleted on the author's instructions or after 3 months.

Appendix B: Turnitin Report

Master's Thesis 21450526

by Themba Zitha

Submission date: 25-Oct-2020 08:59PM (UTC+0200)

Submission ID: 1412678012

File name: FINAL_DISSERTATION_25_OCTOBER_2020.docx (561.05K)

Word count: 40727

Character count: 231472

Masters Thesis 21450526

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Appendix C: Questionnaire

Title: the use of digital payment for online shopping amongst millennials in the greater Durban.

Aim: The aim of this study is to evaluate millennials' perceptions of using digital payment for online shopping in the greater Durban area

Objectives

- To identify millennials' perceptions of digital payment for online shopping;
- To identify the trust and security challenges for shopping online; and
- To determine the usage level of digital payment for online shopping.

I am currently a master's in marketing student at Durban University of Technology. I am conducting a survey on the use of digital payment for online shopping amongst millennials in the greater Durban.

Instructions

1. Please spare a few minutes to read and answer all questions carefully.
2. Please note that all data collected will be kept in strict confidential and will be used for academic research purpose only.
3. Indicate your choice with a tick.

Section A

Demographic data

1. Age Group	**Tick:**
19-22 years	**1**
23-26 years	**2**
27-30 years	**3**
31-34 years	**4**
35-39 years	**5**

2. Gender	**Tick:**
Male	**1**
Female	**2**

3. Race	**Tick:**
African	**1**
Coloured	**2**
Indian	**3**
White	**4**
Other	**5**

4. Occupation	**Tick:**
Student	**1**
Employed	**2**
Self-employed	**3**
Unemployed	**4**

Stay-at-home	**5**
Unable to work	**6**

5. Type of Income	**Tick:**
Salary	**1**
Stipend	**2**
Allowance	**3**

6.Income brackets	**Tick:**
<R3000	**1**
R3000 to R5000	**2**
R5001 to R8000	**3**
>R8000	**4**

Section B: Usage level of digital payment for online shopping

7. How often do you use the Internet?	**Tick:**
Several times a day	**1**
Once a day	**2**
Several times a week	**3**
Once a week	**4**

8. How often did you shop online in the past year?	**Tick:**
1 - 5 times a year	**1**
More than a year	**2**
Once a month	**3**
Several times a month	**4**

9. Which Digital payment methods have you heard off? (multiple answers possible)	**Tick:**		
Credit card	**1**	In-app purchases	**5**
Digital wallet	**2**	PayPal	**6**
Bitcoin	**3**	Other (please fill in below)	**7**
Direct debit	**4**		

10. Which digital payment method do you find the most secure?	**Tick:**		
Credit card	**1**	PayPal	**5**
Digital wallet	**2**	In-app purchases	**6**
Bitcoin	**3**	Other (please specify below)	**7**
Direct debit	**4**		

11. What are main factors preventing you from shopping online? (multiple answers possible)	**Tick:**

Digital Payment Methods	**1**	Warranty	**6**
Added tax/ customs duty	**2**	Unable to view the physical product	**7**
Delivery costs	**3**	Internet access	**8**
Long delivery time	**4**	Others (please specify below)	**9**
Refund policies	**5**		

12. What are the challenges of shopping online?	**Tick:**
Malware attack (Computer Virus)	**1**
Financial issues	**2**
Market regulation issues	**3**
Moral issues	**4**
Other	**5**

The instrument of the questionnaire was developed based on validated constructs which were adapted for the purposes of this study. Read each of the statements below. Kindly rate the following statements by ticking the appropriate one according to the following scale: Point Likert scale was used, from strongly disagree (1) to strongly agree (5), with a neutral (3) response of neither agree (4) or disagree (2).

Section C: online shopping behaviours

N0.	Section C: online shopping behaviours	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	**2**	**3**	**4**	**5**
13.	I have used the Internet for online shopping in the last 6 months.	**1**	**2**	**3**	**4**	**5**
14.	My past experience purchasing online was positive.	**1**	**2**	**3**	**4**	**5**
15.	I trust online stores to keep my best interests in mind for online purchases.	**1**	**2**	**3**	**4**	**5**
16.	I trust online stores to keep my personal information secure	**1**	**2**	**3**	**4**	**5**
17.	I am very likely to provide the online stores with the information it needs to better serve my needs	**1**	**2**	**3**	**4**	**5**
18.	Online shopping makes it easier for me to make online product choice and judgement.	**1**	**2**	**3**	**4**	**5**
19.	Online shopping minimises the time I usually spent on shopping.	**1**	**2**	**3**	**4**	**5**

20.	Online shopping provides simple wide range of different products online.	**1**	**2**	**3**	**4**	**5**
Section D: Digital payment						
21.	My past experience using a digital payment method when shopping online was positive.	**1**	**2**	**3**	**4**	**5**
22.	Digital payment methods are easy to learn and use	**1**	**2**	**3**	**4**	**5**
23.	Digital payment provides various payment methods when shopping online	**1**	**2**	**3**	**4**	**5**
24.	Digital payment system save time for travelling and money when shopping online.	**1**	**2**	**3**	**4**	**5**
25.	I find shopping online using digital payment to be trustworthy.	**1**	**2**	**3**	**4**	**5**
26.	I feel that digital payment methods are secure.	**1**	**2**	**3**	**4**	**5**
27.	I trust the digital payment method I use when shopping online.	**1**	**2**	**3**	**4**	**5**

28.	Most digital payment provides adequate payment security.	**1**	**2**	**3**	**4**	**5**
29.	I use digital payment; the terms and conditions are clear.	**1**	**2**	**3**	**4**	**5**
30.	Speed of digital payment system flow faster than traditional payment system when shopping online.	**1**	**2**	**3**	**4**	**5**
31.	I find digital payment system easier to use when conducting online transaction.	**1**	**2**	**3**	**4**	**5**

Section E

32. What do you think should be done to address these challenges or perspectives mentioned in the previous concerning shopping online using digital payment?

Thank you for your time and participation.

Appendix D: Letter of information and Letter of consent

Letter of Information

Title of the Research Study: Assessing the use of digital payment in online shopping: a case of millennials in Durban.

Principal Investigator/s/researcher: Themba Zitha

Co-Investigator/s/supervisor/s: Prof S Penceliah

Brief Introduction and Purpose of the Study: The purpose of this study is to determine the challenges of using digital payment in online shopping: a case of millennials in Durban. This chapter consists of summarised chapter one into six parts to illustrate and describe a clear idea for a whole research project. All the parts will be explained in detail which consist of research questions, research objectives, problem statement, research background and significance of study in this entire chapter

Outline of the Procedures: The researcher will personally hand deliver the questionnaires to the respondents in Durban. The questionnaire will require approximately 10-15 minutes to be completed. Participation is voluntary and respondents are expected to be honest and truthful when completing the questionnaire. Completed questionnaires will be personally collected from the respondents.

Risks or Discomforts to the Participant: There are no foreseeable risks or discomfort associated with this study.

Benefits: The researcher will benefit through publications and presentations. The key findings will be made available to the DUT repository where the dissertation can be

accessed. This will assist them in identifying the importance and the effects of adopting payments amongst millennials.

Reason/s why the Participant May Be Withdrawn from the Study: Participation in this study is strictly voluntary and there will be no consequences for the respondents should they choose to withdraw.

Remuneration: There is no remuneration for respondents.

Costs of the Study: Respondents are not going to incur any costs related to the study.

Confidentiality: The researcher will ensure that confidentiality is always maintained. Names and any personal details are not included in the questionnaire. The covering letter has a section where the research always undertakes to uphold confidentiality and anonymity during the study.

Research-related Injury: There are no known or anticipated risks and discomforts associated to respondents in this study. If any is experienced there will be no compensation offered.

Persons to Contact in the Event of Any Problems or Queries:

(Supervisor and details) Please contact the researcher (tel no.072 8308 548), my supervisor (tel no. 031 3735 391) or the Institutional Research Ethics Administrator on 031 373 2900.

Letter of consent

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, Zitha Themba (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _____,
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

_____ _____ _____ _____

Full Name of Participant Date Time Signature / Right Thumbprint

I, Themba Zitha (name of the researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

_____	_____	_____
Full Name of Researcher	**Date**	**Signature**
_____	_____	_____
Full Name of Witness (If applicable)	**Date**	**Signature**
_____	_____	_____
Full Name of Legal Guardian (If applicable)	**Date**	**Signature**

Appendix E: Cross Tabulation

How often do you use the Internet? * Gender

Crosstab

			Gender		Total
			Male	Female	
How often do you use the Internet?	Several times a day	Count	108	168	276
		% within How often do you use the Internet?	39.1%	60.9%	100.0%
		% within Gender	67.9%	72.1%	70.4%
		% of Total	27.6%	42.9%	70.4%
	Once a day	Count	7	10	17
		% within How often do you use the Internet?	41.2%	58.8%	100.0%
		% within Gender	4.4%	4.3%	4.3%
		% of Total	1.8%	2.6%	4.3%
	Several times a week	Count	28	27	55
		% within How often do you use the Internet?	50.9%	49.1%	100.0%
		% within Gender	17.6%	11.6%	14.0%
		% of Total	7.1%	6.9%	14.0%
	Once a week	Count	16	28	44

		% within How often do you use the Internet?	36.4%	63.6%	100.0%
		% within Gender	10.1%	12.0%	11.2%
		% of Total	4.1%	7.1%	11.2%
Total		Count	159	233	392
		% within How often do you use the Internet?	40.6%	59.4%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	40.6%	59.4%	100.0%

How often did you shop online in the past year? * Gender

Crosstab

			Gender Male	Female	Total
How often did you shop online in the past year?	1 - 5 times a year	Count	76	132	208
		% within How often did you shop online in the past year?	36.5%	63.5%	100.0%
		% within Gender	51.4%	59.2%	56.1%
		% of Total	20.5%	35.6%	56.1%
	More than a year	Count	20	19	39

		% within How often did you shop online in the past year?	51.3%	48.7%	100.0%
		% within Gender	13.5%	8.5%	10.5%
		% of Total	5.4%	5.1%	10.5%
	Once a month	Count	31	44	75
		% within How often did you shop online in the past year?	41.3%	58.7%	100.0%
		% within Gender	20.9%	19.7%	20.2%
		% of Total	8.4%	11.9%	20.2%
	Several times a month	Count	21	28	49
		% within How often did you shop online in the past year?	42.9%	57.1%	100.0%
		% within Gender	14.2%	12.6%	13.2%
		% of Total	5.7%	7.5%	13.2%
Total		Count	148	223	371
		% within How often did you shop online in the past year?	39.9%	60.1%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	39.9%	60.1%	100.0%

Appendix F: Pearson Chi-Square Tests

Pearson Chi-Square Tests									
		Age	Gender	Race	Occupation	ype of Incc	come Brack	o you use t	shop online in the past
I have used the internet for online shopping in the last 6 months	Chi-square	20.347	12.175	36.949	38.074	17.143	26.119	21.945	46.438
	df	16	4	16	20	8	12	12	12
	Sig.	0.205	.016*	.002*	.009*	.029*	.010*	.038*	.000*
My past experience purchasing online was positive	Chi-square	26.723	14.161	33.143	38.708	31.626	32.281	11.120	27.355
	df	16	4	16	20	8	12	12	12
	Sig.	.045*	.007*	.007*	.007*	.000*	.001*	0.519	.007*
I trust online stores to keep my best interests in mind for online purcha	Chi-square	32.923	4.596	34.275	59.042	42.976	23.942	8.899	33.192
	df	16	4	16	20	8	12	12	12
	Sig.	.008*	0.331	.005*	.000*	.000*	.021*	0.712	.001*
I trust online stores to keep my personal information secure	Chi-square	12.701	4.183	21.323	33.637	17.951	14.062	10.214	21.312
	df	16	4	16	20	8	12	12	12
	Sig.	0.694	0.382	0.166	.029*	.022*	0.297	0.597	.046*
I am very likely to provide the online stores with the information it needs	Chi-square	17.163	6.968	16.643	46.682	15.413	19.553	6.021	14.322
	df	16	4	16	20	8	12	12	12
	Sig.	0.375	0.138	0.409	.001*	0.052	0.076	0.915	0.281
Online shopping makes it easier for me to make online product choice	Chi-square	11.621	4.166	15.401	26.317	19.955	11.510	14.150	19.437
	df	16	4	16	20	8	12	12	12
	Sig.	0.77	0.384	0.496	0.156	.011*	0.486	0.291	0.079
Online shopping minimise the time I usually spent on shopping	Chi-square	23.801	0.832	10.807	32.480	11.924	11.609	5.650	12.237
	df	16	4	16	20	8	12	12	12
	Sig.	0.094	0.934	0.821	.038*	0.155	0.478	0.933	0.427
Online shopping provides simple wide range of different products onli	Chi-square	22.295	4.733	11.785	32.227	22.682	9.841	8.698	10.520
	df	16	4	16	20	8	12	12	12
	Sig.	0.134	0.316	0.759	.041*	.004*	0.63	0.728	0.57
My past experience using a digital payment method when shopping on	Chi-square	32.588	4.154	17.572	40.450	34.223	28.134	9.809	19.324
	df	16	4	16	20	8	12	12	12
	Sig.	.008*	0.386	0.35	.004*	.000*	.005*	0.633	0.081
digital payment methods are easy to learn and use	Chi-square	22.710	5.692	17.886	38.470	41.583	27.993	13.444	20.890
	df	16	4	16	20	8	12	12	12
	Sig.	0.122	0.223	0.331	.008*	.000*	.006*	0.338	0.052
Digital payment provides various payment methods when shopping on	Chi-square	9.714	4.823	17.330	47.437	18.032	19.813	19.843	14.965
	df	16	4	16	20	8	12	12	12
	Sig.	0.881	0.306	0.365	.001*	.021*	0.071	0.07	0.243
Digital payment system save time for travelling and money when shopp	Chi-square	19.453	0.517	11.090	32.320	14.922	11.035	13.848	5.514
	df	16	4	16	20	8	12	12	12
	Sig.	0.246	0.972	0.804	.040*	0.061	0.526	0.31	0.939
I find shopping online using digital payment to be trustworthy	Chi-square	16.350	2.070	13.007	28.958	15.731	16.494	11.107	20.755
	df	16	4	16	20	8	12	12	12
	Sig.	0.429	0.723	0.672	0.089	.046*	0.17	0.52	0.054
I feel that digital payment methods are secure	Chi-square	26.560	0.165	15.008	24.837	12.799	17.641	5.879	6.091
	df	16	4	16	20	8	12	12	12
	Sig.	.047*	0.997	0.524	0.208	0.119	0.127	0.922	0.911
I trust the digital payment method I use when shopping online	Chi-square	21.844	3.018	26.709	32.217	15.918	15.761	7.759	19.689
	df	16	4	16	20	8	12	12	12
	Sig.	0.148	0.555	.045*	.041*	.044*	0.202	0.804	0.073
Most digital payment provides adequate payment security	Chi-square	13.936	4.047	15.801	25.843	14.573	19.288	5.912	16.128
	df	16	4	16	20	8	12	12	12
	Sig.	0.603	0.400	0.467	0.171	0.068	0.082	0.92	0.185
I use digital payment; the terms and conditions are clear	Chi-square	14.874	2.044	11.694	20.856	7.565	8.668	10.555	9.283
	df	16	4	16	20	8	12	12	12
	Sig.	0.534	0.728	0.765	0.406	0.477	0.731	0.567	0.679
Speed of digital payment system flow faster than traditional payment s	Chi-square	16.293	3.387	18.000	34.186	13.206	19.613	10.508	10.489
	df	16	4	16	20	8	12	12	12
	Sig.	0.433	0.495	0.324	.025*	0.105	0.075	0.571	0.573
I find digital payment system easier to use when conducting online tra	Chi-square	25.906	1.931	14.595	35.126	14.253	14.619	16.919	8.528
	df	16	4	16	20	8	12	12	12
	Sig.	0.055	0.749	0.555	.019*	0.075	0.263	0.153	0.743

Appendix G: Factor Analysis

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.931
Bartlett's Test of Sphericity	Approx. Chi-Square	3444.607
	df	171
	Sig.	0.000

Communalities

	Initial	Extraction
I have used the Internet for online shopping in the last 6 months	1.000	0.428
My past experience purchasing online was positive	1.000	0.530
I trust online stores to keep my best interests in mind for online purchase	1.000	0.678
I trust online stores to keep my personal information secure	1.000	0.511
I am very likely to provide the online stores with the information it needs to better serve my needs	1.000	0.583
Online shopping makes it easier for me to make online product choice and judgement	1.000	0.525
Online shopping minimises the time I usually spent on shopping	1.000	0.330
Online shopping provides simple wide range of different products online	1.000	0.372
My past experience using a digital payment method when shopping online was positive	1.000	0.523
digital payment methods are easy to learn and use	1.000	0.474
Digital payment provides various payment methods when shopping online	1.000	0.491
Digital payment system save time for travelling and money when shopping online	1.000	0.503

I find shopping online using digital payment to be trustworthy	1.000	0.497
I feel that digital payment methods are secure	1.000	0.516
I trust the digital payment method I use when shopping online	1.000	0.631
Most digital payment provides adequate payment security	1.000	0.623
I use digital payment; the terms and conditions are clear	1.000	0.525
Speed of digital payment system flow faster than traditional payment system when shopping online	1.000	0.601
I find digital payment system easier to use when conducting online transaction	1.000	0.626

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.374	44.073	44.073	8.374	44.073	44.073	5.380	28.317	28.317
2	1.592	8.379	52.451	1.592	8.379	52.451	4.586	24.134	52.451
3	1.464	7.703	60.155						
4	0.947	4.986	65.141						
5	0.795	4.184	69.325						
6	0.674	3.545	72.870						
7	0.610	3.212	76.082						
8	0.553	2.910	78.992						
9	0.514	2.704	81.697						
10	0.477	2.509	84.206						
11	0.443	2.331	86.537						
12	0.415	2.184	88.721						

13	0.386	2.032	90.753						
14	0.363	1.910	92.663						
15	0.332	1.745	94.408						
16	0.298	1.570	95.978						
17	0.281	1.481	97.459						
18	0.255	1.343	98.802						
19	0.228	1.198	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component	
	1	2
I have used the Internet for online shopping in the last 6 months	0.500	0.421
My past experience purchasing online was positive	0.652	0.324
I trust online stores to keep my best interests in mind for online purchase	0.701	0.431
I trust online stores to keep my personal information secure	0.614	0.365
I am very likely to provide the online stores with the information it needs to better serve my needs	0.644	0.410
Online shopping makes it easier for me to make online product choice and judgement	0.657	0.307
Online shopping minimises the time I usually spent on shopping	0.564	0.111
Online shopping provides simple wide range of different products online	0.599	0.115
My past experience using a digital payment method when shopping online was positive	0.723	0.028
digital payment methods are easy to learn and use	0.682	-0.097
Digital payment provides various payment methods when shopping online	0.689	-0.125

Digital payment system save time for travelling and money when shopping online	0.665	-0.245
I find shopping online using digital payment to be trustworthy	0.705	-0.011
I feel that digital payment methods are secure	0.680	-0.231
I trust the digital payment method I use when shopping online	0.779	-0.156
Most digital payment provides adequate payment security	0.736	-0.286
I use digital payment; the terms and conditions are clear	0.660	-0.299
Speed of digital payment system flow faster than traditional payment system when shopping online	0.620	-0.465
I find digital payment system easier to use when conducting online transaction	0.689	-0.389

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix[a]

	Component	
	Online shopping behaviours	Digital payment
I have used the Internet for online shopping in the last 6 months	0.094	0.647
My past experience purchasing online was positive	0.272	0.675
I trust online stores to keep my best interests in mind for online purchase	0.238	0.788
I trust online stores to keep my personal information secure	0.216	0.681
I am very likely to provide the online stores with the information it needs to better serve my needs	0.209	0.734
Online shopping makes it easier for me to make online product choice and judgement	0.287	0.666
Online shopping minimises the time I usually spent on shopping	0.348	0.458

Online shopping provides simple wide range of different products online	0.372	0.484
My past experience using a digital payment method when shopping online was positive	0.522	0.501
digital payment methods are easy to learn and use	0.574	0.380
Digital payment provides various payment methods when shopping online	0.598	0.365
Digital payment system save time for travelling and money when shopping online	0.660	0.259
I find shopping online using digital payment to be trustworthy	0.534	0.460
I feel that digital payment methods are secure	0.662	0.279
I trust the digital payment method I use when shopping online	0.686	0.400
Most digital payment provides adequate payment security	0.740	0.275
I use digital payment; the terms and conditions are clear	0.692	0.215
Speed of digital payment system flow faster than traditional payment system when shopping online	0.773	0.065
I find digital payment system easier to use when conducting online transaction	0.773	0.167

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	0.747	0.664
2	-0.664	0.747

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Appendix H: Reliabilities

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	372	94.7
	Excluded[a]	21	5.3
	Total	393	100.0

Reliability Statistics

Cronbach's Alpha	N of Items
0.841	8

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	352	89.6
	Excluded[a]	41	10.4
	Total	393	100.0

Reliability Statistics

Cronbach's Alpha	N of Items
0.911	11

Appendix I: Frequency

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	19 – 22	179	45.5	45.5	45.5
	23 – 26	95	24.2	24.2	69.7
	27 – 30	47	12.0	12.0	81.7
	31 – 34	46	11.7	11.7	93.4
	35 – 39	26	6.6	6.6	100.0
	Total	393	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	159	40.5	40.5	40.5
	Female	234	59.5	59.5	100.0
	Total	393	100.0	100.0	

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	African	341	86.8	86.8	86.8
	Coloured	10	2.5	2.5	89.3
	Indian	30	7.6	7.6	96.9
	White	9	2.3	2.3	99.2
	Other	3	0.8	0.8	100.0
	Total	393	100.0	100.0	

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	232	59.0	59.0	59.0
	Employed	112	28.5	28.5	87.5

	Self-employed	20	5.1	5.1	92.6
	Unemployed	25	6.4	6.4	99.0
	Stay-at-home	3	0.8	0.8	99.7
	Unable to work	1	0.3	0.3	100.0
	Total	393	100.0	100.0	

Type of Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Salary	120	30.5	31.2	31.2
	Stipend	41	10.4	10.6	41.8
	Allowance	224	57.0	58.2	100.0
	Total	385	98.0	100.0	
Missing	System	8	2.0		
Total		393	100.0		

Income Brackets

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< R3000	202	51.4	53.6	53.6
	R3000 - R5000	84	21.4	22.3	75.9
	R5001 - R8000	32	8.1	8.5	84.4
	> R8000	59	15.0	15.6	100.0
	Total	377	95.9	100.0	
Missing	System	16	4.1		
Total		393	100.0		

How often do you use the Internet?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Several times a day	276	70.2	70.4	70.4

	Once a day	17	4.3	4.3	74.7
	Several times a week	55	14.0	14.0	88.8
	Once a week	44	11.2	11.2	100.0
	Total	392	99.7	100.0	
Missing	System	1	0.3		
Total		393	100.0		

How often did you shop online in the past year?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 5 times a year	208	52.9	56.1	56.1
	More than a year	39	9.9	10.5	66.6
	Once a month	75	19.1	20.2	86.8
	Several times a month	49	12.5	13.2	100.0
	Total	371	94.4	100.0	
Missing	System	22	5.6		
Total		393	100.0		

Credit card

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	271	69.0	100.0	100.0
Missing	System	122	31.0		
Total		393	100.0		

Digital wallet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	98	24.9	100.0	100.0
Missing	System	295	75.1		
Total		393	100.0		

Bitcoin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	74	18.8	100.0	100.0
Missing	System	319	81.2		
Total		393	100.0		

Direct debit

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	137	34.9	100.0	100.0
Missing	System	256	65.1		
Total		393	100.0		

In-app purchases

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	110	28.0	100.0	100.0
Missing	System	283	72.0		
Total		393	100.0		

PayPal

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	128	32.6	100.0	100.0
Missing	System	265	67.4		
Total		393	100.0		

Other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	28	7.1	100.0	100.0
Missing	System	365	92.9		
Total		393	100.0		

Credit card

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	192	48.9	100.0	100.0
Missing	System	201	51.1		
Total		393	100.0		

Digital wallet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	42	10.7	100.0	100.0
Missing	System	351	89.3		
Total		393	100.0		

Bitcoin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	10	2.5	100.0	100.0
Missing	System	383	97.5		
Total		393	100.0		

Direct debit

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	91	23.2	100.0	100.0
Missing	System	302	76.8		
Total		393	100.0		

PayPal

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	51	13.0	100.0	100.0
Missing	System	342	87.0		
Total		393	100.0		

In-app purchases

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	45	11.5	100.0	100.0
Missing	System	348	88.5		
Total		393	100.0		

Other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	15	3.8	100.0	100.0
Missing	System	378	96.2		
Total		393	100.0		

Digital Payment Methods

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	57	14.5	100.0	100.0
Missing	System	336	85.5		
Total		393	100.0		

Added tax/ customs duty

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	42	10.7	100.0	100.0
Missing	System	351	89.3		
Total		393	100.0		

Delivery costs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	117	29.8	100.0	100.0
Missing	System	276	70.2		
Total		393	100.0		

Long delivery time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	139	35.4	100.0	100.0
Missing	System	254	64.6		
Total		393	100.0		

Refund policies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	88	22.4	100.0	100.0
Missing	System	305	77.6		
Total		393	100.0		

Warrant y

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	35	8.9	100.0	100.0
Missing	System	358	91.1		
Total		393	100.0		

Unable to view the physical product

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	133	33.8	100.0	100.0
Missing	System	260	66.2		
Total		393	100.0		

Internet access

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	22	5.6	100.0	100.0
Missing	System	371	94.4		
Total		393	100.0		

Others

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	17	4.3	100.0	100.0
Missing	System	376	95.7		
Total		393	100.0		

Malware attack (Computer Virus)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	101	25.7	100.0	100.0
Missing	System	292	74.3		
Total		393	100.0		

Financial issues

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	107	27.2	100.0	100.0
Missing	System	286	72.8		
Total		393	100.0		

Market regulation issues

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	60	15.3	100.0	100.0
Missing	System	333	84.7		
Total		393	100.0		

Moral issues

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	39	9.9	100.0	100.0
Missing	System	354	90.1		
Total		393	100.0		

Other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	94	23.9	100.0	100.0
Missing	System	299	76.1		
Total		393	100.0		

I have used the Internet for online shopping in the last 6 months

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	108	27.5	27.6	27.6
	Disagree	67	17.0	17.1	44.8
	Neutral	57	14.5	14.6	59.3
	Agree	66	16.8	16.9	76.2
	Strongly Agree	93	23.7	23.8	100.0
	Total	391	99.5	100.0	
Missing	System	2	0.5		
Total		393	100.0		

My past experience purchasing online was positive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	53	13.5	13.6	13.6
	Disagree	50	12.7	12.8	26.4
	Neutral	100	25.4	25.6	52.1
	Agree	119	30.3	30.5	82.6
	Strongly Agree	68	17.3	17.4	100.0
	Total	390	99.2	100.0	
Missing	System	3	0.8		
Total		393	100.0		

I trust online stores to keep my best interests in mind for online purchase

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	49	12.5	12.6	12.6
	Disagree	57	14.5	14.7	27.2
	Neutral	147	37.4	37.8	65.0
	Agree	88	22.4	22.6	87.7
	Strongly Agree	48	12.2	12.3	100.0
	Total	389	99.0	100.0	
Missing	System	4	1.0		
Total		393	100.0		

I trust online stores to keep my personal information secure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	61	15.5	15.7	15.7
	Disagree	70	17.8	18.0	33.8
	Neutral	121	30.8	31.2	64.9
	Agree	78	19.8	20.1	85.1
	Strongly Agree	58	14.8	14.9	100.0
	Total	388	98.7	100.0	
Missing	System	5	1.3		
Total		393	100.0		

I am very likely to provide the online stores with the information it needs to better serve my needs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	39	9.9	10.0	10.0
	Disagree	51	13.0	13.1	23.1
	Neutral	129	32.8	33.2	56.3
	Agree	121	30.8	31.1	87.4
	Strongly Agree	49	12.5	12.6	100.0
	Total	389	99.0	100.0	
Missing	System	4	1.0		

Total		393	100.0		

Online shopping makes it easier for me to make online product choice and judgement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	36	9.2	9.2	9.2
	Disagree	56	14.2	14.3	23.5
	Neutral	118	30.0	30.2	53.7
	Agree	120	30.5	30.7	84.4
	Strongly Agree	61	15.5	15.6	100.0
	Total	391	99.5	100.0	
Missing	System	2	0.5		
Total		393	100.0		

Online shopping minimises the time I usually spent on shopping

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	31	7.9	8.0	8.0
	Disagree	39	9.9	10.1	18.0
	Neutral	93	23.7	24.0	42.0
	Agree	109	27.7	28.1	70.1
	Strongly Agree	116	29.5	29.9	100.0
	Total	388	98.7	100.0	
Missing	System	5	1.3		
Total		393	100.0		

Online shopping provides simple wide range of different products online

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	22	5.6	5.7	5.7
	Disagree	32	8.1	8.3	14.0
	Neutral	92	23.4	23.8	37.8
	Agree	139	35.4	36.0	73.8

	Strongly Agree	101	25.7	26.2	100.0
	Total	386	98.2	100.0	
Missing	System	7	1.8		
Total		393	100.0		

My past experience using a digital payment method when shopping online was positive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	33	8.4	8.7	8.7
	Disagree	26	6.6	6.8	15.5
	Neutral	117	29.8	30.8	46.3
	Agree	138	35.1	36.3	82.6
	Strongly Agree	66	16.8	17.4	100.0
	Total	380	96.7	100.0	
Missing	System	13	3.3		
Total		393	100.0		

digital payment methods are easy to learn and use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	17	4.3	4.5	4.5
	Disagree	34	8.7	8.9	13.4
	Neutral	111	28.2	29.1	42.5
	Agree	150	38.2	39.4	81.9
	Strongly Agree	69	17.6	18.1	100.0
	Total	381	96.9	100.0	
Missing	System	12	3.1		
Total		393	100.0		

Digital payment provides various payment methods when shopping online

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	3.3	3.4	3.4

	Disagree	21	5.3	5.6	9.0
	Neutral	112	28.5	29.7	38.7
	Agree	154	39.2	40.8	79.6
	Strongly Agree	77	19.6	20.4	100.0
	Total	377	95.9	100.0	
Missing	System	16	4.1		
Total		393	100.0		

Digital payment system save time for travelling and money when shopping online

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	17	4.3	4.4	4.4
	Disagree	19	4.8	5.0	9.4
	Neutral	70	17.8	18.3	27.7
	Agree	153	38.9	39.9	67.6
	Strongly Agree	124	31.6	32.4	100.0
	Total	383	97.5	100.0	
Missing	System	10	2.5		
Total		393	100.0		

I find shopping online using digital payment to be trustworthy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	30	7.6	7.9	7.9
	Disagree	54	13.7	14.2	22.0
	Neutral	171	43.5	44.9	66.9
	Agree	74	18.8	19.4	86.4
	Strongly Agree	52	13.2	13.6	100.0
	Total	381	96.9	100.0	
Missing	System	12	3.1		
Total		393	100.0		

I feel that digital payment methods are secure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	23	5.9	6.0	6.0
	Disagree	60	15.3	15.7	21.7
	Neutral	151	38.4	39.5	61.3
	Agree	103	26.2	27.0	88.2
	Strongly Agree	45	11.5	11.8	100.0
	Total	382	97.2	100.0	
Missing	System	11	2.8		
Total		393	100.0		

I trust the digital payment method I use when shopping online

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	33	8.4	8.7	8.7
	Disagree	51	13.0	13.5	22.2
	Neutral	162	41.2	42.9	65.1
	Agree	104	26.5	27.5	92.6
	Strongly Agree	28	7.1	7.4	100.0
	Total	378	96.2	100.0	
Missing	System	15	3.8		
Total		393	100.0		

Most digital payment provides adequate payment security

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	21	5.3	5.5	5.5
	Disagree	47	12.0	12.3	17.8
	Neutral	146	37.2	38.2	56.0
	Agree	129	32.8	33.8	89.8
	Strongly Agree	39	9.9	10.2	100.0
	Total	382	97.2	100.0	

Missing	System	11	2.8		
Total		393	100.0		

I use digital payment; the terms and conditions are clear

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	30	7.6	7.8	7.8
	Disagree	35	8.9	9.1	17.0
	Neutral	159	40.5	41.5	58.5
	Agree	125	31.8	32.6	91.1
	Strongly Agree	34	8.7	8.9	100.0
	Total	383	97.5	100.0	
Missing	System	10	2.5		
Total		393	100.0		

Speed of digital payment system flow faster than traditional payment system when shopping online

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	16	4.1	4.2	4.2
	Disagree	32	8.1	8.4	12.6
	Neutral	134	34.1	35.3	47.9
	Agree	139	35.4	36.6	84.5
	Strongly Agree	59	15.0	15.5	100.0
	Total	380	96.7	100.0	
Missing	System	13	3.3		
Total		393	100.0		

I find digital payment system easier to use when conducting online transaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	18	4.6	4.7	4.7
	Disagree	27	6.9	7.0	11.7
	Neutral	135	34.4	35.1	46.8

	Agree	149	37.9	38.7	85.5
	Strongly Agree	56	14.2	14.5	100.0
	Total	385	98.0	100.0	
Missing	System	8	2.0		
Total		393	100.0		

Appendix J: Chi-Square Tests

	Chi-Square	df	Asymp. Sig.
Age	193.094	4	0.000
Gender	14.313	1	0.000
Race	1100.27	4	0.000
Occupation	636.053	5	0.000
Type of Income	131.288	2	0.000
Income Brackets	178.597	3	0.000
How often do you use the Internet?	438.878	3	0.000
How often did you shop online in the past year?	198.391	3	0.000
I have used the Internet for online shopping in the last 6 months	23.412	4	0.000
My past experience purchasing online was positive	47.103	4	0.000
I trust online stores to keep my best interests in mind for online purchase	90.524	4	0.000
I trust online stores to keep my personal information secure	33.521	4	0.000
I am very likely to provide the online stores with the information it needs to better serve my needs	96.925	4	0.000
Online shopping makes it easier for me to make online product choice and judgement	75.458	4	0.000
Online shopping minimises the time I usually spent on shopping	81.948	4	0.000
Online shopping provides simple wide range of different products online	125.58	4	0.000
My past experience using a digital payment method when shopping online was positive	131.237	4	0.000
digital payment methods are easy to learn and use	157.412	4	0.000
Digital payment provides various payment methods when shopping online	190.626	4	0.000
Digital payment system save time for travelling and money when shopping online	195.786	4	0.000
I find shopping online using digital payment to be trustworthy	160.168	4	0.000
I feel that digital payment methods are secure	135.853	4	0.000
I trust the digital payment method I use when shopping online	171.392	4	0.000
Most digital payment provides adequate payment security	169.414	4	0.000
I use digital payment; the terms and conditions are clear	193.854	4	0.000
Speed of digital payment system flow faster than traditional payment system when shopping online	173.132	4	0.000
I find digital payment system easier to use when conducting online transaction	194.416	4	0.000