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Department of Information Systems

A Conceptual Framework for Digital Customer Experience in Online Retail Industry

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DECLARATION

The following declaration must be made. It must stand on a page by itself under the heading, DECLARATION:

I declare that *A Conceptual Framework for Digital Customer Experience in Online Retail Industry* is my own work, that it has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Full name: Godwill Anesu T Mamhiyo **Date**: 20/10/2021

Signed: GAT Mamhiyo

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DEDICATION

I dedicate this work and all my success to Sports Skills 4 Life Skills, my Fiancée and finally, my Mum and Dad. We did it!

Thank you all for your support, love and belief in me always.

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ABSTRACT

With the advent of digital technology, retailers can enhance the customer's experience by transitioning from traditional Customer Experience to Digital Customer Experience (DCx). Experiences are seen as differentiators that companies leverage on today. Customer expectations have since risen in the age of digital transformation and omnichannel platforms, leading to consumers demanding an enhanced DCx from online retailers. This shift challenges businesses to bring customer data together and then derive value from it as it becomes more complex and richer. This empirical study used a survey design and a quantitative research method to investigate factors affecting DCx in a city within a developing country.

The study investigated the factors and their impact on the conceptual DCx framework. Constructs examined were Digital Touchpoint Experience (DTP), Digital Service Experience (DSE), Digital Brand Experience (DBE) and Digital Experience Platforms (DEP). Each construct had up to ten variables with exception of DSE. These constructs were not looked at in isolation as the demographic factors of age, gender, level of education and income level were also examined in developing the DCx framework for retailers in developing countries.

The study was conducted on 152 willing participants from Cape Town using a purposive sampling technique. Participants were required to have had prior online shopping experience. The data analyses were conducted on Statistical Package for the Social Sciences (SPSS). The findings showed that customers age, gender and to some extent income level were the main demographic variables which affect DCx in online retail industry in this context. Each of the four constructs brought forward findings which identified unique behaviours by participants in this region for retailers also in developing countries to consider. The findings of this study are largely contrary to existing literature which is no surprise as in most cases was written in the context of developed countries.

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Keywords

Digital Customer Experience, Customer Experience, Digital Touchpoint Experience, Digital Service Experience, Digital Brand Experience, Digital Experience Platforms, Retail Industry

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CHAPTER 1: INTRODUCTION AND BACKGROUND OF THE STUDY

This thesis explores the factors affecting Digital Customer Experience in Online retail industry in Cape Town, South Africa. The introductory chapter begins with a summary of the background to the problem in the digital era. It then shapes the complexity of the digital era from the economic, organisational and customer point of view. Thereafter, a review of related studies is provided. This is followed research problem, research question, objectives, sub questions and methods. The contributions the study seeks to make in practice are then specified. Finally, a chapter summary is presented.

1.1.Background to the research problem

The fourth industrial revolution perceives technology as changing the way we live and work (Moavenzadeh, 2015). The growth of digital ecosystems has transformed Industry operations across the board. Given, the emergence of digital transformation, organisations have had to reconsider their operations. Digital transformation is a shift in business processes, operational activities, capabilities and business models to strategically make use of the opportunities that digital technologies have to offer (Vial, 2019). Thus, the shift in how businesses in the 21st century ought to have to thrive in this environment. Furthermore, Vial suggests that for this to be a possibility, the Information Technology (IT) and the rest of the business functions must move away from the traditional silo approach for this shift to occur (2019). Hence, the need for embracing digital transformation so as achieve organisational success.

While unlocking endless opportunities for businesses, customers have also been empowered and their expectations on customer experience raised. Although customer experience (CX) is no foreign concept, the shift from a transactional relationship to a more connected experience in this digital age demands more from

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businesses. This is part of the concept of digital disruption. This concept draws on changes brought about by digital technologies, which take place at a speed and magnitude that interrupt traditional ways of value creation, social norms, business models and thought processes (Curley and Salmelin, 2018). It comes as no surprise that recent research has found 41% of organisations identify improving CX as one of the three drivers for digital transformation (451 Research, 2018). Hence, the widening gap in the customers' expectations and actual experience.

According to Schwager and Meyer (2007) and Mishra, Singh, Rana, Nripendra, Dwivedi and Yogesh (2017), customer experience is the inner and personal response customers have when they interact with the business. Retailers value this, as they must provide goods and services to their consumers at a given time and place (Chavez, Yu, Jacobs, Feng and Mengying, 2017). Otherwise, the business risks losing their customers to competitors and face bad publicity. Traditionally, Cx has been seen as just a perception of the organisation, while the product or service is the primary focus. With the various departments viewed as silos and retailers being product focused. This notion needs to shift given the increased customer expectations, digitalization of the business and Information Technology (IT) landscape.

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This shift is of paramount importance as, currently, most online retailers fail to provide a smooth and unified customer experience (Wright, 2018). Forbes conducted a survey identifying that 86% of customers would pay more for an improved customer experience, yet 1% state suppliers already meet their needs (Crandell, 2019). From as far back as 2005, this gap has been apparent as a survey by Bain and Company stated that 80% of CEOs felt they provide superior customer experiences, but only 8% of their customers concurred (Allen, Reichheld, Hamilton and Marke., 2005). The need for a better customer experience is even more apparent today (de Bellis and Venkataramani Johar, 2020).

Digital technology boasts capabilities to enhance customer experience. This hinges on a worldwide makeover of the process with digitalization and the Internet

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(Tjahjono, Esplugues, Ares, Pelaez, 2017). This is a welcome transformation as currently, there is a failure to meet the customers' need for a seamless process. The customer expects that the business finds them where they are at. In this digital age, the customer expects immediate responses, omnichannel services, and more tailored interaction with the business (Sutherland, 2017). Where previously a shop assistant going into the storeroom to check for a product was acceptable, in the digital age, if a Web page takes a few extra seconds the load then the customer closes that page and shops elsewhere. The challenge of replicating an in-store experience on a digital platform is apparent.

With the advent of digital technology, retailers can enhance the customer's experience by transitioning to DCx. Experiences are seen as differentiators that companies leverage on in this day and age. Previously, being the most affordable or popular company was enough, but not in this digital age plagued by instant gratification and empowered customers (Sutherland, 2017). The customer also expects businesses to know them from a marketing, sales and service expectations perspective. This challenges businesses as they are accustomed to their traditional way of operating. The customer experience journey should enable the customer to do what they need to do, when they need to do it and how they want to do it. Careful consideration must be made as online retailers consider the implications of DCx in a bid to enhance customer experience. Moreso, in a developing country and a city like Cape Town, which offers a diverse sample group that focused on residents only as visitors, would have skewed the study.

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1.2. Background to DCx

DCx embraces the shift of technology to enhance customer experience. According to Schuchmann and Seufert, to best engage customers at each touchpoint along the customer journey the capabilities digital technology must be utilized (2015). This is due to the constant evolution of customer needs and the fact that retailers can no longer afford to remain stagnant. To meet the convenience need that customers have, traditional Cx is inadequate. DCx brings with it an enhanced customer experience that meets the needs of the customer. Curley and Salmelin further state

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that failure by traditional organisations in meeting the customers' expectations opens the door for digital disruptors to fulfil the customer need gap by giving customers what they seek (2018). This can only be achieved as the economy is digitalised.

1.3. Digital Economy

The strong interconnection of innovations is set to digitize the economy. Digital economy can be defined as an economy based on information technology (IT) and the internet (Vaidya, Ambad and Bhosle, 2018). A previous study showed that transformation in industry and infrastructure are driving the digital economy as people adapt to this new way of life (Schneider Electric, 2019). The technological shift has driven a shift to digital products and services (Naveed, Watanabe and Neittaanmäki, 2018). The digital economy is disrupting the status quo, and its implications can already be seen as customers demand more of online retailers.

1.4. The Digital Customer

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The digital age has empowered the customer vastly. The need for a seamless and memorable experience is apparent on all channels. According to Sutherland (2017), consumers are very knowledgeable about companies and expect the same in return, delivering solutions across all touchpoints. Hence, the digital customer is willing to pay more if there is an enhanced customer experience. The customer expectation is valid as each customer has a digital footprint that they leave. Thus, online retailers knowing their customer, taking heed of the market and industry is pivotal to success (Sutherland, 2017). Hence, the company itself must be open to digital transformation and strategize accordingly.

1.5. The Digital Organisation

Online retailers ought to be open to digital transformation as this will be associated with their brand. Digitalizing elements of the customer journey yields a superior customer experience over competitors. To achieve this, the retailer must be open to

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technology and new business models to meet customer expectations (Schuchmann and Seufert, 2015). This enables the customer to be met in their moment of need and also on their channel of choice, given the rapid changes caused by new entrants who are disrupting the market (Kumar,Lange and Silen, 2016). However, it is essential that the retailer recognizes differences in consumer needs and what they really want. According to Kumar, Singh and Silen (2016), there is a risk of investing in the wrong area if customer requirements needs are not elicited correctly. An example would be blanketing all customers as wanting the cheapest shipping where some may rather have convenience or same-day delivery when it comes to e-commerce. Hence, the need to align the digital solutions in a manner that enhances their individual customer experience.

1.6. Related studies on digital enhancements

Technology has been seen as a tool retailers have used to improve their customer experience. The use of customer feedback saw Maklan, Antonetti and Whitty (2017), draws learnings from the bank of Scotland using customer feedback. While Rodriguez, Campdesuner, Vidal and Vivar (2017), used Big Data and lastly, Cao (2018), utilized e-commerce platforms to research on fashion retailers. These studies drew on models that measured external customer satisfaction. This enabled them to optimize their processes thus, improving their service delivery. This allowed the authors to find ways to add value from the view of the customer and enhance the customer experience.

Embracing digital technology can also be as simple as how the National Health Service in the UK improved no shows by over 40% by sending patients notifications of their appointments (Sallis, Sherlock, Bonus, Saei ,Gold, Vlaev and Chadborn*et*, 2019). However, it must be noted that technology is not a solution, but rather a tool to enhance customer experience. This shows that although previous studies highlighted the need for technology to enhance customer experience, this was not done in isolation as customers had to embrace the changes. This was a shortcoming that was identified.

In undertaking this study, it was apparent that both the technological and people aspect had to be considered in the use of digital technology to enhance customer

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experience. This gap had been identified in prior studies and provided ample motivation for the need of this study.

1.7. Statement of the Research Problem

Customer expectations have since risen in the age of digital transformation and omnichannel platforms, this sees consumers demand an enhanced DCx from online retailers. However, most businesses traditionally operate in silos. The challenge comes in bringing customer data together and then deriving value from it as it becomes more complex and richer. Although there are many of digital solutions available, the challenge arises in getting the customer to embrace the available solution. Hence, the framework is required to outline the factors which affect the use of these digital technologies. These factors specific to a city in a developing country where barriers to use of technology may not be the same as that of a city in a different country.

1.8. Primary Research Question

What are the factors affecting Digital Customer Experience in online retail industry in Cape Town?

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1.9. Location of the study

The study will be conducted on online retailers used by customers in Cape Town.

1.10. Research Objectives

- To explore digital touchpoint experience factors that affect the adoption of digital customer experience to enhance customer experience.
- To explore digital service experience factors that affect the adoption of digital customer experience to enhance customer experience.
- To explore digital brand experience factors that affect the adoption of digital customer experience to enhance customer experience.
- To explore digital experience platform factors that affect the adoption of digital customer experience to enhance customer experience.

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- To propose a framework for Digital Customer Experience in a developing country.

Table 1: **Research Sub-Question, Method and Research objectives**

Research question: What factors affecting Digital Customer Experience in an online retail industry in Cape Town?		
Research Sub-Questions	**Methods**	**Objectives**
1) What digital touchpoint experience factors affect the adoption of digital customer experience to enhance the customer experience?	Survey	To explore how digital touchpoint experience factors affect the adoption of digital customer experience in a bid to enhance customer experience.
2) What digital service experience factors affect the adoption of digital customer experience to enhance the customer experience?	Survey	To explore what digital service experience factors affect the adoption of digital customer experience.
3) What digital brand experience factors affect the adoption of digital customer experience to enhance the customer experience?	Survey	To explore how digital brand experience factors affect the adoption and enhancing of digital customer experience.
4) What digital experience platform factors affect the adoption of digital customer experience to enhance the customer experience?	Survey	To explore what factors affect digital experience platform adoption to enhance customer experience.
5) What framework can be populated in proposing a DCx framework in a developing country?	Data Analysis	To propose a framework for Digital Customer Experience in city within a developing country.

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1.11. Contributions of the Study

This study seeks to identify factors affecting the adoption of DCx in a developing country with Cape Town, South Africa being the focus. This research seeks to contribute to the academic body of knowledge and in retail practice. For retailers, the findings of this study may be used as a decision-making aid when considering enhancing the DCx. This study seeks to conceptualize a framework for enhancing the DCx. Furthermore, the findings may contribute to the academic body of knowledge and be used as a source in other studies.

1.12. Preliminary chapter Summary

- **Chapter 1:** This chapter discusses the overarching introduction of this study. This is followed research problem, research question, objectives, sub-questions and methods.
- **Chapter 2:** This chapter focuses on the literature review of previous literature related to the study. It provides insight of different authors on components of DCx.
- **Chapter 3:** This chapter outlines the research methodology, approach and design selected for use in this study to get answers to the research objectives. The study's data collection methods are discussed in detail in this chapter as well as the sampling procedure and the data analysis methods.
- **Chapter 4:** This chapter details the findings of the study post the analysis using the SPSS tool. The chapter also presents, interprets and discusses the findings of the study.
- **Chapter 5:** This chapter presents the conclusions based on the outcomes of the study. These conclusions are drawn based on outcomes from the analysis of the findings. Finally, a conclusion for the entire research study is given.

1.13. Chapter Summary

This chapter explored the factors affecting DCx in online retail industry in Cape Town, South Africa. A city in a developing country in Southern Africa. It began by providing background to the problem of the digital era. It then specified the

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complexity of the digital era from an economic, organisational and customer point of view. This was followed by a review of related studies. This was then followed by the full definition of the research problem, research question, objectives, sub questions and methods to be used. Finally, the contributions that the study seeks to make in practice were provided with a summary for each chapter depicted as a preview to the study .


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CHAPTER 2: LITERATURE REVIEW

2. Chapter Introduction

In this chapter, existing literature on Customer Experience (CX) in the retail industry will be reviewed. This will be done by focussing on the keywords denoted in this study to find relevant literature. The purpose of this is to ensure that the literature enables the attainment of the set study objectives. The review further explores existing literature on the available technology and the factors to consider in a South African (SA) context. This is done by drawing on statistics and trends in the country, with focus on Cape Town where the study will be conducted. Furthermore, the framework to be adapted for this study and hypothesis are also included in this chapter.

2.1. Introduction

The advancement of digital technologies (Industry 4.0) at such a rapid pace widens the gap between what organisations currently offer and the 21st century customer expectations. To better understand this phenomena, existing literature on how digital technology has transformed the traditional customer journey is brought to the fore. This is done by exploring existing literature on how DCx drives superior online shopping experiences. Hence, the ability to draw conclusions based on the existing literature and perceived gaps.

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2.2. Digital Technology

Industry 4.0 is said to have originated in Germany to optimise processes. It is also known as Internet of things or smart industry (Tjahjono, Espluguesb, Arec, Pelaez and Pelaez, 2017; Bukova, Brumercikova, Cerna and Drozdiel, 2018; Kovacs, 2018). This 21st century invention has brought with its innovation that has enhanced customers' shopping experience. Its disruptive nature forces firms to rethink the design of how they get products to the customer and their level of satisfaction (Alicke, Rachor and Seyfert, 2016). Leveraging off technology is what

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makes retailers stand out and satisfy the ever-increasing demands of the 21st century customer. Industry 4.0 brings with it numerous benefits which make businesses more successful (Yesner, 2017; Cheng and Foley, 2018; Naveed, Watanabe and Neittaanmäki, 2018). Thus, retailers hinge on the digital economy.

2.3. Digital Economy

Retailers have been pushed to be innovative as online sales drive the digital economy. Digital economy can be defined as an economy based on information technology (IT) and the internet (Vaidya, Ambad and Bhosle, 2018). The Global Digital Transformation Benefits Report showed that transformation in industry and infrastructure are driving the digital economy as people adapt to this new way of life (Schneider Electric, 2019). The technological shift has driven a shift to digital products and services (Naveed, Watanabe and Neittaanmäki, 2018). The digital economy is disrupting the status quo and its implications can already be seen as customers demand replication of the in-store experience online. Hence, the challenge from the 21st century customer.

The digital age has empowered the customer vastly. The need for a seamless and memorable experience is apparent on all channels. According to Sutherland (2017), consumers are very knowledgeable about companies and expect the same of companies in return, delivering solutions across all touchpoints. Therefore, the digital customer is willing to pay more as long as there is an enhanced customer experience (Crandell, 2019). The customer expectation is reasonable given that each customer has a digital footprint. Thus, online retailers knowing their customer, taking heed of the market and industry is pivotal to success (Sutherland, 2017). Hence, retailers must be open to being digitally disrupted and be open to new ways of working to provide an enhanced customer experience.

2.4. Customer Experience

Prior to enhancing customer experience, it is vital that one thoroughly defines customer experience. It is an elusive concept that can be seen by how previous authors have defined it. The traditional view is that customer experience originates

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from interactions between the consumer and product which then lead to a response (Brakus, 2001 and Schmitt, 2003). Gentile, Spiller and Noci (2007) sum up customer experience as a personal experience at different levels which include rationality, emotion, sensory and physical. These views are summed up by Klaus and Klaus and Maklan (2008), who suggest that customer experience is multi-faceted, with product and emotional constructs. These traditional views have set a foundation for customer experience in the 21st century.

Customer experience is seen as an improvement of how services are delivered to the end-user. This must be done holistically as studies have suggested. Customer experience is an all-inclusive and multidimensional construct that examines the customer's emotional, behavioural, cognitive and social responses (Huovila, 2017). It is seen as a measure of the customers' actions toward the retailer and is seen across all the 4 P's of marketing, being product, place, price and promotion (Pansari and Kumar, 2017). In an era where customer needs are constantly evolving, The Harvard Business Review (2008), defines customer experience as the combined interactions a customer has with a company. This definition was futuristic as digital technology brought about a new dimension of DCx, which has become a buzzword (Scheer, 2017). Hence, customers now interact with businesses differently.

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2.5 Digital Customer Experience

There is massive interest from online operating retailers for a further understanding of the latest concept called DCx. In this networked and highly digital environment, customers can easily share their experiences which may hamper or boost competitiveness (Christophe and Dufft, 2017). A single negative experience can induce significant damage on sales. Hence, DCx is seen as the next competitive ground for businesses across the globe (Klaus, 2014). However, Chatzopoulos and Weber (2018), argue that merely focusing on DCx is risky as customer experience goes beyond what is experienced on digital touchpoints. Therefore, retailers must not solely rely on DCx as there is other factors to consider. Furthermore, Christophe, Chalons and Dufft (2017), state that in addition to transforming customer-facing services like marketing and sales through digitalizing the customer

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experience, a further transformation involving the back-end processes is fundamental.

It is essential that retailers are open to the digital era. Creating an environment where DCx thrives goes beyond digitizing merchandise and services (Danneels and Viaene, 2015). A vital aspect to consider is that creating DCx depends on whether the culture of the organisation embraces digitalization (Huovila, 2017). This will involve having employees with the right skills, attitude and innovation culture (Danneels and Viaene, 2015; Liere-Netheler, Packmohr and Vogelsang, 2018). Furthermore, Forbes state that although the 21st century customer seeks connection and progress, the strategy and operations of the retailer are the other aspects that must support the co-existence of DCX (Morgan, 2020).

DCx can be seen as a set of digitized multi-actor interactions that fortify a brand in the digital and social realms of the customer experience (Holmqvist, Wirtz and Fritze, 2020). Silalahi and Rufaidah (2018), break down DCx in the telecommunications industry as digital service experience, digital image experience, digital touchpoint experience and digital broadband experience. These factors will be adapted to be suitable for this study as they are overarching constructs in the digital age of online retail industry. This is due to the impact of digital technology across all sectors. The literature suggests that with customers now interacting with retailers through multiple channels and touchpoints, customer experience and behaviour are evolving (Chatzopoulos and Weber, 2018). Therefore, understanding DCx is vital as it is an emerging research area which if leveraged on, will be a competitive advantage for any retailer. This can be unpacked from each of the four identified constructs, namely, Digital touchpoint experience, Digital service experience, Digital Brand experience and lastly Digital experience platforms.

2.6 Digital Touchpoint experience

H1. Digital touchpoint experience enhances customer experience.

2.6.1. Drivers for digital touchpoints

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The digital touchpoint experience was identified as a salient construct in this study. The importance of understanding how the various touchpoints influence customer experience cannot be underestimated (Silalahi and Rufaidah, 2018). The availability of multiple touchpoints for the 21st century makes channel integration important. Chanel integration is the retailer's ability to provide customers a seamless buying experience across all channels which creates a superior customer experience (Lemon and Verhoef, 2016; Lee, Chan, Chong and Thadani, 2019). Channel integration must allow for an exchange of data across channels otherwise risk misalignment (Mirsch, Lehrer and Jung, 2016). A typical example is misalignment between the online and physical store channels which retailers must avoid. All available digital touchpoints must give real-time feedback for customers to draw positive feedback and enhance overall profitability (Kumar, Rajan, Gupta and Pozza, 2019). Online retailers must create interactive experience environments to allow the customer to navigate effortlessly and successfully through multiple touchpoints (Huovila, 2017). Chatzopoulos and Weber (2018), conclude that touchpoints form an important platform, which impacts customer's journey and its outcome in the overall customer satisfaction. Hence, the importance of the digital touchpoint experience of the user.

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It is vital that retailers have real-time interactions with their customers to meet their tailored needs and influence the purchase decision (Faulds, Mangold, Raju, and Valsalan 2018). This is because customers need to know product availability, prices and promotions in their moment of need. It is an area that previously has seen retailers not meet customer expectations (Islam and Rahman, 2017). This comes as no surprise due to the ever-increasing touchpoints. However, this study will focus on three digital touchpoints being websites, social media and mobile applications.

2.6.2. Websites

Websites are seen as the cornerstone for the modern retailers. They are one of the few digital touchpoints that can be entirely controlled by a retailer (Melewar, Foroudi, Gupta, Kitchen and Foroudi, 2017). Primarily, the goal of the website is to make potential customers aware of the retailer and what products are available

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for sale (Huovila, 2017). Furthermore, Huovila (2017), states retailers capture data of who has visited the website and draw up analytics of activity while on the site, from how long the customer stayed on the website, all the way to what products they like. This is to meet the demands of the 21st century customer who spends more time on their mobile hence websites must be scalable. Thus, when the customer revisits the site again, they expect the content and functions to be combined and personalized to cater for their need to have a positive DCx (Earley, 2014). This will potentially lure the customer to repeatedly visit the website and hopefully be converted from just being a browser to being a buyer. Hence, the importance of the website for the modern retailer.

Websites also provide an essential tool that allows customers to leave their reviews describing their shopping experience for others to see (Kawaf and Istanbulluoglu, 2019). It also allows for the retailer to respond to the comments. Hence, a website is seen as a collaborative touchpoint used to manage and provide an integrated communication channels to enable customer interaction (Cruz-Jesus, Pinheiro and Oliveira, 2019). Shavitt and Barnes (2020), further state that culture is a factor that influences how consumers interact with a website and its functionality. Service experiences have migrated online, mainly through mobile websites as portable devices are constantly on hand and connected to the internet, which has made them ideal as digital touch-points (Chung, 2016). In the 21st century, while websites remain essential, social media and mobile integration are vital as customers spend most of their time there.

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2.6.3. Social Media

Social media is traditionally seen as a collection of digital platforms that permit users to create and exchange (Kaplan and Haenlein, 2010). Some common examples include Facebook, Twitter, Instagram, YouTube and Snap Chat (Eigenraam, Eelen, van Lin, and Verlegh 2018). Social media does not necessarily replace other touchpoints, but rather supports and directs customers to the relevant touchpoint (Hollebeek, 2019). However, due to its low cost, ability to reach new customers and ability to conduct sales, small businesses have been seen to use it

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instead of a formal website that is likely to be more costly (Beckers, Doorn and Verhoef, 2017).

Social Media has grown exponentially, becoming a powerful touchpoint that accelerates the distribution of data about new merchandise and services, enabling retailers drive brand attitude, manage brand to consumer relations and create value (Souiden, Ladhari and Chiadmi, 2019). Statistically, 2.48 billion people across the globe (a third) were active Social Media users (eMarketer, 2017). Furthermore, digital consumers are said to be spending an average of 2 hours and 24 minutes daily on social networks and messaging applications (Global Web Index, 2019). Engagement on Social Media goes beyond the retailers and customers, it extends to between customers themselves (Beckers, Doorn and Verhoef, 2017; Hollebeek, 2019). Thus, it's grown in recent times to be a powerful touchpoint.

Table 2: Referral Sites

Sites by how many other sites drive traffic to them	**Referral Sites**
Facebook.com	3 400 000
Twitter.com	2 400 000
YouTube.com	1 500 000
Instagram.com	965 700
LinkedIn.com	930 300

Source: facebook.com Competitive Analysis, Marketing Mix and Traffic

As noted from the above Table 2, social media is a powerful touchpoint that is now seen as a standard requirement for any business. This can be seen by over 2.5 million businesses paying to use Facebook advertising and 75% of brands paying for post promotion (Smith, 2016). Social media websites now receive the highest web traffic worldwide (Alexa, 2020) and one-third of online time is spent on social media (Global Web Index, 2019). In the new era of social media relations, the need to manage customer relationships more efficiently has seen the use of detailed and accurate analysis of consumer data (Cruz-Jesus, Pinheiro and Oliveira, 2019). However, Kawaf and Istanbulluoglu (2019) state that in the fashion industry, online

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shopping experiences and Social Media marketing proved ineffective in comparison to other industries.

Mobile devices have become so popular and are powered by mobile applications which unlock a world of new possibilities. The massive adoption of smartphones gives customers easy access to information and retailers can engage their customers dynamically (Grewal, Roggeveen and Nordfält, 2017). Customers are primarily near their mobiles most times. This has motivated retailers to develop mobile applications that enable direct them to communicate with the consumer with increased proximity (Hansen and Sia, 2015). In the background, they also capture and analyse data generated through customer interactions with their mobile application, providing the retailer insights to enhance the customer experience (Vial, 2019). Consumers are heavily reliant on their mobile devices, so the ability to purchase goods and services on them will see retailers capitalize on this by developing stand-alone mobile applications (Vial, 2019). However, the application must be easy to use. A simple, intuitive and user-friendly application is required especially on the customer front end to enhance their user experience (Christophe, Chalons and Dufft, 2017). By providing personalised content and access to the application, then an improved DCx is seen (Huovila, 2017). These are vital factors given the prevalence of smartphones and their mobility.

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Scheer (2017), suggests connecting these applications with devices via Internet of Things (IoT) technologies or with other users through social media, creating communities to enhance the customer experience. While Inman and Nikolova (2017) elaborate further, suggesting embedding newer scanning technologies like self-checkout and scan-and-go within the mobile application. This would extend customers' capabilities should they decide to shop in-store. This also gives shoppers increased autonomy and the retailer could also make use of push notifications through the application, prompting them of new offers or payment reminders (Sahu, Deng and Molla, 2018; Shavitt and Barnes, 2020). Thus, allowing retailers to collect data and monitor customer behaviour while enjoying an enhanced user experience.

Mobile applications like WeChat and LINE are good examples of integrating commerce. They allow consumers to carry out a variety of transactions, from

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booking taxis to paying for restaurant bills and products in-store (Global Web Index, 2019). However, customers are not always comfortable with transacting online. For customers to trust digital mobile applications, they need confidence that the environment is secure, the existence of data integrity and reliability before they are accepting of the touchpoint (Schweer and Sah, 2017).

This research does not cover all the available touchpoints but focuses on websites, social media and mobile applications. Scheer (2017), notes that, customers demand a seamless, synchronised buying experience across all channels and devices. Furthermore, that this is because there are a wide variety of digital and non-digital channels on which customers interact with retailers for information and eventually to make a purchase. These touchpoints must therefore be integrated in real-time as buying decisions are made on the based on the services that come with a product (Christophe, Chalons and Dufft, 2017). Hence, the literature suggests the importance of the digital touchpoint experience in enhancing the DCx.

2.7. Digital service experience

H2. Digital service experience enhances customer experience.

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2.7.1. Customer Engagement

The digital age is not to say that there is no more scope for in-store purchases. While in the previous section, much emphasis was placed on digital touchpoints, this is not to say customers purchase products solely online. As Lee, Chan, Chong and Thandani (2019) concur, the 21st century customer shops across channels. A recent IKEA (UK) report indicated a 31% rise in online sales post making products accessible across the various touchpoints, including in-store purchases (Rigby, 2016). This bodes well for retailers but presents the challenge of engaging customers seamlessly across all channels (Blackmon, 2016; Huovila, 2017; Vial, 2019). Customer engagement is a vital component in-store that can persuade or deter a customer from completing a purchase and even more challenging to replicate online (Cao, 2018). This study will utilize the narrowed definition by Beckers,

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Doorn and Verhoef (2017), which focuses on customer engagement as a value-creating role of the customer.

A study by Sahu, Deng and Molla (2018), identified customer engagement as an essential capability in digital transformation. As times have moved on, so has the way customers and retailers engage. As the report by Delloite (2019), alludes to, the rise of the internet has seen engagement become two way as retailers seek out email addresses and mobile numbers to connect to the customer. Based on the customer's behaviour, retailers can engage with them through tailored marketing, taking the initiative to engage and use integrated offline and online channels (Sahu, Deng and Molla, 2018). Furthermore the availability of multiple digital touchpoints retailers can monitor their service performance and can provide push notifications through applications, reminding customers of special offers or payment deadlines (Sahu, Deng and Molla, 2018). Before the internet era, it would have been unthinkable that customers could be reached effectively with no human interaction. However, Gartner forecasted that by 2020, customers will manage 85% of their relationship with the retailer without human interaction (Gartner, 2011). Hence, the importance of retailers being able to engage customers online.

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It is vital that the customer is engaged in a manner they deem acceptable. Some customers may only feel comfortable sharing personal information with particular retailers as they do not want to risk their mailboxes being flooded by "junk email" (Fridh and Dahl, 2019). The objective of customer engagement is to foster customer loyalty, trust and to build an emotional bond with the customer through the provision of consistent and personalized customer experiences (Huovila, 2017). Failure to doing so can see customers dissatisfied, as indicated by Salesforce's State of the Connected Customer Report which indicated that 50% of customers would switch brands if their needs are not anticipated (Mcginnis, 2016). This shows how the 21st century customer has high expectations of the retailer. Beyond this, the digital era is unforgiving as customer engagement can have a dark side. McDonald's Twitter campaign, which was set to promote positive word-of-mouth, was transformed into a platform to bash the chain (Beckers, Doorn and Verhoef,

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2017). Hence, customer experience must be viewed holistically as a value creator, customer relationship builder and also a risk the retailer must be willing to take to enhance the DCx (Beckers, Doorn and Verhoef, 2017).

2.7.2. Co-creation

The rise of engagement online allows the customer to give insights on products and services. This gave rise to a concept called co-creation. This is a practice that enables the retailer to utilize both external and internal knowledge to be innovative incrementally dependent on available digital technologies (Torres de Oliveira, Indulska, Steen and Verreynne, 2020). These digital technologies let customers co-create value by crafting and tailoring products to their specifications, redefining delivery and by sharing product reviews, they raise awareness for other customers (Verhoef, Broekhuizen, Bart, Bhattacharya, Qi Dong, Fabian, Haenlein 2019). In his study, Huovila (2017), recognized that providing experiences rather than solutions is more valuable to customers hence more businesses are shifting to co-creating value with customers. This concept allows the online retailer to provide value for themselves and the customer through co-creation.

Using the value co-creation model, companies need to build experience environments that allow for co-creation of new experiences and stimulate dialogue (Huovila, 2017). As found in previous literature, social media has been found to address this. Torres de Oliveira, Indulska, Steen, Verreynne, Martie (2020) concur that to build an environment that fosters co-creation, social media platforms must-have features to enable knowledge transfer in an efficient and effective manner. Social media is an extension of a relatively simple means of co-creation where digital platforms which allow customers to engage in word-of-mouth or write product reviews like Trip Advisor or share inventive ideas on crowdsourcing platforms like Dell IdeaStorm (Verhoef, Broekhuizen, Bart, Bhattacharya, Qi Dong, Fabian, Haenlein 2019). Digital platforms are extensive in their service offerings and allow for this collaborative effort.

Additionally, co-creation implies that integration between internal and external partners which includes employees, customers, digital technology and information enables the creation of personalized experiences (Huovila, 2017). These platforms also allow customers to shift roles, such that they become suppliers, online in

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marketplaces like Airbnb and eBay, or be converted to co-producers as they design, modify, or create products, for example Dell PCs, NikeID, Threadless (Verhoef, Broekhuizen, Bart, Bhattacharya, Qi Dong, Fabian, Haenlein 2019). Hence, the shift in customer roles to producers or suppliers comes about due to digital disruption, which has seen digital platforms foster co-creation and collaboration between the online retailer and their customers.

2.7.3. Service experience

Service delivery and user experience are vital in how the customers experiences are shaped. The service experience must provide efficiencies and benefits to the customer. In a study by, Moreno-Munoz, Bellido-Outeirino, Siano and Gomez-Nieto (2016), which found the website as one of the most preferred channels, an example of how successful applications on smartphones allowed customers to access bill statements and utilize a self-service facility to pay that bill. This provided time savings and a seamless means for the customer to check or pay their bill. Hence, the role of the online retailer is to create and then provide an enabling environment for an enhanced customer experience (Pansari and Kumar, 2017). This will increase profitability as prior studies in e-retailing and self-service retail technology have proven that good customer experience leads to repeat sales (Roy, Balaji, Sadeque, Nguyen and Melewar 2017). It is therefore in the retailer's best interests to ensure that customers have a desirable experience.

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The users experience determines what the service experience will be. A customer review by Delloite showed that investing in the right technologies produced a better user experience which in turn enhanced customer experience (Delloite, 2019). In the age of digital disruption, these technologies must improve or simplify the lives of the users and, most importantly, be built with them in mind, not solely on the business model (Curley and Salmelin, 2018). This must be the methodology employed as the customers are the end-users and the custodians of the digital interfaces. The importance of User experience designers must not be under estimated, as they must adapt to the ever-changing customer preferences based on the insights provided (Huovila, 2017). As mentioned earlier, there are multiple channels available for customers to use and these must all be aligned and integrated.

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This is vital as multichannel integration will provide value to firms as they create a consistent experience across all channels for their customers (Hossain, Akter, Kattiyapornpong, and Dwivedi 2019). This will enable customers to be self-sufficient and for internal stakeholders to have an improved user experience and productivity (Shivakumar and Sethii, 2019).

Online retailers seek to provide their products with the best possible service accompanied by it. With the wide range of channels and touchpoints, choosing the most convenient one must be left up to the customer (Shaikh, Alharthi and Alamoudi, 2020). Shivakumar and Sethii (2019), examined the use of Digital Experience Platforms in banking these are seen to provide reliable, holistic and engaging user experiences which have enhamced online customer experiences. While the industries may differ, the stated fundamentals remain the same as the need to match the service provided with the quality of the product being sold. This is however a continuous process of improvement to meet customer needs which should also be communicated. There is no use in improving an application but not informing the user. Hence, Shaikh, Alharthi and Alamoudi (2020), stated that customers should be made aware when a new feature is added or if a service is removed or altered on the mobile banking app in their study. This will undoubtedly allow for the customers to get the best out of this service as they are well informed and educated about its advantages, functions, benefits and capabilities, which will most likely see its usage improve. Therefore, service experience is a vital component in using digital technologies to enhance customer experience.

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2.7.4. Accessibility

With the growth of online retail, its accessibility must be considered. Online retailers must use accessible channels which are appropriately integrated and widely adopted to leverage fully on a multi-channel strategy which, when done well, is known as omnichannel retailing (Torres de Oliveira, Indulska, Steen and Verreynne, 2020). This study will focus on the accessibility of retailers online across the touchpoints of websites, social media and mobile applications. Damian and Jones (2008), state that the web design must be equally accessible to all in terms

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of its functionality and information. This ensures that it is of use to a wider cross-section the target market as possible and that the experience is seamless. This includes functions for those who are disabled, which include images or multimedia for the visually impaired, text to speech or even Braille. This will be dependent on the nature of your site and target market. What is often overlooked is ensuring that the text on the site and how it renders to the user's browser may have a significant impact on the effectiveness of the site. With the above in mind, systems should not solely be built for exceptions and although accessibility is vital, the practicality of the solution should also be considered.

Social media and mobile applications represent new leaders in building valuable customer relationships and easily accessing information. When social media is used effectively, better engagement with customers is achieved and there is potential to monetize the social media usage (Souiden, Ladhari and Chiadmi, 2019). Its accessibility allows customers to utilize it as a source of information about businesses, their products, services and weigh in with comments about their experience (Torres de Oliveira, Indulska, Steen and Verreynne, 2020). The usage of social media includes checking ratings, product or service promotion, asking questions, sharing coupons or advertisements, photos and videos. The same can also be said about mobile applications. The widespread adoption of smartphones has equipped the customer with information on the go, therefore customers allowing them to constantly access information and for retailers to engage in dynamic conversations with them (Grewal, Roggeveen and Nordfält, 2017). Above all, it is vital that the content intended for consumption for public consumption is made accessible to them (Kawaf and Istanbulluoglu, 2019).

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2.7.5. Security

Security is a critical factor in all aspects of retail shopping especially online. The specific security being referred to in this study is cybersecurity. Hossain, Akter, Kattiyapornpong and Dwivedi (2020) refer to security as safety when using all the different channels availed by a retailer. In the context of the online retailer, this factor is critical for customers and maybe a deterrent. This is because security is a significant influencer for customers who use online retail platforms (Bhattacharya

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and Anand, 2019). Customers enter private information online via websites and mobile apps which makes them vulnerable. The security of both offline and online channels is vital , however, online security is more complex as it requires websites and mobile applications to be free of bugs or malware (Hossain, Akter, Kattiyapornpong and Dwivedi 2020). Websites and mobile applications are often integrated into banking systems. Therefore, security must encompass signing into websites, data encryption, user authentication, fraud detection, adaptive security and data security (Shivakumar and Sethii, 2019). Hence, it is a crucial factor that the online retail shopping environment is kept secure.

In Shivakumar and Sethii's (2019) study in the banking sector, experience platforms must be integrated with security systems to provide secure interfaces for customers. If these measures are not adhered to, past studies reflect that there might be potential issues related to the use of digital technologies, more so in the realm of security (Vial, 2019). These issues include cybercrime, identity theft and exposure of banking details. A good example is the data breach at British Airways in 2018 which Forbes reported to have led to a fine of USD$ 229 million after 380 000 customers' booking transactions were compromised, as well as critical details like card number and CCV code (O'Flaherty, 2018). This does not bode well for the customer's perception of the entity at hand and possibly a loss in sales. This caused an uproar, a loss of trust and exposed loopholes in the systems of British Airways, which put their customers at risk. Consequently, customers feel at ease when shopping from digital platforms that guarantee secure payments and provide customer support (Hånell, Rovira, Tolstoy and Özbek, 2019). This is also supported by Fridh and Dahl (2019), who state that security builds trust thus leading to increased purchase intentions. Hence, the importance of security systems to ensure a secure interface for customers.

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2.8. Digital Brand Experience

H3. Digital brand experience enhances customer experience.

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2.8.1. Trust

This is a vital factor that is a by-product of security. Trust will affect customer behaviour and actions as it is difficult to measure otherwise. When a customer feels that there is a relationship between them and the company, this will most likely increase the level of trust (Fridh and Dahl, 2019). This trust stems from various external factors which will drive customer behaviour. The ability to show that the company understands the relevant needs and are willing to resolve them, builds trust and between the retailer and the customer (Huovila, 2017). This ensures that the customers feel valued and appreciated, which yields trust. By re-enforcing the trust that customers have in the business, the retailer benefits from customers engaging in a more profound manner which will see them share more information about themselves (Huovila, 2017). As Fridh and Dahl (2019) stated, it is imperative that consumers are treated right to build trust towards the brand. Hence, by being made to feel secure, the customer begins to trust more.

Building emotionally bonding customer relationships involves constantly providing consistent and tailored customer experiences. This seeks to create a seamless, omnichannel customer experience where customers can interact, complete purchases and also get support consistently all the time and thus building trust amongst other elements (Huovila, 2017). Huovila (2017), mentions loyalty and passion as additional factors to trust. The more a customer trusts a company, the more they are willing to share personal information (Fridh and Dahl, 2019). This additional information allows the business to learn more about the customer and better serve them. This also allows for deeper insights about the customer to personalize their experiences and meet their expectations. Preferences for customers are evolving with a greater reliance on digital technologies and trust advice derived from online communities (Watanabe, Naveed and Neittaanmäki, 2018). Through recommendations by others, the trust in companies can increase, probably because the consumer trust the public opinion (Fridh and Dahl, 2019). Thus, it is essential that each customer is met with a memorable experience so that they leave positive reviews. Furthermore, a well-nurtured relationship contributes to increased consumer trust. (Fridh and Dahl, 2019)

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2.8.2. Loyalty

Loyalty comes about once the customer can trust the retailer. Trust, as explained earlier, must be created by the retailer and the customer experience must be pleasant to achieve this. Often the Marketing department ensures that the customer experience improves customer satisfaction and loyalty to positively impact the bottom line (Mbama and Ezepue, 2018). It must be kept in mind that service quality impacts customer satisfaction and subsequently leads to loyalty (Mbama and Ezepue, 2018). Huovila (2017), states that customer loyalty drives customer satisfaction and in turn, these customers are naturally more loyal to the brand. Therefore, encouraging customers to stay longer with the retailer, spend more and consequently more likely to recommend friends. By offering more value to customers, it enhances their experiences, increases satisfaction and loyalty hence the business is perceived as adding value (Wedel and Kannan, 2016). Thus, loyalty is derived.

While some customers buy occasionally, there are other highly satisfied customers who are incredibly loyal and are the most profitable. Huovila (2017), poses that meeting the specific needs of each customer, maintaining positive relationships, increasing customer satisfaction and most importantly offering additional services helps to build loyalty in the relationship. In building loyalty, acquiring the customer is merely the start of the journey. It is vital to ensure that the customer is consistently given the service or product they expect or more. A study by Huovila (2017), found that existing customers were perhaps the most loyal and profitable ones. Therefore, putting an effort towards keeping them satisfied is vital. It comes as no surprise that consistently achieving customer satisfaction has become critical in the race to differentiate and build brand loyalty (Sutherland, 2017). Some retailers have even recorded purchase history on the loyalty cards issued to the customers (Wedel and Kannan, 2016). This is an effort to motivate customers to return as they accumulate points and rewards. This approach gives a higher probability of repeat purchases and purchasing intention (Mbama and Ezepue, 2018). Therefore keeping customers highly satisfied increases loyalty and profitability.

Customer satisfaction and loyalty do not always consider customer experience. A study in the banking sector by Mbama and Ezepue (2018), found that enhancing

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customers' experiences can attract less loyal customers. Customers of that nature often move to the next best option that they hear about. It is therefore essential to ensure the customer is satisfied even after their purchase. Post-purchase, these relationships must be nurtured to drive loyalty and generate more sales in the future, often referred to as customer advocacy in literature (Huovila, 2017). On the other hand, customer experience enhances customer satisfaction, loyalty, brand perception and positive recommendations (Klaus, 2014). Businesses who get this right prioritize appeasing the customer. Examples are disruptive brands like Uber and Amazon who understand their customer needs, build solutions accordingly and thrive on brand loyalty (Sutherland, 2017). Furthermore, they drive seamless interactions and deliver special treatment at critical moments to constantly encourage loyalty (Sutherland, 2017). Huovila (2017), noted that DCx should prioritize customer engagement as this aims to improve customer loyalty and customer relations through personalizing experiences to customers via digital capabilities.

2.8.3. Customer perception

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The way a customer perceives a product or service determines what their experience will be. This is the case as the actual experience is measured against the expected. Fridh and Dahl (2019), found that what the consumers consciously or unconsciously focused on determined the perception of what something becomes. This supports the suggestion that perception is, to a greater extent based on expectations. Given that this study primarily focuses on online interactions, it is vital that this is the focus be on the online environment. Customers in this environment perceive the quality of information displayed based on whether it conforms to their expectations and meets their needs while engaging online channels (Islam and Rahman, 2017). This includes information displayed on all online touchpoints, which include website, social media and mobile applications. The user perception drives usage as customers consider the relevance of information, data richness, accessibility, interactivity and personalisation (Islam and Rahman, 2017). Furthermore, if the expectations are surpassed, the consumer

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feels the whole experience added value and thus increases the possibility of the customer returning for further purchases (Fridh and Dahl, 2019). Hence, it cannot be emphasized enough how vital it is to exceed expectations to motivate customers to keep coming back.

Several factors can impact the customers' perception. Privacy concerns and past experiences are the two main factors that affect the consumer's perception, more so, when they engage online (Fridh and Dahl, 2019). Ensuring that past experiences are positive will develop consumer trust and this in turn solidifies the relationship with the retailer. The consumer also becomes less concerned and more comfortable sharing their personal information, which provides deeper insights for personalisation (Fridh and Dahl, 2019). It must however be kept in mind that it is difficult to predict how each customer will form their perception. Companies tend to measure aspects like customer perceptions one transaction at a time to counter this (Lemon and Verhoef, 2016). However, there are instances like if a customer has their data compromised due to poor security infrastructure, then their perception of the e-commerce platform will undoubtedly be negative. In conclusion, these factors that impact the customer perception must be considered and duly dealt with to ensure a memorable shopping experience.

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2.8.4. Customer Journey

A customer journey is a series of customer interactions with a service provider to accomplish a specific objective involving various touchpoints (Nabbosa and Iftikhar, 2019). This journey may take from a couple of minutes to weeks or months. There are different permutations dependent on the touchpoint being utilized to purchase the service or product and, in this study, the focus will be on the online channel. A customer journey comprises various stages that the customer goes through when making a purchase (Huovila, 2017). Several sources concur that the stages include pre-purchase, actual purchase and then post-purchase stage (Huovila, 2017; Nabbosa and Iftikhar, 2019; Grewal and Roggeveen, 2020). Simply put, this is before, during and after making the purchase. In the pre-purchase stage, the customer discovers the good or service, explores more about the product which

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includes its specifications and then compares it with others (Nabbosa and Iftikhar, 2019). In the context of this study, this takes place online with the customer checking other retailers, web reviews and most relevant in today's context, what others are saying on social media. The actual purchase comprises the customer completing the purchase online. While the post-purchase stage entails the feedback the customer has and any after sales services the retailer may offer (Huovila, 2017). Grewal and Roggeveen (2020), draw out various factors which influence the customer at the three different stages with much focus on the choice of channel and environmental factors.

The factors that influence the customer journey determine the customer's decision, especially in the online context. These factors include, social, cultural, political, atmospheric and security (Grewal and Roggeveen, 2020). The digital technological developments have revolutionised the nature of customer-retailer interactions, hence the new shopping behaviours which demand retailers to adapt to this new normal (Nabbosa and Iftikhar, 2019). It vital that retailers themselves understand the customers' experiences and journeys so that they optimize the placement of products, services and their communications in the online environment (Grewal and Roggeveen, 2020). In a bid to optimize the customer journey, customers must be seen as unique individuals and they can also get to know about the retailer they are engaging with (van Osselaer, Fuchs, Schreier and Puntoni, 2020). This allows for a rich data exchange. This makes customers more complex and sophisticated as you consider the journey which they go through. Retailers gather, store, analyse and transfer a lot of customer data and face the challenge of keeping this data safe (Nabbosa and Iftikhar, 2019). While this is a risk, for a seamless and enhanced experience the retailer must leverage on personalized engagement in the online context. This study will focus on personalization, past experience, digital marketing and culture as vital factors to consider further in the online context.

2.8.5. Personalization

Personalization will lead to the customer experience journey that may not always be linear. Grewal and Roggeveen (2020), in their study found that there may be

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certain aspects that brings fluidity between the different stages. For example, a consumer can answer a questionnaire to determine which product suits them best first rather than researching about that particular product in the first place. Reverse chaining the process to give the customer just what they need based on their stated specifications. Hence, the concept of personalization. In a bid to enhance the customer journey, retailers seek to understand the customer better by collecting the customers' data and then personalizing their shopping experience (Nabbosa and Iftikhar, 2019). This allows the retailer to get to know the customer based on their preferences and interactions online. Gathering and analysing customer data across all touchpoints helps create that personalized experience (Huovila, 2017). It comes as no surprise that 52% of customers are likely to switch brands if the business does not make efforts to personalize their communication to them (Mcginnis, 2016). Though this will see the retailer improve their service delivery and customer experience, this comes at a price. Lemon and Verhoef (2016), state that there needs to be a balance between the increase in costs and the benefits associated with this offering. Often this dilemma hinders businesses to embrace digital technology solutions as they require investment and uncertain business returns (Nabbosa and Iftikhar, 2019). However, it critical to understand how technology impacts the customer journey, albeit at different stages. Ultimately, the customer journey may not be linear, but personalization will see the customer experience enhanced.

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2.8.6. Past experience

In the digital age, it is vital that customers have a memorable experience each time they interact with the business. Better than the last time, every time as each experience becomes a memory that will be used as a yardstick (Grewal and Roggeveen, 2020). Amoroso (2019), states that providing a positive experience today rather than only in the past should be a vital consideration for online retailers as customers demand just that each time they encounter the business. It must be kept in mind that each customer has an opportunity to leave feedback that potential customers are likely to encounter while browsing and researching in the pre-purchase stage. A perception of quality and high website performance are amongst

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the numerous intangible factors that are vital for a retailers' online reputation (Han, 2019). Past experiences which are positive have a massive impact on the perception as they bring about a decrease in concern and increased trust (Fridh and Dahl, 2019). The customer experience touchpoints must enable this reputation. Straker and Wrigley (2016), in their study found that the customers' emotions, moods and feelings must be considered as they form an emotional commitment with clients as a starting point. Therefore it is imperative that at each stage (prepurchase, purchase, and post purchase) that the retailer provides an enhanced customer experience as consumers are taking note of each aspect of their journey (Lemon and Verhoef, 2016).

2.8.7. Brand engagement

Customers are motivated differently in engaging retail brands online. How much time they spend, what they feel, think and also how much effort on engaging the brand must be considered (Eigenraam, Eelen, van Lin, Verlegh., 2018). This is a vital component as it impacts how customers and the brand engage online. Retailers require an in depth understanding of what resources customers have available and how they plan to invest in brand-related interactions and actions (Hollebeek, Sprott, Andreassen, Costley, Klaus, Kuppelwieser, Karahasanovic, Taguchi, Ul Islam, and Rather, 2019). Customers are also motivated by the response they get from the retailer online. As earlier mentioned, the 21st century customer has very high expectations. Curley and Salmelin (2018), found in their study that retailers must adjust their offerings accordingly as customers use digital leaders like Uber and Amazon as a baseline, expecting quick and real-time interactions (Eigenraam, Eelen, van Lin, Verlegh., 2018). Hence, it is imperative that customers are motivated to engage with the retailer online.

Behavioural brand engagement is one of three elements (cognitive and emotional being the other two) to be considered when looking at customers likelihood to engage with the brand online (Eigenraam, Eelen, van Lin, Verlegh., 2018). Furthermore, their reason for being online determines their engagement online as they could be present for recreational use, education work or just browsing the

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internet. Hollebeek, Srivastava and Chen (2019), found that customers with high behavioural brand engagement care more about the various products a brand offers and their uses to learn more about any new offerings. These customers go on and post reviews as they are well informed. Online retailers must take note of these customers with a heavy online presence as their feedback is likely to be spontaneous as seen by the correlation of behavioural brand engagement and online reviews (Eigenraam, Eelen, van Lin, Verlegh., 2018). Their opinions are most likely to be heard over most of the others and it is vital that these customers have a memorable customer journey. By doing this, the customer will see their needs met and are more likely to engage with the brand online.

2.8.8. Digital marketing

The digital age has challenged retailers to find new ways to reach their customers. The increase of digital marketing channels has also given retailers new avenues to satisfy customers (Chung, Ko, Joung and Kim, 2018). Still affording the marketers an opportunity to connect and establish relationships with customers through technology. While technology offers new ways of being, retailers must seek to understand the customers and how they are utilizing the technology, then use that as a means to best engage them (Damian and Jones, 2008). Technology is a tool that if used will harness the power of digital marketing. Furthermore, Damian and Jones (2008) points out that the digital marketing space is constantly evolving and to be successful, the retailers have to stay abreast of these changes. That way they can be relevant to customers in this digital age were reaching the customer is a new challenge.

This digital age has demanded that retailers be accessible online. With the world fast becoming a global village, digital marketing is critical online to better connect with customers (Chung, Ko, Joung and Kim., 2018). The importance of how to be represented online should not be taken lightly. Hånell, Rovira Nordman, Tolstoy and Özbek (2019) emphasizes the importance of catching the customers' eye right away and also creating a similar look and feel to the physical store environment online. This would include the text and picture styles which the retailer is

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associated with. Furthermore, targeted e-mails, customer database management and infographics are additional methods which can be utilized (Huovila, 2017). The content that is shared with public must well thought out and packaged in a way that draws customers to it. Sending relevant information and offers to people who have already opted into emails reduces the clutter caused by junk emails on the customer side. This communication can include the sending of coupons, new products and advertising sale items. Search engine optimization, careful selection of images used and also keeping the text brief while still remaining appealing are certainly challenges in the digital marketing space (Hånell, Rovira Nordman, Tolstoy and Özbek., 2019). This calls on a precise sort of skillset which includes data visualization and promotion which will be driven by customer insights. Knowing how people can find you online and how you can find them unlocks opportunities. The more types of digital marketing a retailer uses, this increases the probability of reaching new and existing customers wherever they may be in the digital space. Hence, the importance of retailers being accessible online in a way that appeals to their target market.

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2.8.9. Culture

There are numerous ways that culture can influence the customer journey. Culture involves how customers interpret and respond to all touchpoints in the consumer journey (Shavitt and Barnes, 2020). Essentially it is how customers view the world in their own eyes. It is what drives their way of thinking which ultimately impacts their judgements and decisions (Shavitt and Barnes, 2020). Therefore, the different cultures will lead to different values and goals. In this study, the recognition of the importance of the impact of culture throughout the customer journey is critical. The diversity of cultural contexts underlines the importance of each element of the journey the customer embarks on including how they respond to advertisements, prices, the website, products and promotions (Shavitt and Barnes, 2020). Taking note of these variables will only enhance the customer experience. Thus, the importance of defining the pivotal role that culture plays and how it might directly or indirectly impact the customer journey (Grewal and Roggeveen, 2020).

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There are other elements which are moving parts in the impact of culture in the customer journey. The internal company culture must also be noted as a factor to the customer journey. Internal company culture has to be aligned with strategic intent, the digital business strategy broadcast clearly across the whole business, encouraging innovation and synergy with cross-functional teams (Huovila, 2017). This is recognised as it will impact the customer downstream. Another essential element to take into consideration is the advertisements, precisely the use of online brand ambassadors, better known as "influencers" in today's context. Diversity in social media influencers increases effectiveness in reaching diverse cultural circles to positively impact the customer perception and ultimately the customer journey (Grewal and Roggeveen, 2020). However, the free culture promoted by the internet, which promotes the consumption of unverified information creates a sub culture that is not easy to satisfy as it is very fluid (Watanabe, Naveed and Neittaanmäki, 2018). Similarly, new digital technology like Chatbots and virtual assistants are likely to have differing levels of acceptance based on the different cultures. All in all, all these elements must be recognised as what impacts the customer journey in a cultural context.

The influence of an individual touchpoint depends on all the above factors and also when it occurs in the customer journey (Lemon and Verhoef, 2016). From the findings so far, there must be adequate channels for customers to get information then proceed on the given customer journey across touchpoints at any given point in time to provide an enhanced digital brand experience. Ultimately from a customer journey perspective, the available touchpoints seek to lead to a purchase as the outcome (Lemon and Verhoef, 2016). Thereafter in the post-purchase stage, nurture the customers in a way that gets them entrenched in the loyalty loop with consistent, top quality experiences which will result in customer retention and positive reviews (Huovila, 2017). Therefore, in exploring digital brand experience, trust, loyalty, perception, recommendations and the customer journey stand out in enhancing customer experience in the digital context.

2.9. Digital Experience Platforms

H4. Digital experience platforms enhance customer experience.

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2.9.1. Ease of use

This is considered an essential factor as it will drive usage of any touchpoint. Ease of use is often a perception and can be defined as the extent to which an individual believes that using a system is simple and requires minimal to no mental effort (Shaikh, Alharthi and Alamoudi, 2020). Often, complexity puts off customers especially in the online context that is already out of the traditional norm. How easy it is to access the product or service combined with convenience and customer satisfaction will motivate repeat purchases (Pansari and Kumar, 2017). Sutherland (2017), explicitly states that, "the best predictors of exceptional customer experience is low customer effort". In todays' context, the thought of driving to go and buy a product in store whereas one can purchase online from the comfort of their home is a no brainer. However, the customer experience on the online platform must be pleasant, quick and seamless such that the customer does not opt for a rival competitor in their time of need. Making it easy for a customer to interact and purchase products or services from a particular online platform increases the likelihood of them always opting for that retailer (Sutherland, 2017).

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Ease of use in the online context is defined by Han (2019), as a means of making a site easy to use and operate. The online channel has grown rapidly allowing customers' access to shopping by just pressing a few buttons. This ranges from televisions, game consoles, desktop computers, tablet PCs and other mobile devices like smartphones. Increased mobile phone functionality allows customers to use their phone to browse the Internet and to supplement the store shopping experience from virtually anywhere, from their living room to when they on a train commuting to work (Simone and Sabbadin, 2017). It is therefore vital that the website is responsive and scalable to smaller screen sizes to meet user needs. This is further motivated by (Shaikh, Alharthi and Alamoudi, 2020) whose study investigated the ease of use (usability) of a mobile banking app and found that users were happier using the application on their mobile phone rather than on a desktop or laptop computer. This included how clear, easy, controllable and flexible to use it. When purported, ease of use could potentially help customers understand that systems are clear, understandable, controllable, flexible, and easy to learn, making users more

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comfortable to use them (Shaikh, Alharthi and Alamoudi, 2020). Finally, there must be overall consistency across all channels and online platforms. This brand image is vital and includes having similar colours, logo and brand experience across the board (Hossain Akter, Kattiyapornpong, Dwivedi, 2019).

2.9.2. Technology

The rise of digital technologies has opened new possibilities for retailers. A Gartner report (2011) predicted that by 2020, at least 85% of customers will manage their relationship with the businesses with no human. While this has not quite played out, the potential is immense. In the retail context, the future of customer service will likely be led by Chatbots, Artificial Intelligence (AI), Big Data, Machine Learning, Virtual assistants and the Internet of Things (IoT) (Huovila, 2017; Sutherland, 2017; Vial, 2019). In the evolving retail environment, consumers' needs continue to drive their purchase decisions. Constant innovation keeps evolving the retail space with new technologies, business models and predictive analytics being the future (Grewal, Roggeveen and Nordfält, 2017). This study will be focusing on these six technologies amidst the plethora of available technologies as seen in the below Hype Cycle. It must be noted that they often leverage each other's functionality. This cycle illustrates the stages that the various technologies go through and possibilities are endless for retailers.

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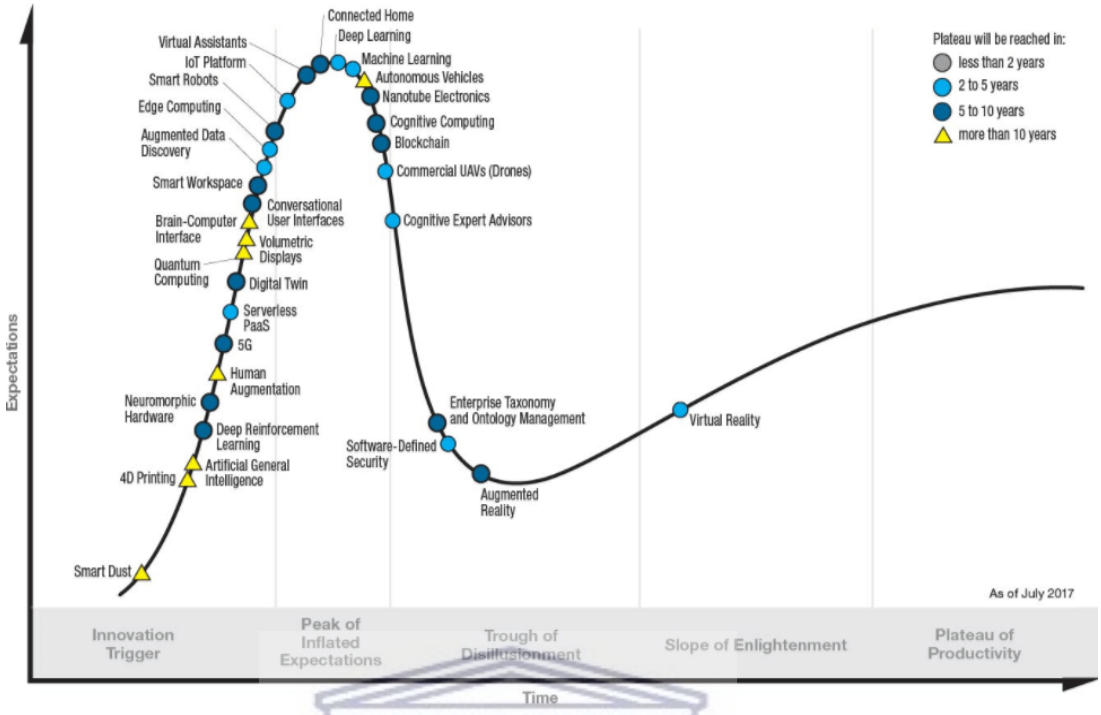

Figure 1. The Hype Cycle (Gartner, 2020)

It is vital to know where and how to utilize technology in a bid to enhance customer experience. Technology is best utilized to automate mundane interactions which allows humans to be allocated to the value-adding activities which drive the customer experience and loyalty (Sutherland, 2017). The section to follow highlights the six technologies to be considered in this study.

2.9.3. Chatbots

Chatbots are systems that mimic human interactions and provide real-time experiences (Pantano and Pizzi, 2020). They have an intuitive ability to make out the meaning and relation of words. Chatbots are more suitable for direct question and answer conversations, rather than deep understanding or assessment (Pantano and Pizzi, 2020). Many retailers have adopted Chatbots to differing degrees. Their ability to respond to generic customer queries almost instantly and in large volumes makes them very useful. However, as the queries get more specific, a human takes over as they can empathize with customers and give them a memorable experience. In some instances, customers do not even realise that they are engaging with a bot.

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In a study by Huovila, (2017) the business used an automated Chabot on their website for preliminary lead generation purposes as this increased volumes. Human interaction would then be used once the lead had been generated. Hence, an enhanced customer experience is provided by leveraging on real-time interactions provided by Chatbots without customers even realizing.

2.9.4. Artificial Intelligence

Artificial Intelligence (AI) refers to programs and systems that replicate intelligent human behaviour (Pantano and Pizzi, 2020). This allows for replacement of people by digital technologies with built in logic. As far as possible such solutions can be utilized so that people can focus on critical tasks. AI is one of the major technological developments in retail business lately with it transforming multiple data types into meaningful information which ranges from planning to prediction (Cao, 2018). This can be on the front and/or back end of the given system. In terms of enhancing the customer experience, cognitive technologies, like AI can be used to frequently learn from customers' online behaviour and optimize the web site accordingly for individual needs (Huovila, 2017). AI strives to ensure customers' experiences are enhanced as retailers will be pushed to do better with their products and systems.

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AI provides a competitive advantage for retailers online. It seeks to make communication between humans and machines simpler using natural language to accomplish superior capabilities in terms of analysis, comprehension and prediction (Pantano and Pizzi, 2020). This is not always the case as customers input may not be recognised by the system. Retailers that successfully use suitable technologies are more likely to build on their competitive advantage as they customize products and shopping experience (Cao, 2018). To deepen the emotional bond with customers, AI is used to provide a seamless customer experience during the customer journey (Huovila, 2017). Furthermore, Huovila (2017), suggests that the best value for the business is achieved when the digital

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technologies are combined. Hence, the ability to then provide a competitive advantage.

2.9.5. Big Data

Retailers in the 21st century are inundated with data. This is due to the size, speed, diversity, veracity, variability, conception and value of data generated in the digital economy which has seen the emergence of Big Data (Holmlund, Van Vaerenbergh, Ciuchita, Ravald, Sarantopoulos, Ordenes and Zaki, 2020). This data must still be processed and turned into meaningful information which can guide strategic decisions. The term Big Data stems from the sheer volume, velocity and variety of the data which standard computing infrastructures cannot process ordinarily (Chavez, Yu, Jacobs and Feng, 2017). Data is an asset and a decision-making tool, so it must be well utilised. Chavez, Yu, Jacobs and Feng (2017) state that Big Data generates operational and strategic level data which gives abundant visibility and optimises the flow of the supply chain, thus increased availability and delivery speed for the customer. Hence, the faster response times, quicker decisions, automation and algorithms which Big Data leverages off (Vial, 2019). Holmlund, Van Vaerenbergh, Ciuchita, Ravald, Sarantopoulos, Ordenes and Zaki (2020) concur that analytics using big data reveal customer insights. This goes to show that if well utilised the data collected by retailers can be used to enhance the customer experience.

The utilization of big data analytics relies on other technologies. This allows for co-creation, an amplified demand for personalized experiences (Torres de Oliveira, Indulska, Steen and Verreynne, 2020). Cao (2018), sets the foundation for online retailers to foresee the next fashion trends and look for future customers already. This is vital as the targeted customer segment can be identified, understood and serviced adequately. This allows for retailers to match consumer groups with relevant online content. A concept called Big Data Analytics (BDA) enhances the customer experience as it enables online businesses achieve better and quicker understanding of the customer journey (Holmlund, Van Vaerenbergh, Ciuchita, Ravald, Sarantopoulos, Ordenes and Zaki, 2020). As Shivakumar and Sethii (2019),

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also emphasize, the handling of big data enables insights into customer behaviour. Wedel and Kannan (2016), mentions how the capability of Big Data may have initially been over estimated, which saw businesses invest heavily in the technology. Over time this investment has started to pay off as more businesses made data-driven decisions that have provided a competitive advantage. On the other end created a relatively high expense as models needed to be more complex, employees more skilled and emphasis on privacy to capture the value of this data (Wedel and Kannan, 2016). Amazon, Google and Facebook have revolutionised marketing using big data. Amazon is a good example as 278 million active customers have their online browsing and purchasing data captured (Wedel and Kannan, 2016). Therefore, the convergence of various technologies so to leverage off the potential Big Data enables an enhanced customer experience.

2.9.6. Virtual Assistants

This technology brings about time saving and efficiency in the purchase process. Virtual assistants are set up to perform given tasks and can be in the instore or online environment. With the recent technological advancements the development of new and more proficient virtual assistants which are able to mimic human communicationss and provide realistic experiences are availabvle (Pantano and Pizzi, 2020). Interactions with these virtual assistants are functional and social as the customer gets immediate feedback which gives them a pleasant experience as they feel valued (Pantano and Pizzi, 2020). Hence, the importance of the quality of this experience and the virtual assistant doing what it set out to do. This must be in a way that the customer is comfortable with and understands the process. A good example is Apple's Siri which uses voice recognition technology to complete tasks such as retrieve data from the Internet, place online orders amongst others in a bid to deliver a seamless and enhanced customer experience for the customers (Kumar, Rajan, Gupta and Pozza, 2019). As it sets out to bring convenience, the margin for error is limited. Grewal and Roggeveen (2020), suggest that consumers shopping online are more prone to be exposed to virtual assistants alongside chatbots and their perceptions will be based off reviews, posts by influential people, friends and

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past experiences. The importance of how social media influencers will percieve the service is essential as they are powerful and set trends across their different cultures which may impact the customer journey (Grewal and Roggeveen, 2020). The new technology has very different impacts on the customer journey in different cultures. Culture and resistance to change will most likely impact the realisation of all the time savings and efficiencies from virtual assistants.

For this technology to be put to use, one must be aware of it and be willing to adopt it as a new way of being. While technology and dehumanizing some processes in the name of efficiency is great, some interactions can only be delivered in person like a warm smile or empathy which will make the customer appreciate the service (van Osselaer, Fuchs, Schreier and Puntoni., 2020). Furthermore, as more responsibility is passed onto the technology, barriers like autonomy, social connection and culture on the customer may pose a threat to the adoption of any technology (Grewal and Roggeveen, 2020). While customers may like these efficiencies, the retailer themselves must get buy in from employees so that they do not feel like their jobs are being taken away from them but rather an efficiency being introduced. Yes, people will be replaced eventually as virtual assistants are available all the time and at a lower cost to human assistants but retailers must look to utilize humans in other areas. With virtual assistants ability to execute grocery shopping in conjunction with Internet of Things technology, this may reduce the need for human decision making (de Bellis and Venkataramani Johar, 2020). Retailers may have to rethink their models as there will be less feet in the stores. However, a blend of physical and online retailing must be found as technology may bring speed and efficiency, it is limited as personal touch is difficult to replicate online (Reinartz, Wiegand and Imschloss, 2019). This will not be easy as the acceptance, adoption of customers and staff will be pivotal to still deliver value.

2.9.7. Machine learning

Machine learning allows digital platforms to collect information on customer behaviour and preferences (Sutherland, 2017). This is done as algorithms are put in

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place to learn customer behaviour from multiple streams of data. In recent times, retailers have been able to collect large amounts of interesting data but lack expertise in analysing that data to make it valuable (Varian, 2016). Collection alone is only half of the job, hence Machine learning is vital. Combined with econometric and theory-based techniques machine learning approaches deliver great business value (Wedel and Kannan, 2016). Often in conjunction with Artificial intelligence and Big Data, Machine learning creates value for the retailer. These cognitive technologies can be combined with customer data for managing customer relations in the post-purchase stage (Huovila, 2017). This includes other content, targeted e-mail communications and improving the digital marketing efficiency.

Machine learning also ensures that value and efficiencies are created within the business. Sutherland (2017), emphasizes on the ability to automate routine interactions in a bid to free human resources to focus on areas that add value, enhance the customer experience and create brand loyalty. Machine learning methods can be used to detect specific languages and summarize it, making it useful in interpreting large textual data (Wedel and Kannan, 2016). This certainly creates an efficiency which humans alone could not have achieved in the given time frame. This enriches and creates a seamless customer experience and potentially develops an emotional bond with the customers (Huovila, 2017). This is brought about by the algorithms within the machine learning technology being able to predict customer behaviour. Customers will feel that the business has their best needs at heart and pre-empt purchases. This can be seen where Netflix ran a competition internally for the group that developed the best machine learning system for recommendations and showed a minimum of 10% improvement to the current version (Varian, 2016). This was because of the value and efficiency the executives knew it would bring the business. Thus, retailers must always challenge themselves and give their customers what they want or did not know they needed through machine learning.

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2.9.8. Internet of Things (IoT)

IoT collects data generated by sensors and connects stakeholders. Pagoropoulos, Pigosso and McAloone (2017), defines IoT as sensors which are connected to computing systems by networks. According to (Mital, Chang , Praveen , Armando and Ashis., 2018) “It is a network of smart and connected devices which communicate in real-time through the standard IP based communication protocols”. These sensors have a wide function from monitoring and managing health to ordering systems and some even wearables. Developments in digital technology have led to an increased adoption of IoT and the retail industry leads the way in utilizing IoT and smart technology (Roy, Balaji, Sadeque, Nguyen and Melewar., 2017). The benefits to its customers, range from faster and more accurate sensing of environmental variables to a more cost effective tracking of processes that drive new business models (Watanabe, Naveed and Neittaanmäki, 2018). This will probably generate significant revenue to those who can provide its applications and services as competition will be stiff. However, IoT also poses a challenge of security of infrastructure, technology innovation requirements, new business models, expenses and skills together with policy issues around protection of privacy and property rights (Mital, Chang, Choudhary, Papa and Pani, 2018; Watanabe, Naveed and Neittaanmäki, 2018). This is brought about by the volume and sensitivity of data being shared constantly.

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IoT has the potential to drive digitization of society and the economy. It will grow customer engagement with retailers (Simone and Sabbadin, 2017). Given that IoT embraces use of sensors, this can improve supply chain efficiency which ultimately enhances customer experience further downstream as business processes are optimized and slack activities reduced (Vial, 2019). Woodard (2016) states that over a billion customers are leaving a digital trail, and with even more sensors connected to IoT, retailers must be clear in harnessing these capabilities. Already there are smart refrigerators which read the bar codes of food items, managing the fridge contents and even helping order groceries online (de Bellis and Venkataramani Johar, 2020). This can be replicated across online retailers so as create added value offerings. However, Grewal, Roggeveen and Nordfält (2017),

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pose the question, whether IoT will increase or decrease customer engagement with retailers since machines are taking over all the communications and will this be the start of a new commerce? Fair to say that technology aims to create integrated and responsive business capabilities as well as provide exceptional customer experiences in ever changing market conditions (Huovila, 2017). Hence, IoT has the potential to drive digitization of society and the economy.

2.9.9. Availability

Availability in this study can be seen from a functional and accessibility point of view. Functionally it is the ability of a system to be available as and when users need (Han, 2019). This includes, it always being available for business, loading right away, not lagging and generally allowing a seamless journey for the customer. Support must also be available promptly. Huovila (2017), found that when support is always available, a perception of reliability and trustworthiness with customers is created. This is vital as the customer does not want to ever feel neglected across all platforms. The internet and strides in the digital space have led to the diversification of available means to engage with retailers (Wedel and Kannan, 2016). This presents both opportunity and challenges for any retailer. A study by Sahu, Deng and Molla (2018) revealed that by effectively integrating digital technologies, better features, functions and journeys led to an enhanced customer experience.

In terms of an accessibility point of view, the vast number of digital channels serve no purpose if customers cannot access them. Retailers have the ability to interact with their target consumers directly much easier and in an efficient way as the increase in communication channels allows for a wider global reach (Fridh and Dahl, 2019). Furthermore, connecting customers data online and offline across all digital devices increases data availability (Wedel and Kannan, 2016). This data helps retailers better understand customer behaviour and build better relationships which ultimately is a competitive advantage (Fridh and Dahl, 2019). Huovila (2017), calls this a “360 view” which looks at customers from all channels to generate new leads. By aligning internal and external processes retailers can be

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accessible to a wider customer base and improve their customer experience. However, digital technology availability in South Africa is affected by several factors as per the below statistics:

Table 3. South Africa: Web traffic by device

Mobile Phones	Laptops & Desktops	Tablet computers	Other devices
73%	25%	2%	0.03%

Source: (Kepios, 2020)

As per the above, most users in South Africa access the Internet via mobile devices (73%), hence this study draws on mobile device as a tool to enhance DCx.

Table 4. Internet and Social Media Users (Kepios, 2020)

	Total population	Internet users	Active social media users
Global	7.75 (Billion)	59%	49%
South Africa	58.93 (Million)	62%	37%

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With over half (37%) of internet users in South Africa being active on social media, it is therefore a tool whose potential must be harnessed to improve DCx.

Table 5. South Africa: Time spent online and Security concerns (Kepios, 2020)

Time spent on internet	Time spent on social media	% Of Internet users concerned about how companies use their personal data	% Of Internet users concerned about what's real or fake on the internet
9h 22mins	3h 10mins	69%	70%

A significant amount of time is spent on the internet by users and these are potential customers. According to Table 5, just over a third of time on the Internet is spent on social media. This suggests that engaging with customers online is crucial and a

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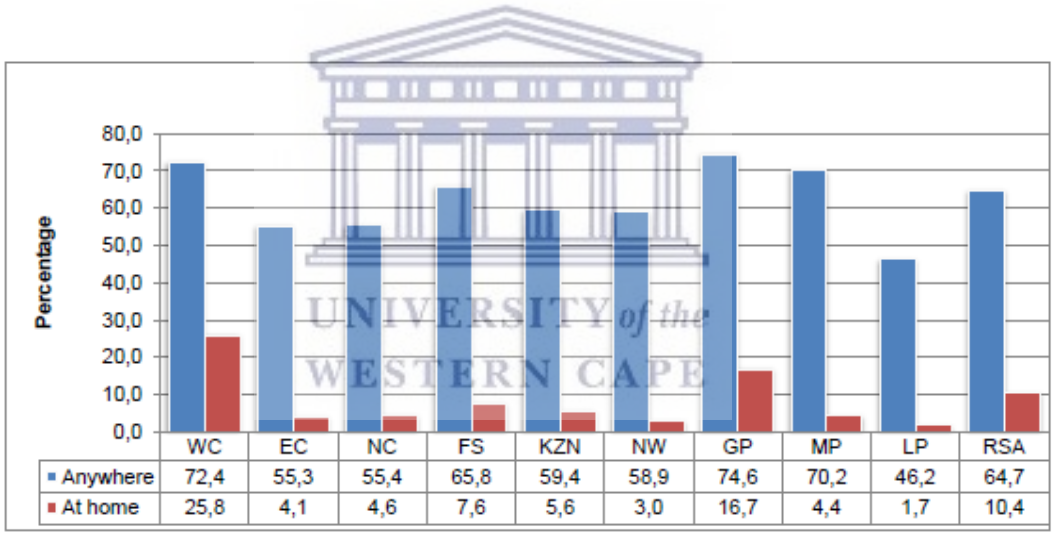
balance must be found as customers have security concerns (Table 5). Hence, the importance of conducting the survey on a sample of Cape Town customers to ascertain relevant findings.

2.9.10. Digital Exclusion

Enhancing digital experiences for customers is only relevant if they can access the available tools and services. Digital exclusion is a vital consideration in this respect. Digital exclusion describes the lack of access of some population groups towards resources and opportunities on the internet (Cheng and Foley, 2018). Below are statistics which suggest digital exclusion is a reality for most in South Africa and less so for those in the Western Cape.



	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
Anywhere	72,4	55,3	55,4	65,8	59,4	58,9	74,6	70,2	46,2	64,7
At home	25,8	4,1	4,6	7,6	5,6	3,0	16,7	4,4	1,7	10,4

Figure 2: Percentage of households with access to the Internet at home, or for which at least one member has access to, or used the Internet by province, 2018 (Stats SA, 2019)

From the above, in the Western Cape 72,4% of the population can access the internet from anywhere and 25,8% have access at home. In contrast, the general percentages for the country are 64,7% and 10,4% respectively. With only Gauteng Province boasting a higher percentage of internet access from anywhere but a lower percentage from home. Therefore while digital exclusion is a reality in South Africa, the Stats SA (2019) General Household Survey Statistical Release states that the Western Cape is the least digitally excluded population group in the country.

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2.9.11. Affordability

This is a vital factor that customers across the board consider. Curley and Salmelin (2018), state that alongside two other factors (speed and ease of use), affordability is a vital consideration for any customer. Affordability is largely dependent on one's income. It is therefore essential to consider income in the South African context. The Quarterly Employment Statistics February 2020 suggest that the monthly salary of those in the formal sector which excludes agriculture earn about R19 433 per month (Statistics South Africa, 2020). This translates to about R233 196 per annum and up to R250 000 if you factor in bonuses. However, with unemployment rife in South Africa, this salary excludes 30% of the employable population who are unemployed (StatsSA, 2019). This possibly is a factor that impacts Figure 2 as low income could lead to low internet use.

2.10. Proposed Framework

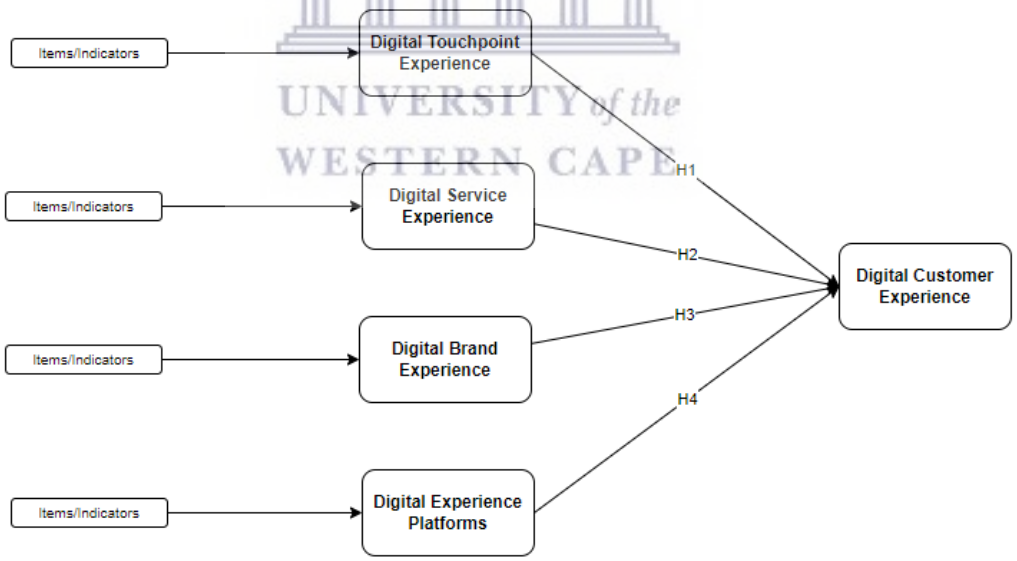

Figure 3. Adapted Conceptual Framework (Silalahi and Rufaidah, 2018)

2.10.1. Overview

Assessment for the acceptance of technologies is mostly based on the models that are included in literature on technology acceptance. This study will utilize a *second-*

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order model (Figure 3) adapted from a study titled Measuring digital experience (Silalahi and Rufaidah, 2018). In that study, confirmatory factor analysis was used to successfully measure DCx across four constructs, namely, Digital Service Experience, Digital Image Experience, Digital Touchpoint experience and Digital Broadband Experience. For this study Digital Image Experience and Digital Broadband Experience are replaced by Digital Brand Experience and Digital Experience Platforms respectively. The adapted framework has four constructs which will be further explored by numerous variables. These variables will be plotted as items/indicators given that their validity and reliability are of the required level. Furthermore, demographic characteristics namely, age, gender, income level and educational level will be incorporated in the framework. The constructs for this study are discussed further below:

2.10.2. Digital touchpoint experience

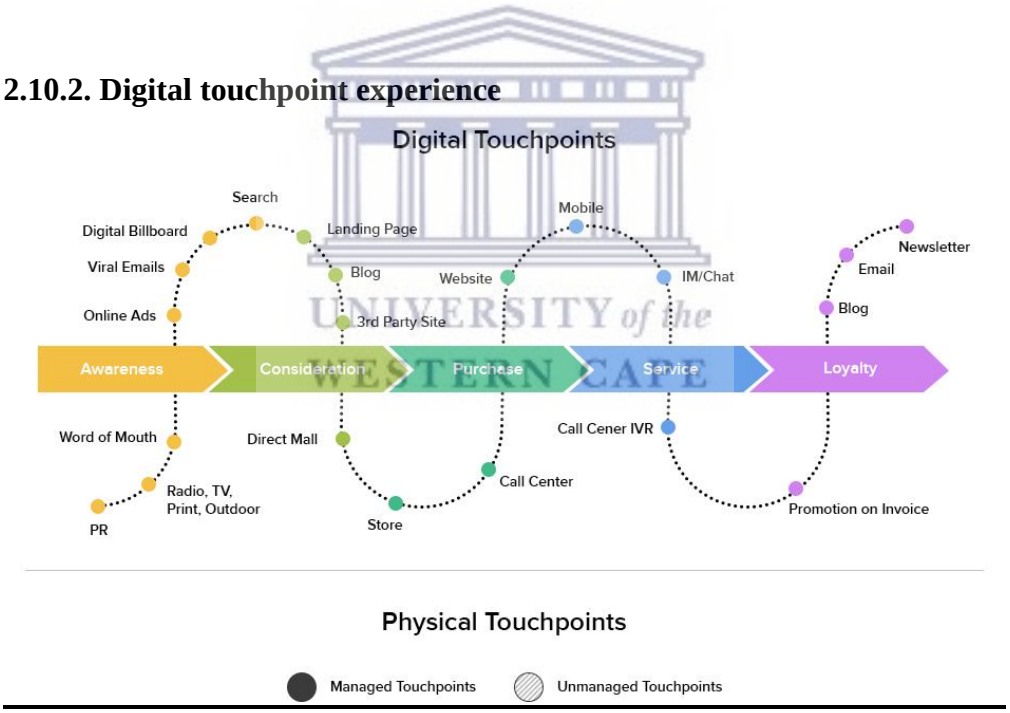

Figure 4: Tools for customer engagement (Auditeers, 2019)

Digital technology is quickly remodelling how consumers engage with businesses. There is a wide array of digital touchpoints to be considered throughout the customers journey map (see figure 2) and the business must align with the ones that resonate with them (Auditeers, 2019). The shift to digital platforms lessens reliance on traditional touchpoints like brick-and-mortar stores. With online touchpoints, customers are not restricted to trading hours as there are a wide range of number of

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touchpoints available (Chung, 2016). According to the Marketing Science Institute (2020), customers are faced with a dilemma of having a wide array of digital platforms and devices to interact with businesses which alters their experience in the customer journey. It is vital that online retailers can provide adequate touchpoints with customers to provide choices. Whilst digital technology boasts the ability to enhance customer experience, it must be noted that the abundance, velocity and veracity of data in the age of Big Data also poses a challenge for online retailers (Wedel and Kannan, 2016; Hollebeek, Sprott, Andreassen, Costley, Klaus, Kuppelwieser and Karahasanovic, 2019; Holmlund, Ciuchitaa, Ravaldc, Sarantopoulos and Ordenese, 2020). Hence, these touchpoints must be closely examined and all factors which may impact them have to be taken into consideration.

2.10.3. Digital Service Experience

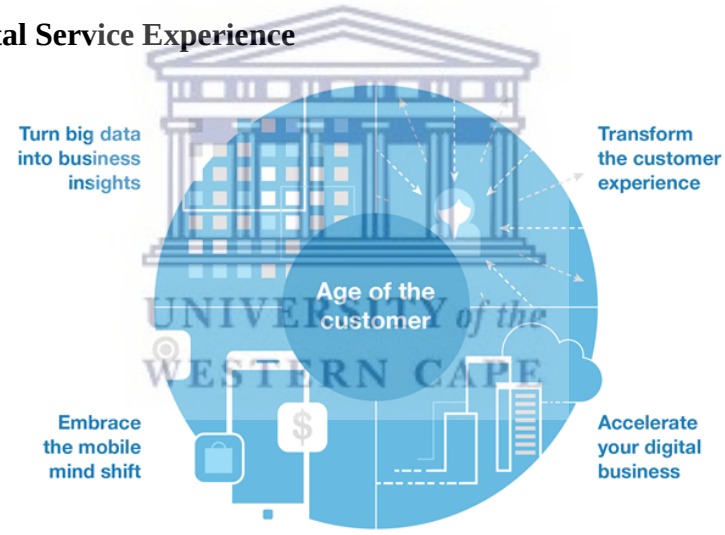

Figure 5: The Age of the customer (Forrester Research 2015)

Modern retailers must realise that they must be customer driven and not product driven in this age of the customer as seen above. Therefore, making it imperative that efforts are made to ensure that the experience each customer gets is customised to suit them. The 21st century customer values experiences over the actual product (Hilken, de Ruyter, Chylinski, Mahr and Keeling, 2017). The importance of personalizing experiences in the digital age in a bid to optimize the customer journey is fundamental. Accurate information on customers helps create a long lasting relationship with the customer as it shows their needs and traits are known (Fridh and Dahl, 2019). Hence, this is a vital construct to explore as it allows firms

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to gain a competitive advantage and deliver an enhanced customer experience by the digital service experience. This construct encompasses privacy, customer perception, digital marketing, customer relationship management and culture in a bid to enhance CX from its traditional view to embracing DCx by utilizing digital tools.

2.10.4. Digital Brand Experience

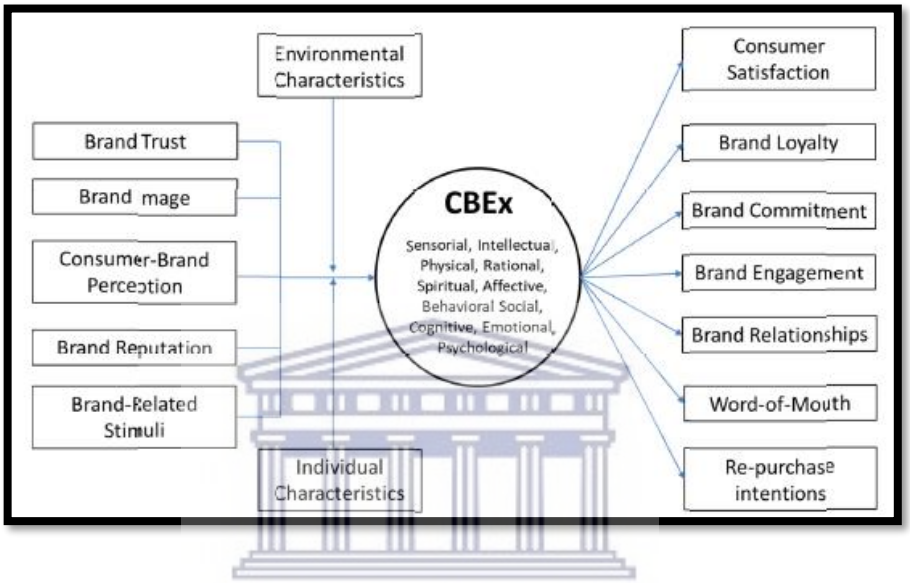

Figure 6: Adopted from CBEx Conceptual model *(Amoroso, 2019)*

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The transition to digital should ensure that the customer journey is not complicated and also worth the customers while. The Progress Software Corporation (2016), go onto suggest that this makes it easier for customers to access, research and transact with the business. This experience leaves a lasting memory that is always associated to that particular brand and building the brand image is pivotal in nurturing this relationship (Bhattacharya and Anand, 2019). As depicted in Figure 6 above, the brand experience is influenced by several elements. While past experiences play a pivotal role, factors like trust, emotional experience, customer perception and culture play a vital role of gaining loyalty from the customer (Bhattacharya and Anand, 2019; Monferrer, Moliner and Estrada, 2019). These elements are not easy to translate online, hence retailers must be innovative in creating this digital brand experience. Furthermore, prospective customers rely on the feedback they acquire from those who have engaged with the business before committing. Thus, it is

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imperative that each customer has a pleasant experience so that they project positive sentiments across all platforms.

2.10.5. Digital Experience Platforms

It is imperative that with digital transformation that there be innovative ways of enhancing the customer experience through various platforms. In the digital age this has to be done in an environment with rapid change, uncertainty and advances in technology (Shivakumar and Sethii, 2019) These are also referred to as digital service platforms. According to Sebastian, Ross, Beath, Mocker, Moloney and Fonstad, these are business and technological capabilities that allow for quick development and implementation of digital innovations (2017). Services on digital platforms are hinged on the technology that drives them, but the business capabilities are what the technology enables (Sebastian, Ross, Beath, Mocker, Moloney and Fonstad, 2017). This construct investigates the ease of use, availability, and affordability of these technologies. They include Internet of Things (IOT), Machine learning, virtual assistants, Artificial Intelligence (AI), Big Data and chatbots despite the wide array as depicted on the next page.

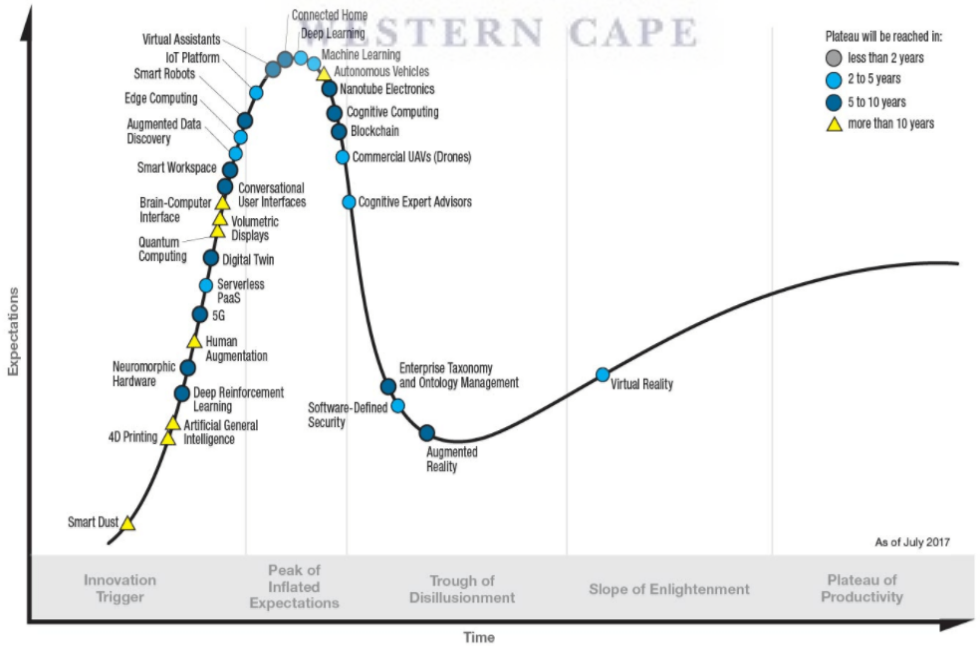

Figure 7: Hype Curve Gartner (2020)

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2.11. Hypothesis

Therefore, based on the discussion of the four constructs above, the following hypotheses are incorporated into the conceptual framework (Figure 8). This study seeks to prove four hypotheses. These are hypothesised in this study as per below the Framework.

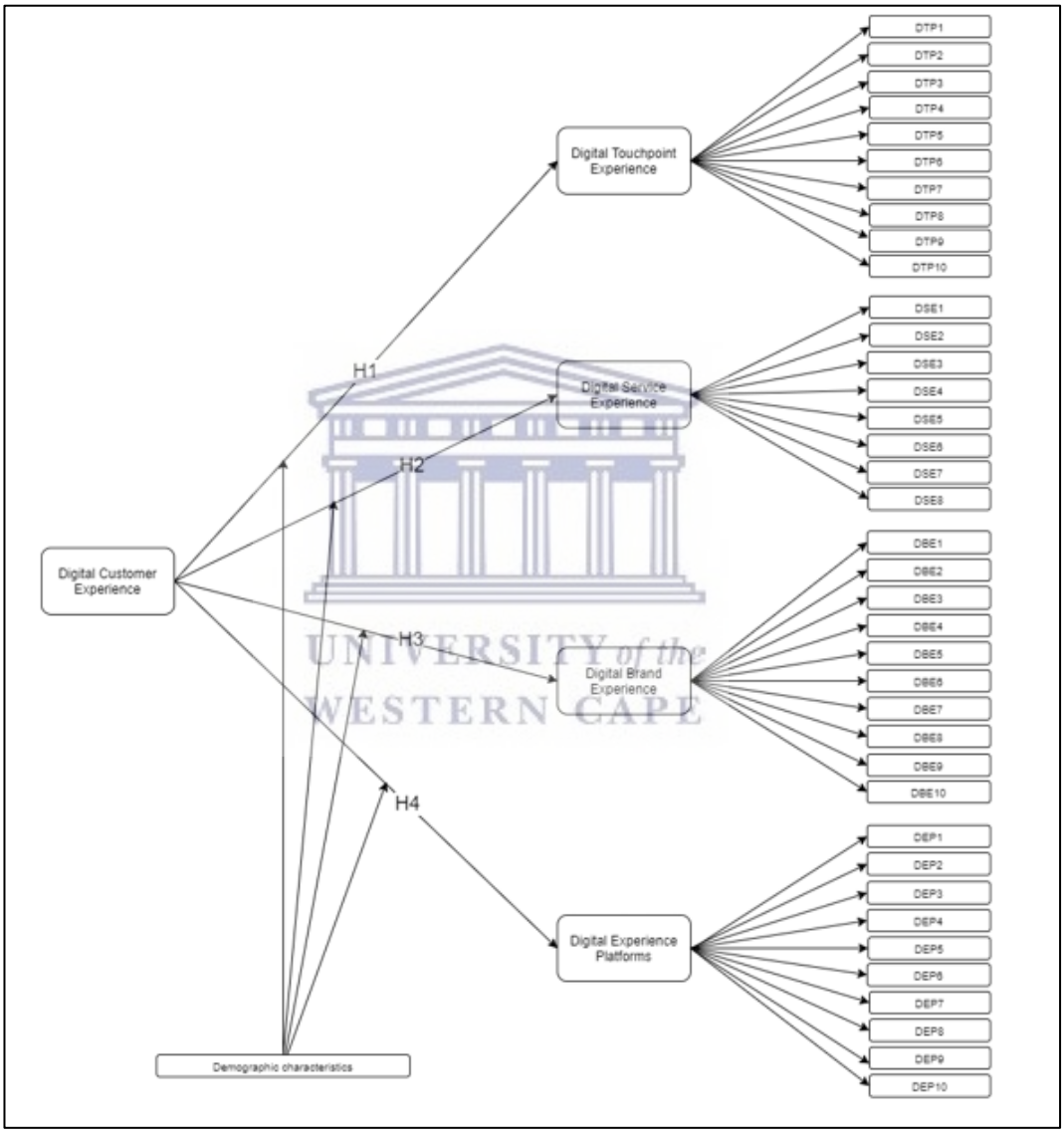

Figure 8: Conceptual Framework

H1: Digital Touchpoint Experience enhances customer experience.

This hypothesis will seek to obtain customer perceptions on their Digital touchpoint experiences. These variables will be incorporated into the framework as

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items/indicators as DTP1 to DTP10. Namely websites, channel integration, social media, applications, service channels, mobility, real-time interactions, user experience, co-creation and devices in that order.

H2: Digital service experience enhances customer experience.

This hypothesis will seek to obtain customer perceptions on their Digital service experiences. These variables will be incorporated into the framework as items/indicators as DSE1 to DSE10. Namely customer satisfaction, customer engagement, self-service, service excellence, accessibility, speed and feasibility in that order.

H3: Digital brand experience enhances customer experience.

This hypothesis will seek to obtain customer perceptions on their Digital brand experiences. These variables will be incorporated into the framework as items/indicators as DBE1 to DBE10. Namely customer loyalty, trust, recommendations, brand engagement, customer perception, customer journey, culture, personalisation, past experiences and digital marketing in that order.

H4: Digital experience platforms enhance customer experience.

This hypothesis will seek to obtain customer perceptions on their Digital service experiences. These variables will be incorporated into the framework as items/indicators as DEP1 to DEP10. Namely ease of use, availability, digital exclusion, affordability, internet of things, machine learning, virtual assistants, artificial intelligence, big data and chatbots in that order.

2.12. Chapter summary

From the literature it has been established that there are a wide range of digital technological advancements. These have largely been embraced in developed countries where the infrastructure and environment allow. However, there are a plethora of factors which can be seen in the literature. South Africa has its own challenges which were highlighted in the review. These have been seen to impact the use of online retailers. Hence, although there may be a wide range of digital technologies available worldwide, it is vital to consider Cape Town South Africa in isolation.

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CHAPTER 3 RESEARCH METHODOLOGY

3. Introduction

This chapter will elaborate on the research methodologies utilised in this study. The research onion was used as a guideline in approaching the methodology. This section begins with the research paradigm, as the layers are unpacked, the research design, research approach, research strategy, unit of analysis, research instrument, and data collection methods will be explored. Furthermore, the sampling procedure, pre-pilot testing, data collection, validity and data analysis are also be elaborated upon. This will be finally followed by the chapter summary.

3.2 Research Paradigm /Philosophy

In this section the definition and comparison of the types of research paradigms was be provided. This was done to ascertain the appropriate paradigm for this study. A research paradigm can be defined as a framework for observation which shape the world view of the author (Kankam, 2019). This was essential as it helped define the way data was gathered, analysed and utilized when examining the stated phenomenon. Paradigms are not said to be true nor false, they are only more appropriate in certain instances as each offers its own assumptions and ways of observing human social life (Babbie and Mouton, 2005). The two main research paradigms used widely in research are the positivist and interpretivist paradigms. These will be examined and the most appropriate paradigm used for this study.

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3.2.1. Positivist

This paradigm works with observable social reality and the output of such research is likely be generalized, comparable to physical or scientific findings (Saunders, Lewis and Thornhill, 2009). It is useful when trying to understand human behaviour through noting observation and reasoning. This approach endeavours to have an understanding of the social and natural world (Rehman and Alharthi, 2016). It assumes that there is a cause-effect relationship in any subject matter which can help predict what my happen in future with certainty. Positivists hold the belief that

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there are rules that govern social phenomena and that by formulating these rules, factual statements can be presented. This approach assumes that humans act rationally (Neustadtl and Babbie, 1989). It however must be kept in mind that rationality is not always the case.

The theory of these studies is that of realism. Realism is a philosophical approach which utilizes scientific enquiry. Its essence is derived from what the senses project is as reality that is seen as the truth. This philosophy points out that there is a reality fairly independent of the mind (Saunders, Lewis and Thornhill, 2009). It is a branch of epistemology that stems from positivism and utilises a scientific approach to develop the basis for knowledge.

The positivist researcher gathers data to assess the validity of the phenomena being assessed. The type of data is dictated by the purpose of the study. The data could be qualitative or quantitative. In a study which looked at the influence of governance on foreign investor decisions a positivist paradigm was employed (Madinga and Maziriri, 2018). This study utilised quantitative data in a cross-sectional deductive study and this approach enabled the author to measure the relationship their chosen variables. The aforementioned study motivates for this approach to be replicated in this study.

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3.2.2. Interpretivist

This approach respects the differences between people and the substance of sciences (Bryman and Bell, 2011). It is socially constructed, subjective and may change (Saunders, Lewis and Thornhill, 2009). Unlike the adoption of a scientific model in quantitative research, this paradigm relies on grasping the social world by considering the understanding of the world by others. By focusing on incorporating human interest into the studies, this approach is better suited for a qualitative study rather than quantitative one. Furthermore it is seen as a response to Positivism which has largely be seen as dominant (Grix, 2018).

This paradigm allows for no absolute truth as it accommodates multiple realities. It can be seen as a subjective approach. In a study titled, Customer Experience Innovation as a Competitive Advantage, the interpretivist approach was used as

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greater importance was placed on feelings and attitudes of customers (Thapa and Jørgensen, 2020). In this study customers drew on how they experienced things and reflected on those experiences. A qualitative research method was used. It involved the use of focus groups and interviewing participants. With this study utilizing quantitative data, the grounding theories in the positivist approach will allow for the complexity of the data, rather than pushing data into predefined segments which may lead to them not providing the full picture (Babones, 2016). It must however be noted that the research method does not dictate what paradigm is chosen.

3.2.3. Chosen paradigm

Positivism was used in this study to ascertain new knowledge. This philosophy was chosen over interpretivism as this study will work with an observable social reality (Saunders, Lewis and Thornhill, 2009). As seen in the above contrasting of both approaches, positivism is the most appropriate for this particular study. This is because positivism reputes human behaviour to be passive and controlled, however, it is determined by the external environment (Sönmez, 2013). This encapsulates how this study will be approached. With DCx being a relatively new concept, this study seeks to explore that concept. This was done using the deductive approach which involves the development of a theory and then testing it rigorously (Saunders, Lewis and Thornhill, 2009).

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3.3. Research Design

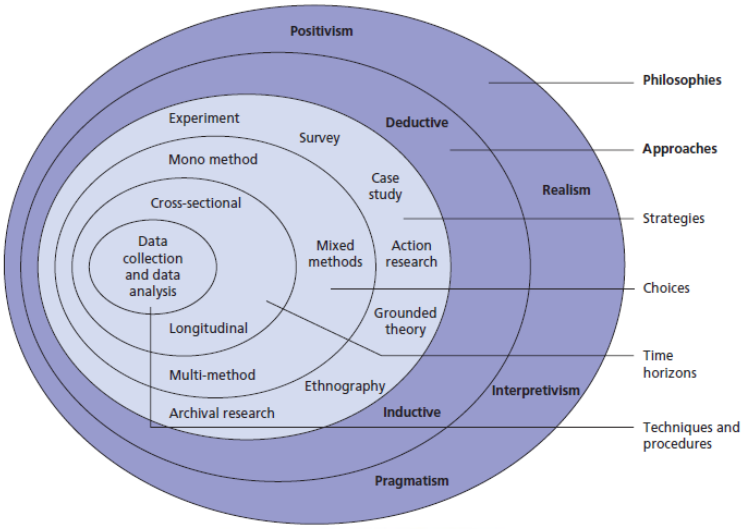

Figure 9: Research onion (Saunders, Lewis and Thornhill, 2009)

This section explained how the study will achieve its objectives. The study utilized a survey design. This was done using the research onion (Figure 1) as a research tool. This enabled this study to have valid findings, evaluations and conclusions. The research onion is a starting point which frames how to acquire logical and scientifically driven results.

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3.4. Approach

Research can be approached from two reasoning approaches, inductive and then a deductive approach.

The inductive approach begins by collecting data which will then be used to generate a hypothesis and a theory. The inductive approach starts with particular instances and ends with a generalised statement or a set of principles (Williamson, 2018). This approach was not used for this study. It begins with noting observations, then searching for patterns in the observation and this is largely used in conducting qualitative research (Babbie and Mouton, 2005). In essence the hypothesis is built based on the responses given by participants of the study. In contrast the deductive approach uses the opposite approach, whereby pre-set patterns which the collected observations are measured against. Furthermore, literature is used to identify theories to test using collected data against a theoretical

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or conceptual framework (Saunders, Lewis and Thornhill, 2009). Hence, the deductive approach was chosen for this study.

The deductive approach aligns well with the Positivist philosophy. A deductive approach being, a method to the association between theory and research (Bryman and Bell, 2011). To begin with, a theory is put together. Thereafter a hypothesis is suggested and this can either be proved or disproved dependent on the outcomes of statistical analysis (Rehman and Alharthi, 2016). Research is therefore directed by hypotheses and the ideas are acquired from the theory. This is done to find causality and show that the findings will not differ when applied to the general population. The collection of quantitative data enables the testing of the hypothesis against a particular characteristic which must have certain controls in place to counter act any mitigating factors (Saunders, Lewis and Thornhill, 2009). In contrast in inductive research the theory is generated from the research (Bryman and Bell, 2011).
The research strategy was a survey, given that data will be collected from willing participants. There are three options available regarding research method, namely, mono, mixed and multi methods. With quantitative data being collected using a structured questionnaire, a mono method was used.

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3.5. Research method

This study could have utilized either a qualitative, mixed or a quantitative research method. Before reaching a decision on which methodology to use, all three must be examined. All three of these research paradigms are vital to solve the diverse and multifaceted stated problem. The mixed method is generally acceptable in today's world unlike in the past where the quantitative and qualitative were standard practice (Strijker, Bosworth, Bouter and Gosse, 2020). These three methods are further elaborated on in Table 6 on the next page.

Table 6: Emphases of Quantitative, Mixed, and Qualitative Research

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	Quantitative Research	**Mixed Research**	**Qualitative Research**
Scientific method	Confirmatory or "top- down"—the researcher tests hypotheses and theory with data	Confirmatory and exploratory	Exploratory or "bottom-up"— The researcher generates or constructs knowledge, hypotheses, and grounded theory from data collected during fieldwork
Ontology	Objective, material, structural, agreed-upon	Pluralism; appreciation of objective, subjective, and intersubjective realities and their interrelations	Subjective, mental, personal, and constructed
Epistemology	Scientific realism for Truth; justification by empirical confirmation of hypotheses; universal scientific standards	Dialectical pluralism: pragmatic justification (what works for whom in specific contexts); mixture of universal (e.g., always be ethical) and community-specific needs-based standard	Relativism; individual and group justification; varying standards
View of human	Regular and predictable	Dynamic, complex, and	Situational, social, contextual,

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thought and behaviour		partially predictable—multiple influences include environment/nurture, biology/nature, free will/agency, and chance/fortuity	personal, and unpredictable
Most common research objectives	Quantitative/ numerical description, causal explanation, and prediction	Multiple objectives; provide complex and fuller explanation and understanding; understand multiple perspectives	Qualitative/ subjective description, empathetic understanding, and exploration
Interest	Identify general scientific laws; inform national policy	Connect theory and practice; understand multiple causation, nomothetic (i.e., general) causation, and idiographic (i.e., local, certain, individual) causation; connect national and local interests and policy	Understand and appreciate particular groups and individuals; inform local policy

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Focus	Narrow-angle lens, testing specific hypotheses	Multilens focus Study	Wide-angle and "deep-angle" lens, examining the breadth and depth of phenomena to learn more about them
Nature of observation	Study behaviour with controlled conditions; isolate the causal effect of single variables	Study multiple contexts, perspectives, or conditions; study multiple factors as they operate together	Study groups and individuals in natural settings; attempt to understand insiders' views, meanings, and perspectives
Form of data collected	Collect quantitative data based on precise measurement using structured and validated data-collection instruments	Collect multiple kinds of data	Collect qualitative data such as in-depth interviews, participant observations, field notes, and open-ended questions. The researcher is the primary data-collection instrument
Nature of data	Variables	Mixture of variables, words, categories, and images	Words, images, categories
Data Analysis	Identify statistical relationships among variables	Quantitative and qualitative analysis	Use descriptive data; search for local patterns,

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		used separately and in combination	themes, holistic features; and appreciate and articulate differences/variation
Results	Generalizable findings providing representation of objective outsider viewpoint of populations	Provision of "subjective insider" and "objective outsider" viewpoints; presentation and integration of multiple dimensions and perspectives	Particularistic findings; provision of insider viewpoints
Form of final report	Formal statistical report (e.g., with correlations, comparisons of means, and reporting of statistical significance of findings)	Mixture of numbers and narrative	Less formal narrative report with rich contextual description and direct quotations from research participants

Adopted from: *"Interpretive Quantitative Methods for Social Sciences"* (Babones, 2016)

3.5.1. Qualitative

Qualitative method put emphasis on words as opposed to quantification when collecting and analysing data (Bryman and Bell, 2011). A qualitative research study

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makes use of multiple data collection methods and particular analytical procedures to develop a conceptual framework. This ensures that all the necessary nonnumeric data is collected which will aid the researcher. This includes interviews, pictures, case study, life story, artifacts and video clips to mention a few (Saunders, Lewis and Thornhill, 2009; Williamson, 2018). This method aligns with the interpretivism paradigm. There are two types of qualitative data collection which are mono and multi method.

In the mono method a single data collection technique such as semi structured interviews are utilised. In contrast the multi-method qualitative study involves collecting data using various qualitative data collection techniques. For both these methods, the appropriate data analysis tools must be used. In previous studies largely semi-structured interviews were utilised. These include studies by Huovila, (2017) and Mital *et al.*, (2018). These were titled "Action Plan for Improving Omnichannel Customer Experience and Digital Lead Management" and "Adoption of Internet of Things in India: A test of competing models using a structured equation modelling approach" respectively. While this extracted valuable information, the current Covid-19 environment limited face to face interaction and time constraints contributed to this method not being feasible. Hence, a qualitative method is not relevant for this study. Below are some of the advantages and disadvantages listed from a previous study (Rahman, 2016).

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Table 7: Advantages and Disadvantages of Qualitative methods

Advantages	**Disadvantages**
Provides detailed description of subject's feelings, thoughts, and experiences.	Leaves out contextual understanding and rather focuses more on meanings and experiences.
Gives a holistic understanding of the subjects' experience in certain situations.	Seen as less credible in social sciences.

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Allows for the researcher to explore the subjects inner experience, working out how meanings are moulded via culture.	Uses a smaller sample size which raises the question on generalisation of the whole population.
Seen as the study of individualised cases or events with the ability to comprehend different voices, meanings and events.	Data interpretation and analyses seen as more complicated.
Data collection is subjective and in depth as researchers engage directly with the subjects.	The analysis of the study takes a substantial amount of time.

Adapted from: *The Advantages and Disadvantages of Using Qualitative and Quantitative Approaches and Methods in Language " Testing and Assessment " Research : A Literature Review* (Rahman, 2016)

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3.5.2. Quantitative

Quantitative method is used for any data collection technique or data analysis procedure which uses numerical data (Saunders, Lewis and Thornhill, 2009). This method uses largely graphs and statistics. Quantitative studies permit one to examine the relationship between variables (Bryman and Bell, 2011). In contrast quantitative data provides the advantage of being numeric and quantifiable over words used in qualitative method, there is scope for there to be loss of meaning and depth (Neustadtl and Babbie, 1989). This method aligns well with the positivism paradigm. This can be seen in previous studies by Hung-Joubert and Erdis; Mihardjo, Sasmokob, Alamsjahb and Elidjenb; Eigenraam, Eelen, van Lin and Verlegh which all successfully used quantitative methods. These studies were titled, "Influence of retailers' website system quality factors on online shopping in South Africa", "Digital leadership role in developing business model innovation and customer experience orientation in industry 4.0" and "A Consumer-based Taxonomy of Digital Customer Engagement Practices" respectively (Eigenraam *et*

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al., 2018; Hung-Joubert and Erdis, 2019; Mihardjo *et al.*, 2019). Below are some of the advantages and disadvantages identified from a previous study (Rahman, 2016).

Table 8: Advantages and Disadvantages of Quantitative methods

Advantages	**Disadvantages**
Likely to be more reflective to the general population as a larger randomly selected sample is used.	Leaves out contextual understanding and rather focuses more on meanings and experiences.
Data analysis is less time consuming.	Does not explain how subjects interpret their actions and that of others.
Researcher does not influence the subjects understanding or mood as its most likely to not be as engaging e.g., survey.	Does not ascertain the deeper underlying connotations and explanations.
Utilises variables.	Gives more a snapshot than the full picture of the variables without considering other factors
Findings can be quantified.	Overlooks the subjects' experiences and perspectives in a very controlled environment.

Adapted from: *The Advantages and Disadvantages of Using Qualitative and Quantitative Approaches and Methods in Language " Testing and Assessment " Research : A Literature Review* (Rahman, 2016)

3.5.3. Mixed method

This method entails using both quantitative and qualitative methods within the same study (Williamson, 2018). It is an approach believed to provide a deeper understanding of any given phenomena as multiple viewpoints are taken. This method leverages off the strengths of both qualitative and quantitative research. This allows for the gaps within the two methods to be filled using both in a single

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study. It utilises a paradigm of pragmatism. There is no exact mixture deemed to be appropriate as it depends on the research questions, the scenario and practical issues faced by the researcher. The use of this method allows for attainment of a holistic view to tackle a given research problem, unpacking its complexity which more often than is not fully unpacked if looked at from a one dimensional view (Strijker, Bosworth, Bouter, Les, 2020). Studies by Silalahal and Rufaidah then one by Nguyen were seen to have used this method successfully. Drawing out rich findings in the studies titled, "Measuring Digital Customer Experience" and "The impact of emotions on customer experience through using mobile application for food ordering in Finland" respectively (Nguyen, 2018; Silalahi and Rufaidah, 2018). Given the time constraints this method was not feasible for this study regardless of its strengths and weaknesses depicted below:

Table 9: Advantages and Disadvantages of Quantitative methods

Advantages	**Disadvantages**
Highly effective for complex research questions (Driscoll, Appiah-Yeboah, Salib and Rupert, 2007).	Analysis, coding, and integration of unstructured with structured data is a complex and time- consuming process (Driscoll, Appiah-Yeboah, Salib and Rupert, 2007).
The use of qualitative and quantitative data provides a deep understanding of response and detailed assessment of response patterns respectively (Driscoll, Appiah-Yeboah, Salib and Rupert, 2007).	Can be expensive and researchers working under tight budgetary or time constraints opt to reduce sample sizes or reduce the time spent on interviews. (Driscoll, Appiah-Yeboah, Salib and Rupert, 2007).
Enables the researcher to verify and generate theory in the same study (Malina, Nrreklit and Selto, 2011)	Given the complexity, it is challenging to manage data inconsistencies (Malina, Nrreklit and Selto, 2011)
Allows researcher an opportunity to have a holistic view of participants	Requires a highly skilled researcher.

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point of view (Malina, Nrreklit and Selto, 2011)	

3.5.4. Chosen research method

The choice of method is defined by several factors. For this study, due to the fact that respondents will provide structured and predetermined feedback (Likert scale) and not descriptive feedback, the quantitative method is preferred over qualitative (Kumar, 2011). The quantitative method also enriches research by identifying the occurrence of thematic or rhetorical patterns and allows for one to examine numerical data by statistical inference (Boettger and Palmer, 2010). Furthermore, the time constraints to conduct this study meant that the quantitative method was preferable.

3.6. Study Type

The study can be longitudinal or cross-sectional. Longitudinal studies will require data to be collected twice or more from the sample group (Bryman and Bell, 2011). This allow for more time to be taken in conducting the study and conclusions can be made based on this refined approach. On the other hand, cross-sectional is conducted at a given point in time, requires quantifiable data and relationships between variables can be examined (Bryman and Bell, 2011). A longitudinal study can also be seen as a series of cross-sectional studies as information is collected from the participants several times (Kumar, 2011). This allows the researcher to measure the change over a period of time with certainty and accuracy. While on the other hand, participants can anticipate the questions or lose interest in the study which skews the findings. Cross-sectional studies are cheaper and faster to undertake as the information is gathered once off. However, they do not measure change as there is only one data collection point (Kumar, 2011).

The time horizons in this study were cross-sectional due to time constraints and the fact that data was collected at a given point in time (Saunders, Lewis and Thornhill, 2009). The study assessed these stated factors at a given time and do not seek to

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measure any change. Hence, this study was of a cross-sectional type. Furthermore, the utilization of the quantitative method and study objectives are well aligned to the utilization of cross-sectional method. This approach has been successfully used in similar studies which include studies titled "Towards a framework for innovation in retailing through social media" (Torres de Oliveira, Indulska, Steen and Verreynne, 2020); "Determinant factors of cloud-sourcing literature in the era of cloud computing" (Schneider and Sunyaev, 2016) and "Guerilla Marketing Strategies and their Impact on the Business Performance of Retail SMEs within the Johannesburg Metropolitan Area" (Madinga and Maziriri, 2018). Thus, it has been deemed appropriate for this study.

3.7. Unit of analysis

This is typically known as the unit of observation and also referred to as, "the what of the study" (Babbie and Mouton, 2005). The data was collected from individual survey responses. Hence, individuals were the unit of analysis type, specifically, those who live in Cape Town and have shopped online. This is an appropriate unit of analysis as individual customers are the direct source of the user experience that seeks to be enhanced.

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3.8. Data collection Methods

This section details how the primary and secondary data were used, the research instrument and how it was administered, data sourcing, data sampling and the pilot testing approach.

3.8.1. Primary and secondary data

This study used both primary and secondary data collection. The primary data was collected by means of an online survey which was distributed amongst residents of Cape Town. While the secondary data was collected by way of literature review as described in Chapter 2.

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3.8.2. Research Instrument

An online survey was developed as the primary instrument. This was ideal given the Covid-19 pandemic that killed thousands of people hence the limited human interactions in 2020 given the lock down regulations (Alex, Herkulaas and Benjamin, 2020). The responses were recorded against questions on Likert-style Scales. This method consists of asking respondents to show the extent to which they agree or disagree with a given statement related to their particular attitude (Hooker, 2016). The instrument had a five-point agreeing scale with contrasting answers on either end. The options were strongly agree, agree, neutral, disagree and strongly disagree. The instrument was informed by four main constructs, namely, Digital Touchpoint Experience, Digital Service experience, Digital Brand Experience and Digital Experience Platforms. These constructs had 7 to 10 variables each. The questions were grouped according to firstly by which construct they fell under and then variable they speak to as seen on the next page.

Table 10: Variables

Digital Touchpoint Experience	**Digital Service experience**	**Digital Brand Experience**	**Digital Experience Platforms**
Websites	Customer satisfaction	Customer loyalty	Ease of use
Channel Integration	Customer engagement	Trust	Availability
Social Media	Self service	Recommendations	Digital exclusion
Applications	Service excellence	Brand Engagement	Affordability
Service Channels	Accessibility	Customer perception	Internet of Things
Mobility	Speed	Customer journey	Machine learning
Real-time interactions	Feasibility	Culture	Virtual assistants
User experience	Security	Personalisation	Artificial intelligence
Co-creation		Past experiences	Big Data
Devices		Digital Marketing	Chatbots

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3.8.3. Data Collection Methods

For this study quantitative data collection methods were considered. This excluded qualitative methods which include Observation, ethnography, field research, focus groups, case studies and interviews (Marczyk, DeMatteo and Festinger, 2005). The various methods had to be considered and the most suitable one subsequently selected for this study. In Table 11 below, the advantages and disadvantages of the quantitative methods were discussed to help make a choice.

Table 11: Comparison among quantitative methods

Method	Advantages	Disadvantages
Field experiments	- Works in natural setting - Larger scale research - Subjects are not influenced by the observations of the experiments	- Difficult to control variables - Difficult to replicate the same conditions of the study - Ethical problems can arise
Simulation	- Used to study complex systems - Compress a time frame, which allows to study the behaviour of the system more quickly - "What-if" questions can be tested and answered	- Building the model requires deep knowledge of the field - Time consuming and expensive - May require specialized hardware and software tools
Surveys	- Minimal development time - Cost-effective - Easy data collection and analysis using statistical methods - High audience reach - High representativeness	- Reliability of data is very dependent on the quality of answers and on the survey' structure - Rigidity of the structure - Does not portray emotions, conduct and shift of emotions of respondents

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	- Not affected by the subjectivity of the researcher	
Correlational study	- A great deal of information and different areas can be examined - Degree of association between two variables can be calculated easily - No manipulation of behaviour is required	- No direct cause and effect can be inferred - May lack internal/external validity - Does not provide a definitive reason for the existence of a correlation between two variables
Multivariate analysis	- Multiple statistical tests and techniques can be used - A lot of information/domains can be explored - Technical rigor of the process	- Complex of the employed techniques - Requires the use of specialized statistical software

Adopted from: *Strengths and limitations of qualitative and quantitative research methods* (Almeida, 2017)

Given the above considerations, a survey method was selected. Surveys collect the data directly from participants through a set of questions arranged in a particular order (Almeida, 2017). As seen in the stated benefits, a survey was most suitable given the time constraints, limited funding, its ability to reach a wider audience and the limitation of face-to-face contact with participants. Furthermore, in this study there were limited emotions to be captured and structure was very important to get the required information from participants which mitigated some of the weaknesses of this method. An online survey was distributed to participants.

3.8.4. Survey structure

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An internet-based survey will most likely increases the reach and external validity as the assumption is made that a larger accessible population was used (Rice, Winter, Doherty, and Milner 2017). Data was collected from retail customers who have had the chance to purchase from a retailer online. The participants for this study were residents of Cape Town. The participants were at least 18 years old and where all asked for prior consent. The population was accessible to the researcher in Cape Town. The respondents are those that the researcher has practical access to.

3.8.5. Sampling

Sampling is the method by which a select group is drawn from a larger population group to be utilised for estimating or forecasting the presence of a phenomena in the general population (Kumar, 2011). The two broad techniques are probability and non-probability sampling. In probability sampling, each respondent has an equal chance of being selected and this may at times lead to the selection criteria being very broad (Marczyk, DeMatteo and Festinger, 2005; Kumar, 2011). Non-probability sampling involves the respondents having some unknown factors and there is a set criteria in the selection of respondents (Dawson, 2013). Careful consideration had to be done in selecting the sampling method to be used.

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Table 12: Sampling methods

Probability Sampling		
Method	**Advantages**	**Disadvantages**
Simple random sampling	- Easy and fair way to attain sample - Representative of the population - Unbiased	- Generalised population group - Unfocused findings
Systematic sampling	- Sample is spread evenly across the population - Ease of use	- Process of selection may miss hidden traits - Sample can easily be compromised.

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Stratified sampling	- Reduces human bias - Highly representative sample	- Can't be applied where population can't be split into different groups - Subgroups may not be proportional
Cluster sampling	- Reduced variability - Feasible for large groups	- Biased sampling - Complex and requires skilled researcher
Non-Probability Sampling		
Method	**Advantages**	**Disadvantages**
Quota sampling	- Quicker and easier than probability sampling techniques - Improves representation of the sample	- Difficult to detect sampling error - No generalisations which may compromise external validity
Purposive sampling	- Allow researchers to justify generalisations - Provides a wide range of non-probability sampling techniques	- Prone to researcher bias - Sample may be representative of a limited population group
Self-selection sampling	- Reduced time searching for participants - Participants more likely to be committed to the study	- Self-selection bias - Exaggeration of findings
Snowball sampling	- Difficult to identify participants - Useful when there is no other way to access the population.	- Impossible to determine sampling error. - Not representative of the sample

Adapted from: *Pros and cons of different sampling techniques* (Sharma, 2017)

For this study, a non-probability sampling procedure called purposive sampling was utilised. This procedure is based on the researchers' discretion in selecting

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participants (Saunders, Lewis and Thornhill, 2009). Thus, allowing for a criterion to be drawn up before respondents were asked to participate in the study. A non-probability sampling approach is best suitable for exploratory studies; hence it was selected for this study. It was also best suited as there were time and cost constraints in conducting this study. Furthermore, with the participants needing to meet a set criterion, it was vital that this approach was taken.

The survey was set up in a manner such that if "No" was given as an answer to one or both the first two questions, the respondent was immediately directed to the submission screen. This meant that they were excluded from the study. These questions verified if one had prior online shopping experience and if they lived in Cape Town. This homogeneous sampling method ensured that respondents who did not meet the criteria did not take the main survey questions. Those who did meet the criteria were taken through each of the survey questions and gave consent to participate in the study.

3.8.6. Pre-pilot testing

After the survey was developed it was sent out to five individuals as a pilot. This allowed for testing and ensuring that the necessary outcomes were achieved by the survey (Dawson, 2013). The findings derived from the pilot test were incorporated into the final questionnaire to make it better suited for the participants. The feedback received was largely positive with only a few amendments needing to be made. These changes were made to ensure that the best results were obtained. These were to reduce and refine some questions so that the survey is not too long. A good indicator was that the pilot group did not have many questions which indicated that the instructions were clear and there was no ambiguity in the questions. The data was as required as the responses could be collated in a secure and central online repository. Once satisfied with the survey and amendments, it was then sent out electronically to the target group.

3.9. Validity of the sample

Validity refers to investigating the integrity of the findings that are generated from the research (Bryman and Bell, 2011). It is critical to consider external and

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ecological validity. However, construct validity was of utmost importance for this study.

External validity investigates if the results of the study can be generalized beyond the specific research context (Bryman and Bell, 2011). The survey was made voluntary and used a representative sample of the population (Saunders, Lewis and Thornhill, 2009). In contrast for ecological validity which questions whether social scientific findings were derived from people's daily and natural social settings (Saunders, Lewis and Thornhill, 2009). The ecological validity may be questioned as the completion of the questionnaire will be at variable levels of comfort for participants. The first question in the survey ensured that participants had conducted online shopping to strengthen the ecological validity of the study.

Construct validity demonstrates that the test measures the construct it claims to measure and in the case of this study, that the construct is critical to enhance DCx. To achieve this, the preliminary pilot was used to check the feasibility of the larger test in establishing the strength of questionnaire and then making the necessary adjustments. The results of the pilot test gave an indication of whether the intended construct was being measured as expected.

Factor analysis was then conducted to test the convergent and discriminant validity. This was to make sure the selected variables used to measure a given concept are doing so adequately. Firstly, to measure the inter correlation of the constructs and loading of items as per their construct, oblique rotation will be utilised. What was seen as an acceptable factor loading measure is > 0.35. Thereafter, the Kaiser-Meyer-Olkin (KMO) and Bartlett's test with values shown in table 13 below:

Table 13: Kaiser-Meyer-Olkin (KMO) and Bartlett's test (Hadi, Abdula and Sentosa 2016)

Test	Score	Criteria
KMO	> 0.5	Bare minimum
KMO	0.5 - 0.7	Mediocre
KMO	0.7 – 0.8	Good
KMO	0.9 – 0.9	Great
KMO	> 0.9	Superb

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Bartlett	< 0.05	Significant

3.9.1. KMO and Bartlett's Test result

Table 14: KMO and Bartlett's result

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.710
Bartlett's Test of Sphericity	Approx. Chi-Square	2112.956
	Df	703
	Sig.	.000

The above table shows that the KMO test was acceptable at 0.710 that is indicated as good. The Bartlett's test was also seen as acceptable as it showed a significance level of 0.00 that is less than 0.05. Therefore, Factor Analysis, as done below is appropriate for this study. This was used to construct the final framework depicting the influence of the variables.

Table 15: Factor Loading

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Construct	Variable	Factor Loading	Construct	Variable	Factor Loading
Digital Touchpoint Experience	DTP1	0.625	**Digital Brand Experience**	DBE1	0.589
	DTP2	0.682		DBE2	0.652
	DTP3	0.770		DBE3	0.731
	DTP4	0.762		DBE4	0.567
	DTP5	0.783		DBE5	0.759
	DTP6	0.801		DBE6	0.715
	DTP7	0.623		DBE7	0.754
	DTP8	0.829		DBE8	0.730

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	DTP9	0.835		DBE9	0.578
	DTP10	0.775		DBE10	0.425
Digital Service Experience	DSE1	0.714	**Digital Experience Platforms**	DEP1	0.708
	DSE2	0.804		DEP2	0.822
	DSE3	0.801		DEP3	0.709
	DSE4	0.608		DEP4	0.627
	DSE5	0.675		DEP5	0.848
	DSE6	0.804		DEP6	0.871
	DSE7	0.804		DEP7	0.660
	DSE8	0.674		DEP8	0.829
				DEP9	0.882
				DEP10	0.735

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All the factors as seen in the above are seen as acceptable as their factor loading measure is > 0.35. The lowest being DBE10 with 0.425 and the highest being DEP6 with 0.871 as the depicted measure.

3.10. Reliability

Reliability questions whether the measures that are devised for the research are consistent. Thus it investigates that the findings of the study are repeatable in other conditions and the same findings will be derived (Bryman and Bell, 2011). Furthermore, this calculation provides a measure of internal consistency which indicates relation of a data set (Institute for Digital Research and Education, 2020). Reliability is especially an issue when it comes to quantitative research. The stability of a measure is often in question. In this study, the procedures undertaken

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have been described in detail to enable replication of the study in a different time or location.

For this study, Cronbach's alpha was used to measure the reliability of the survey administered on participants. It was appropriate for this study as it is used to determine internal consistency of Likert scale surveys. An overall Cronbach's alpha value of 0.7 or higher is generally deemed acceptable. However, it must be noted that values of 0.6-0.7 are also an acceptable level of reliability, while greater than 0.8 and less than 0.95 represent a very good level (Ursachi, Horodnic and Zait, 2015).

3.10.1. Cronbach's Alpha Results

Table 16: Cronbach's Alpha result

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Digital Touchpoint experience	0.627	0.617	8
Digital service experience	0.621	0.642	8
Digital brand experience	0.775	0.777	10
Digital experience platforms	0.701	0.693	8

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The findings indicated an acceptable reliability alpha (≥ 0.7) for Digital brand experience (0.775) and Digital experience platforms (0.701). While Digital Touchpoint experience and Digital service experience were questionable at 0.627 and 0.621 respectively. Given that the reliability of all constructs had an alpha of greater than 0.5 which demarcates the level where the reliability will be deemed unacceptable if lower than that, the correlation between the constructs can be examined further.

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To improve the alpha, elimination of variable was done. This is done base on the relative effect on the variable to the total (Kopalle, 1997). Below are the observed impacts of excluding certain variables.

Table17: DTP modified Cronbach's Alpha result

	Mean	Std. Deviation	N	Cronbach's Alpha if Item Deleted
DTP2	4.49	.661	152	.627
DTP3	3.53	1.009	152	.594
DTP4	3.89	.987	152	.583
DTP5	3.78	1.073	152	.593
DTP7	4.50	.797	152	.606
DTP8	2.97	1.187	152	.569
DTP9	3.16	1.174	152	.558
DTP10	4.35	.808	152	.617

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DTP1 was excluded as that raised the Cronbach alpha to 0.627 from 0.612. The rest of the variables were not excluded as that would have been detrimental to the alpha as seen on table 17 above.

Table 18: DSE modified Cronbach's Alpha result

	Mean	Std. Deviation	N	Cronbach's Alpha if Item Deleted
DSE1	3.95	.783	152	.574
DSE2	4.15	.820	152	.616
DSE3	3.36	.909	152	.566
DSE4	4.05	.684	152	.551
DSE5	3.72	.943	152	.592
DSE6	3.05	1.066	152	.621
DSE7	3.36	1.013	152	.627
DSE8	3.70	1.002	152	.562

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This construct had a Cronbach Alpha of 0.621. There was no need to delete any of the variables as there was no significant difference noted between them. DSE7 which had an Alpha of 0.627 that is only a 0.006 difference was the only notable variable with a more significant score.

Table 19: DBE modified Cronbach's Alpha result

	Mean	Std. Deviation	N	Cronbach's Alpha if Item Deleted
DBE1	4.22	.788	152	.764
DBE2	4.01	.949	152	.767
DBE3	4.49	.755	152	.767
DBE4	4.22	.829	152	.755
DBE5	4.09	.845	152	.771
DBE6	4.16	.865	152	.730
DBE7	3.73	1.055	152	.756
DBE8	3.65	1.037	152	.737
DBE9	4.44	.698	152	.752
DBE10	4.19	.716	152	.754

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This construct had an alpha of 0.775. In looking at Table 19 above, deleting any of these factors would not increase the alpha. Due to that, none of the variables were excluded in this analysis.

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Table 20: DEP modified Cronbach's Alpha result

	Mean	Std. Deviation	N	Cronbach's Alpha if Item Deleted
DEP1	4.28	.622	152	.706
DEP3	4.00	.942	152	.699
DEP4	3.57	1.149	152	.697
DEP5	4.10	.961	152	.662
DEP6	4.01	1.033	152	.665
DEP7	3.59	1.082	152	.656
DEP8	3.45	1.079	152	.627
DEP9	3.45	1.178	152	.653

This construct had a Cronbach alpha of 0.701. This was after it had an initial alpha of 0.679. DEP 10 was then deleted which brought the alpha up significantly to 0.701. Furthermore, excluding DEP1 would have very slightly increased the alpha by 0.05 to 0.76. So, this was not done as the increase was deemed insufficient.

3.11. Data analysis

For this study, the collected data was coded and analysed with Statistical Package for Social Science (SPSS). To best answer the research question, participants could not skip any questions when answering any survey questions. Neither could they proceed to the next section before completing the prior one. This ensured that the survey had logic built in to eliminate any incomplete responses. It was critical that the respondents answered the first two questions which were the control questions that lead to them being included or excluded from the study. The section that followed collected demographic information which included age, gender, education level and annual income. This was then followed by the four main constructs which had 10 questions each. These addressed each variable that fell under the various constructs. Finally, the survey was closed off by a section of consent which was a pre-requisite for submission.

This study had the critical analysis and further interpretation of data in an effort to find the rationale behind the findings (Memon, 2019). The data which was processed on the SPSS analysis tool quantified the findings adequately. SPSS drew

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out the descriptive statistics of frequency, significance, Analysis of variance (ANOVA) and bivariate correlation and regression analysis. The ANOVA had to be verified by checking if the samples were extracted independently from each other by way of the Levene's test for determining whether the homogeneousness of variance was satisfied and Shapiro-Wilk or Kolmogorov test for checking normality (Kim, 2016). The correlation analysis was done to ascertain the relationship between the quantitative variables (Gogtay and Thatte, 2017). While the regression analysis describes the association of responses to their explanatory variables (Liang and Zeger, 1993). Finally, Cronbach's Alpha factor analysis was used to measure the reliability of the findings. This calculation is a measure of internal consistency which signifies relation of a data set (Institute for Digital Research and Education, 2020). This analysis altogether enables for the study objectives to be met.

3.12. Limitations and threats

This study was based on participants from the city of Cape Town, South Africa. The findings may not be the same in other cities in South Africa. Furthermore, this study was conducted in the onset of the Covid-19 pandemic whereby in South Africa, Cape Town was the hub of the crisis initially (Alex, Herkulaas and Benjamin, 2020). This limited access to people face to face and the use of an online questionnaire to capture the participants' responses was utilized. This was done by circulation of the Google forms questionnaire link. The study was also cross-sectional in nature; hence data was collected at a moment in time.

The selection of participants was limited to only those with internet access as the survey was made available online. This however must not be seen as a limitation as the target population needed to have internet access. An assumption was made that the participants were honest in their responses. Untruthful responses were out of the researchers control and the assumption is a fair one. To reduce falsified responses and social desirability bias, the questionnaire was made completely anonymous. The participants were informed to manage this and told the data will be confidential to put them at ease.

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3.13. Chapter summary

This chapter presented the research methodology which were used in seeking to achieve the objectives of this study. It covered the research paradigm, research design, approach and unit of analysis. The research instrument, data sourcing, sampling, pre-pilot testing, and data collection methods were also covered. This chapter further covered the validity and reliability, before closing off with the data analysis, limitations and threats close off the chapter. The next chapter will cover the data analysis and discussion of the research findings.

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CHAPTER 4: DATA ANALYSIS AND DISCUSSION OF FINDINGS

4. Introduction

This chapter will present the data analysis for this study. The analysis was conducted through the statistical package for social sciences (SPSS). Firstly, it will comprise of demographic information which was collected. This includes age, gender, education level and annual income of the sample. This chapter will also cover the frequency across the four constructs of DTP, DSE, DBE and DEP. This will inform the Analysis of variance across all constructs which then informs the correlation and regression analysis that follows. The chapter then concludes with a final framework that the study findings brought forward. Finally, the summary of the entire chapter is presented.

4.1.Demographics

The section presents the findings on the demographic profile of the sampled respondents. These are age, gender, education level and annual income respectively.

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4.1.1. Age

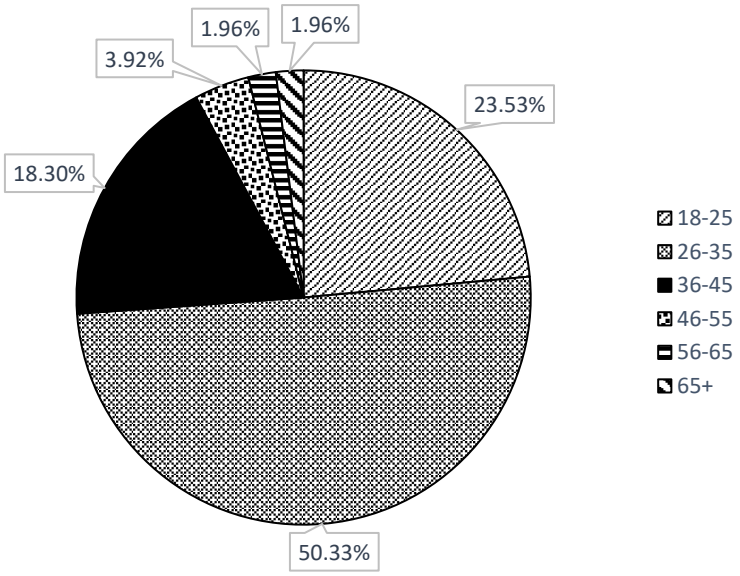

Figure 10: Age

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A least half of the eligible participants of this study (50.33%) was in the 26-35 age bracket. This was then followed by the 18-25 and then the 36-45 age group at 23.53% and 18.30% respectively. This indicates that the younger age group are more open to the use of online shopping. Only a combined total of 7.84% of the sampled participants were above the age of 45 which showed a low adoption of digital channels to complete purchases as participants got older.

4.1.2. Gender

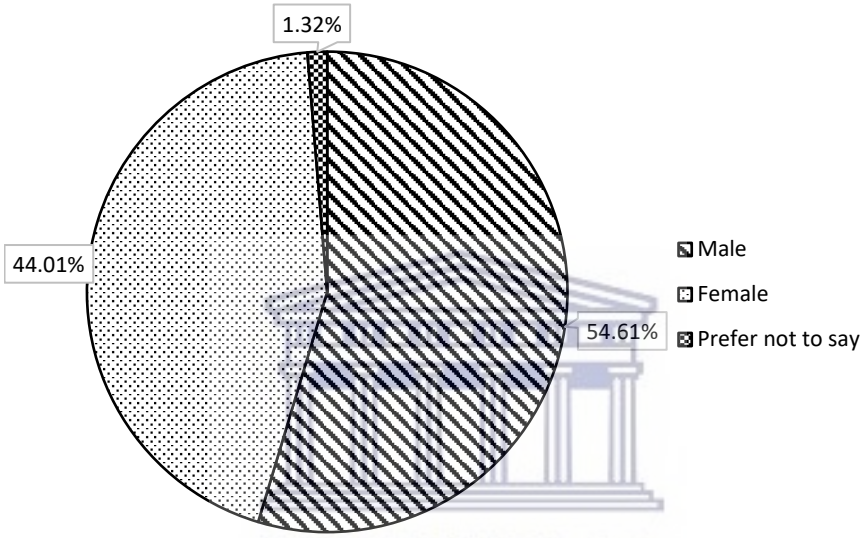

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Figure 11: Gender

This study showed that 54.61% of participants were male in comparison to the 44.01% who were female. This left 1.32% who preferred to not specify their gender. This shows that most participants were male while a minority preferred not to specify their gender.

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4.1.3. Education Level

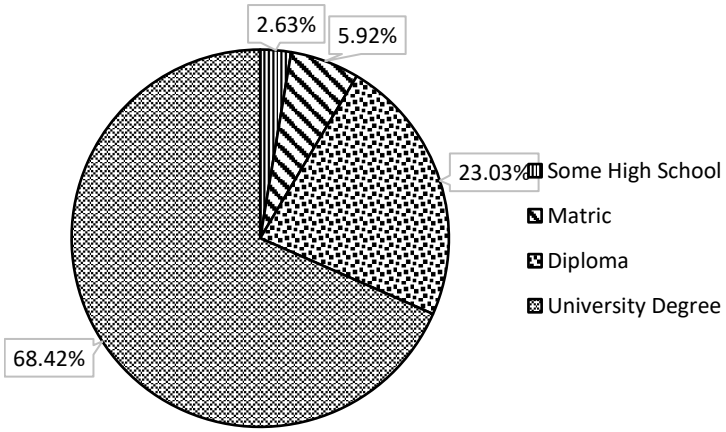

Figure 12: Education Level

This study showed that 68.42% of participants hold a university degree. The remaining 31.58% of the participants constitutes of 23.03% with a Diploma, 5.92% Matriculants and 2.63% with some high school education. This indicates that most of the sample are adequately educated and it can be assumed that the survey was well understood. This is further motivated by the fact that only 8.55% of the population do not hold a tertiary qualification.

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4.1.4. Annual Income

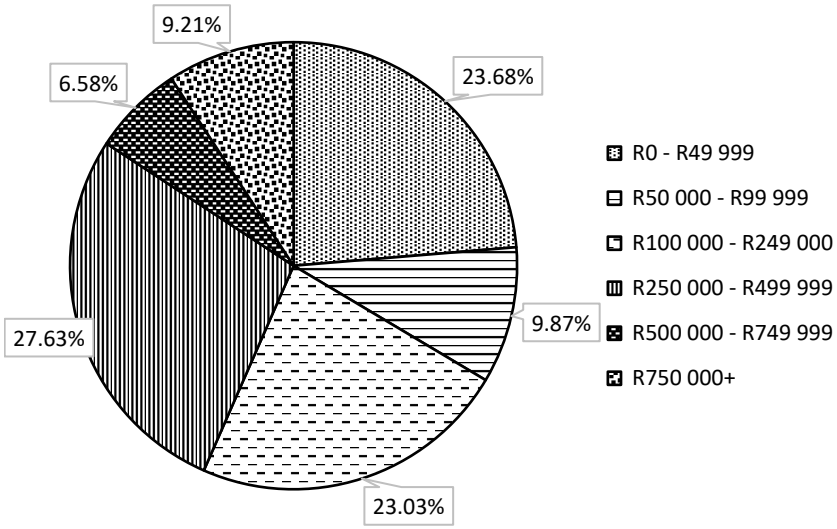

Figure 13: Annual Income

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In this study it was found that the most popular group comprised of 27.63% of the population who earned between R250 000 - R499 999. This came as no surprise given that 50% of the population where in the 26-35 age group. While 23.68% of the sample group earned between R0 - R49 999. This correlated with the fact that the same percentage of the group is aged between 18 and 25 years old who would typically be university students or unemployed. The R100 000 - R249 999 was a tight third place with 23.03%. While those who earned more than R500 000 only comprised of a combined 15.79%.

4.2. Frequency

This section will discuss the frequency findings of this study. What will be referred to as largely agreeable in section 4.2 is the sum of strongly agree and agree responses in the study.

4.2.1. Sample size and eligibility

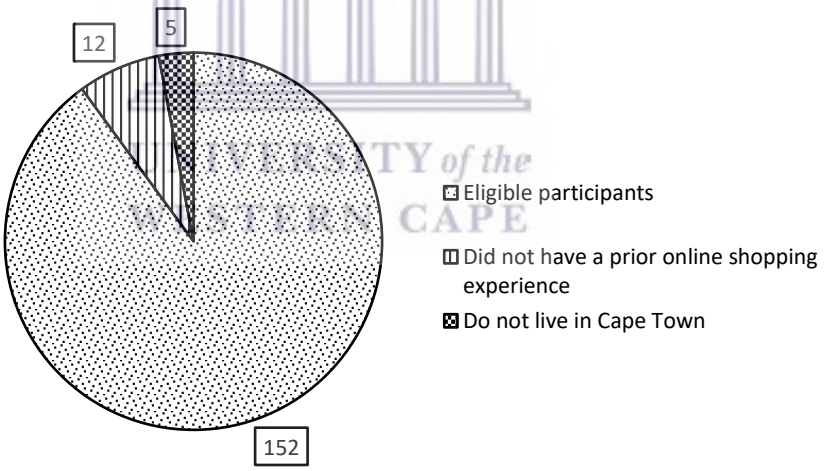

Figure 14: Participants break down

The survey was circulated via an online link which saw 169 respondents take the survey. A total of 152 participants were deemed to be eligible based on the control questions. This demonstrated that 89.94% of the sample group were eligible and answered the survey in full which according to Dillman (1978) is an acceptable rate of return. The other 10.06% were directed to the submission page without answering any of the questions after responding to the control questions. These being the above 7.10% and 2.96% respectively. Moreover, the sample size is also

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deemed sufficient even when dealing with a large population in social science research (Cochran, 1977).

4.2.2. Digital Touchpoint Experience (DTP) Frequency

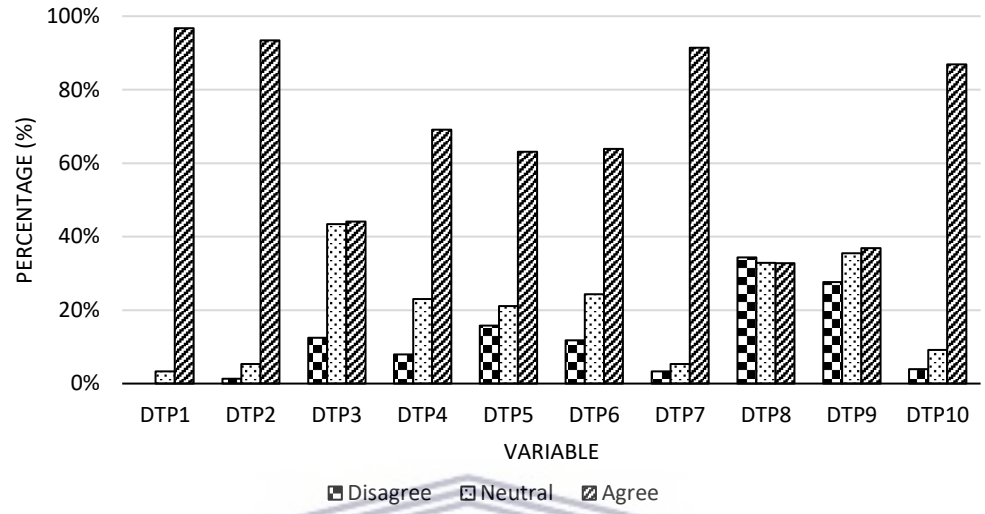

Figure 15: Participants by DTP

From the graph above, the variables that participants chose to agree with will be discussed, with the top three or greater than 85% of the sample being seen as significant. Any variable below 35% will also be seen as significant. What can be interpreted from this is that 96.70% of the sample group had prior online experience while 3.30% remained neutral. Furthermore, 93.40% of the sample group were comfortable completing online purchases. These findings show that only a minority of the sample had difficulties shopping online. While at least 91.40% of the sample group were found to be active on at least one social media platform. With only 3.30% of them not being active on any social media platform. From this, it can be inferred that social media is a well sought-after touchpoint. There is also 86.90% of the sample indicated that they expect real-time interactions with retailers. Finally, 32.80% clearly agree to being contacted by brands on social media, showing that most online shoppers do not want to be contacted on their social media pages.

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4.2.3. Digital Service Experience (DSE) Frequency

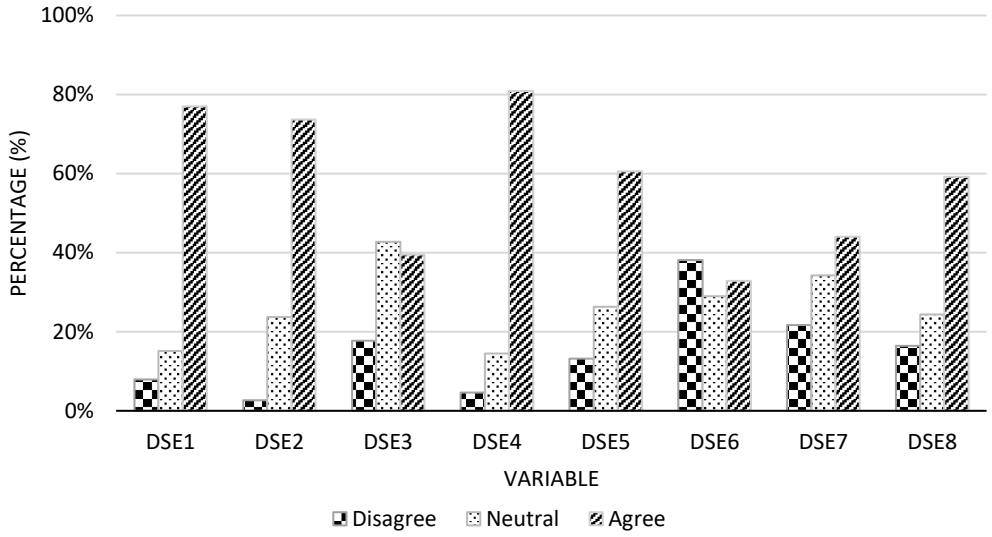

Figure 16: Participants by DSE

From the graph above the variables that participants chose to agree with will be discussed, with the top three of the sample being seen as significant. While any variable with less than 35% agreeability will also be seen as significant. A large majority, 82.90% of the sample find that their online experience is often pleasant and allows them to do what they set out to do. With 76.90% of them satisfied with available online shopping options. There is also 73.68% of the sample who prefer a personalised experience when they engage with the retailer. Furthermore, only 32.89% often get frustrated with how long it takes them to complete transactions online. This goes to show that largely the customer experiences shopping at a satisfactory speed.

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4.2.4. Digital Brand Experience (DBE) Frequency

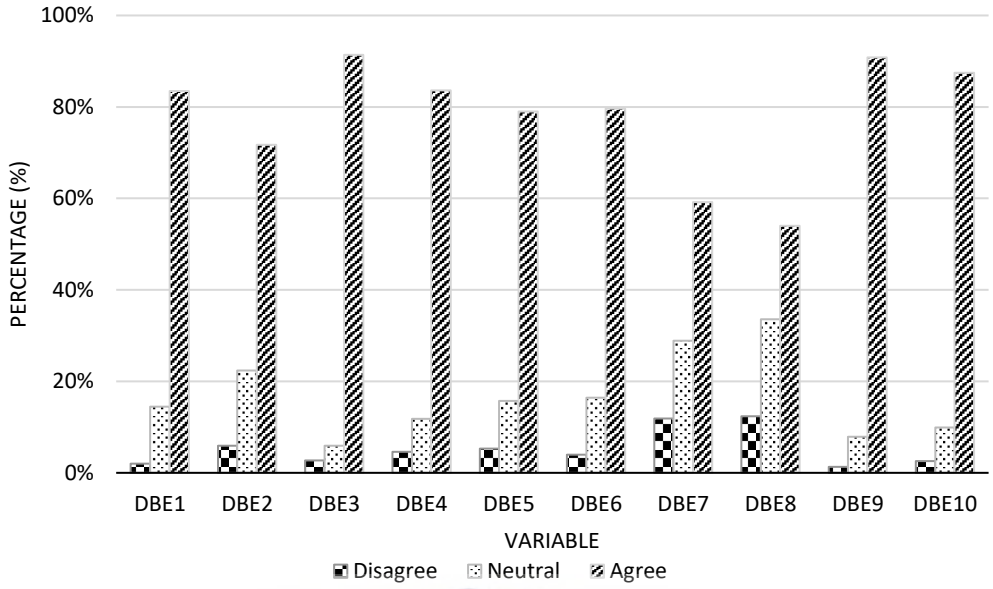

Figure 17: Participants by DBE

From the graph above the variables that participants chose to agree with will be discussed, with the top three of the sample being seen as significant. While any other variable greater than 85% or less than 35% agreeability will also be seen as significant. The participants were 91.40% less likely to recommend a brand if they have a bad experience with them. While 90.80% were most likely to engage with the brand that they had a memorable experience with. Lastly 87.50% of the participants indicated that how the brand is portrayed online will impact their perspective of the brand. These findings go to show the importance of the brand engagement, customer perception and past experiences in impacting the retailers brand image online.

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4.2.5. Digital Experience Platform (DEP) Frequency

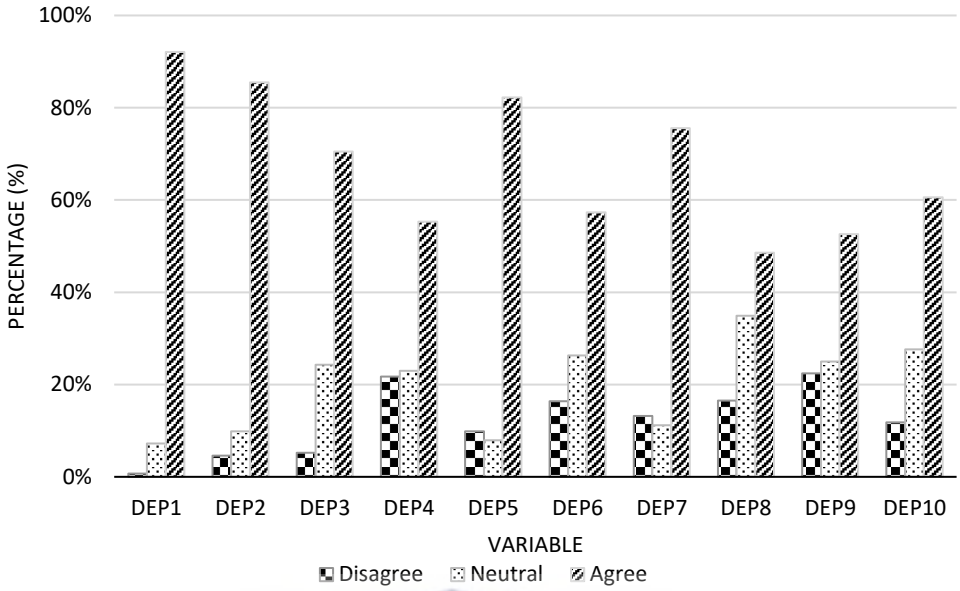

Figure 18: Participants by DEP

From the graph above the variables that participants chose to agree with will be discussed, with the top three of the sample being seen as significant. While any other variable greater than 85% or less than 35% agreeability will also be seen as significant. A vast majority of participants found it easy to complete most online purchases as seen by the 92.10% agreeability. With 85.50% indicating that most digital platforms are available 24/7. This indicated a strong need for useability and availability of digital platforms. Lastly, in terms of emerging technologies, 82.20% of the participants indicated that they were familiar with the concept of Internet of Things.

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4.3.Analysis of variance: Demographic Factors

4.5.1. ANOVA: Age

Table 21: ANOVA of Age

		Sum of Squares	df	Mean Square	F	Sig.
DTPMean	Between Groups	5.595	5	1.119	6.279	.000
DSEMean	Between Groups	9.435	5	1.887	9.540	.000
DBEMean	Between Groups	4.877	5	.975	4.107	.002
DEP Mean	Between Groups	11.652	5	2.330	10.326	.000

The analysis of variance of the four constructs against age showed that all of them were significant. DTP, DSE and DEP all were at the 0.000 significance level. While DBE was at the 0.002 significance level. They are all deemed significant at the less than 0.05 level. Therefore, for this study, these variables will be examined, and further analysis will be conducted.

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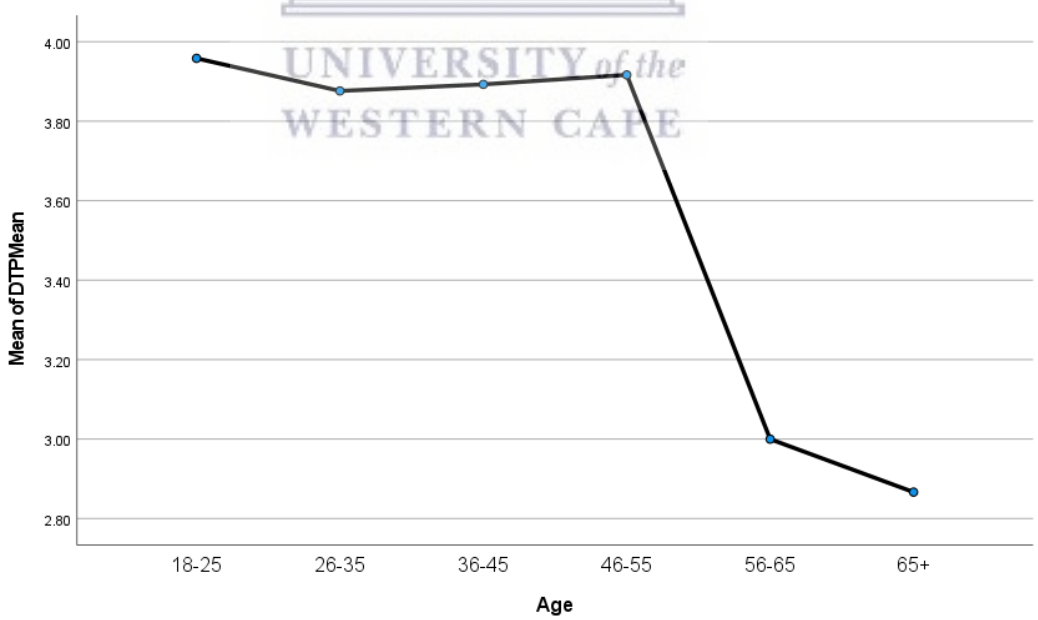

Figure 19: Age to DTP

What can be observed from the above is that participants between the age of 18-25 scored the highest in this construct with a mean of 3.96. What can be observed is that the DTP decreased slightly to a mean of 8.876 for participants aged between

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26-35. There was a slight increase in the next two age categories of 36-45 (3.89) and 46-55 (3.91) respectively. This then saw a steep decline to a mean of 3.00 for the age category of 56-65 and further down to 2.86 for the 65+ category.

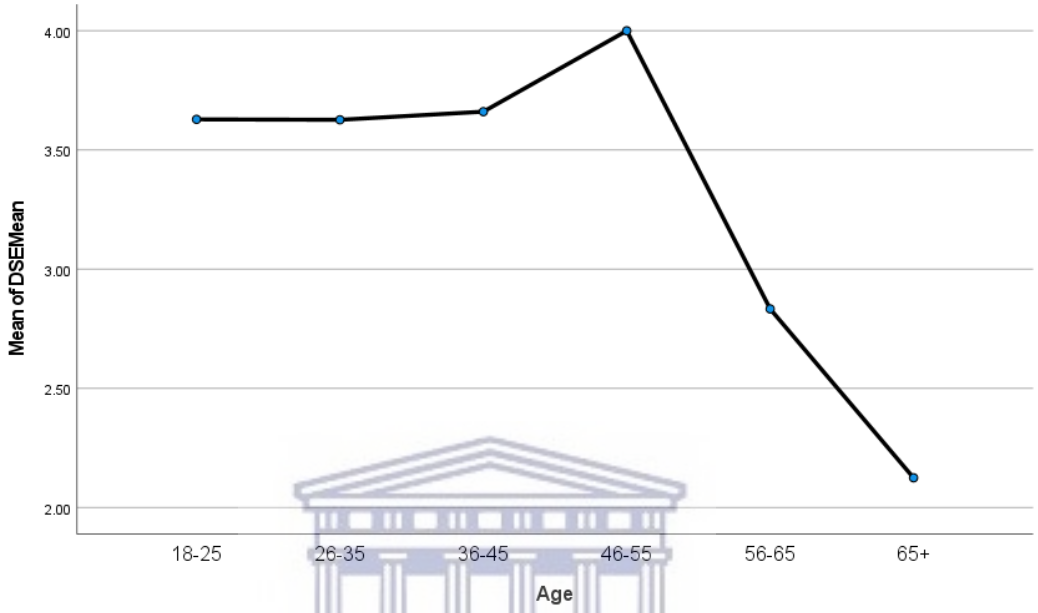

Figure 20: Age to DSE

What can be observed from the above is that participants between the age of 18-25 had a mean score of 3.63. What can be seen is that the DSE decreased very slightly to a mean of 3.62 for participants aged between 26-35. There was a slight increase in the next age categories of 36-45 to 3.66. While the 46-55 age category showed an increase to 4.00. A steep decline to a mean of 2.83 for the age category of 56-65 and further down to 2.12 for the 65+ category.

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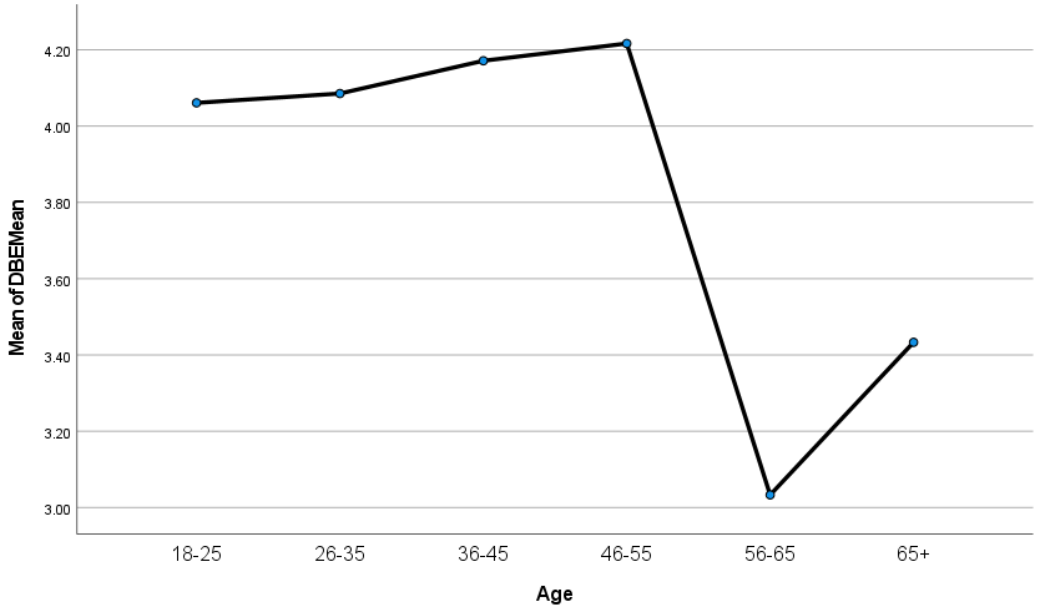

Figure 21: Age to DBE

What can be observed from the above is that participants between the age of 18-25 scored a mean of 4.06 in this construct. What can be observed is that the DBE increased very slightly to a mean of 4.08 for participants aged between 26-35. There was a slight increase in the next age categories of 36-45 to a mean score of 4.17. Then the 46-55 age category showed an increase to 4.21. A steep decline to a mean of 3.03 for the age category of 56-65 and then a slight increase to 3.43 for the 65+ category was observed.

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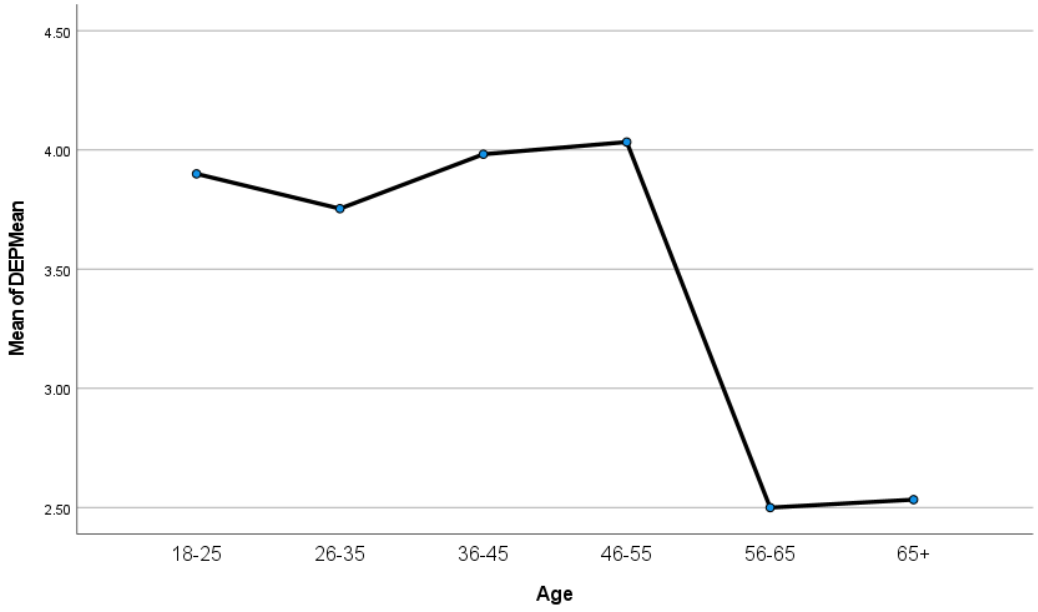

Figure 22: Age to DEP

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What can be observed from the above is that participants between the age of 18-25 scored a mean of 3.90 in this construct. What can be observed is that the DEP decreased very slightly to a mean of 3.75 for participants aged between 26-35. There was a slight increase in the next age categories of 36-45 to a mean score of 3.98. Then the 46-55 age category showed an increase to 4.03. A steep decline to a mean of 2.50 for the age category of 56-65 and then a slight increase to 2.53 for the 65+ category.

4.5.2. ANOVA Gender

Table 22: ANOVA of Gender

		Sum of Squares	df	Mean Square	F	Sig.
DTPMean	Between Groups	1.699	2	.850	4.232	.016
	Within Groups	29.914	149	.201		
	Total	31.614	151			
DSEMean	Between Groups	3.268	2	1.634	6.947	.001
	Within Groups	35.048	149	.235		
	Total	38.316	151			
DBEMean	Between Groups	2.560	2	1.280	5.155	.007
	Within Groups	36.995	149	.248		
	Total	39.556	151			
DEPMean	Between Groups	3.055	2	1.527	5.478	.005
	Within Groups	41.547	149	.279		
	Total	44.602	151			

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The analysis of variance of the four constructs against age showed that all of them were significant. DTP was observed at 0.016 level of significance. DSE was observed at 0.001 level of significance. DBE was observed at 0.007 level of significance. While DEP was observed at 0.005 level of significance. They were all deemed significant at the less than 0.05 level.

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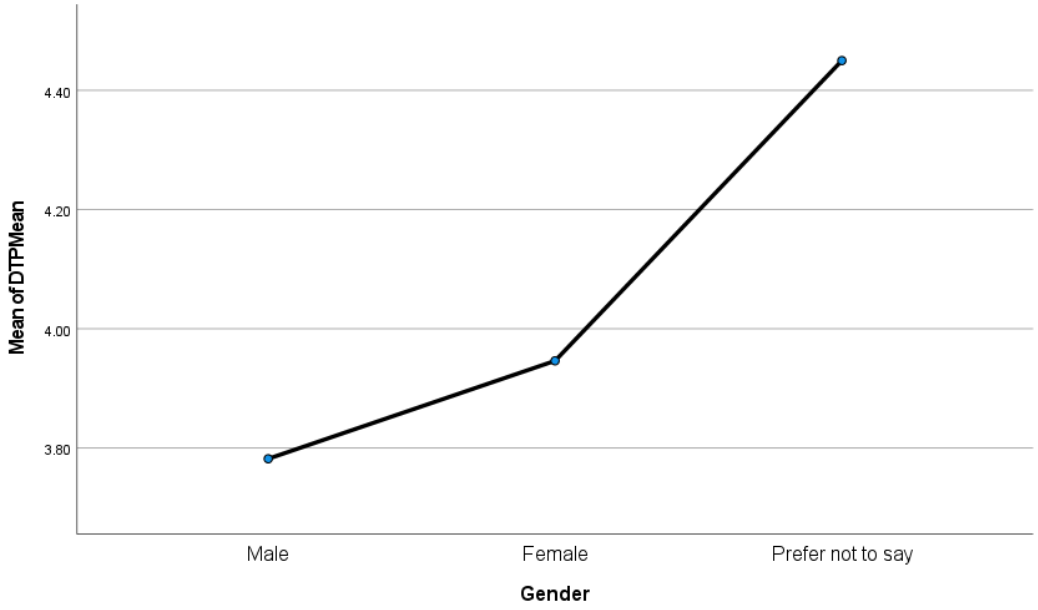

Figure 23: Gender to DTP

What can be observed from the above is that the total mean for this construct was 3.86. The male participants were observed to have a mean of 3.78 in the DTP construct. Whereas the female participants had a higher mean of 3.94. The final category was that which preferred not to state their gender and their observed mean was 4.45.

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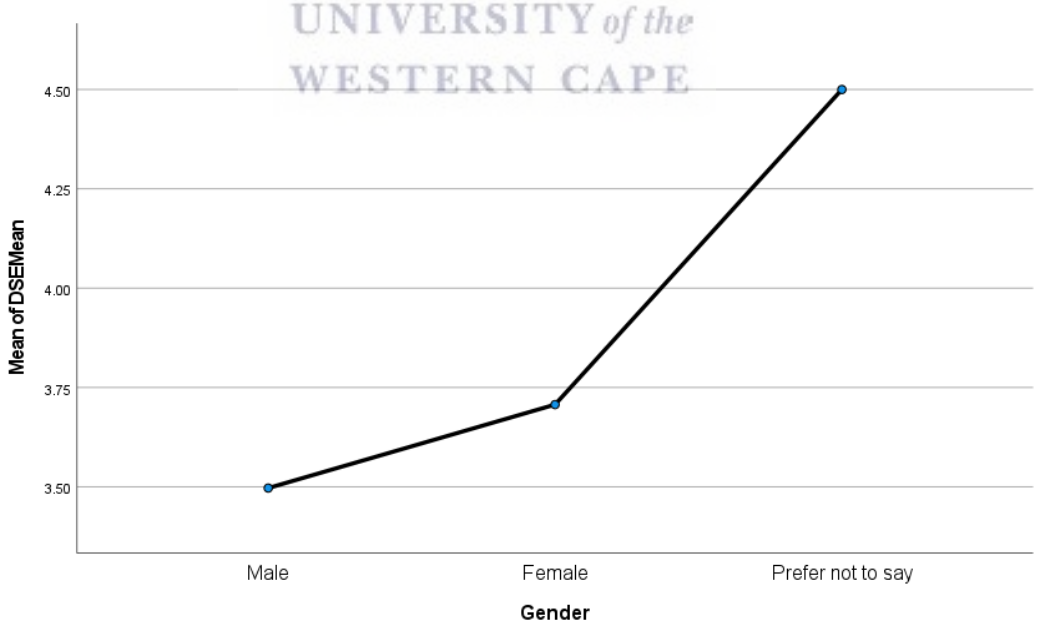

Figure 24: Gender to DSE

What can be observed from the above is that the total mean for this construct was 3.60. The male participants were observed to have a mean of 3.49 in the DSE

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construct. Whereas the female participants had a higher mean of 3.70. The final category was that which preferred not to state their gender and their observed mean was 4.50.

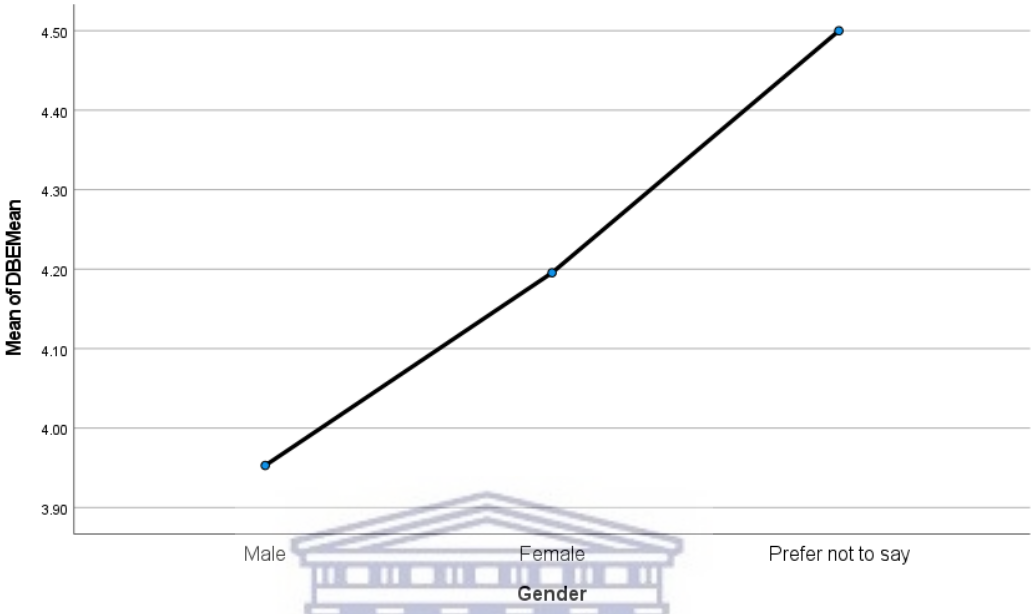

Figure 25: Gender to DBE

What can be observed from the above is that the total mean for this construct was 4.06. The male participants were observed to have a mean of 3.95 in the DBE construct. Whereas the female participants had a higher mean of 4.19. The final category was that which preferred not to state their gender and their observed mean was 4.50.

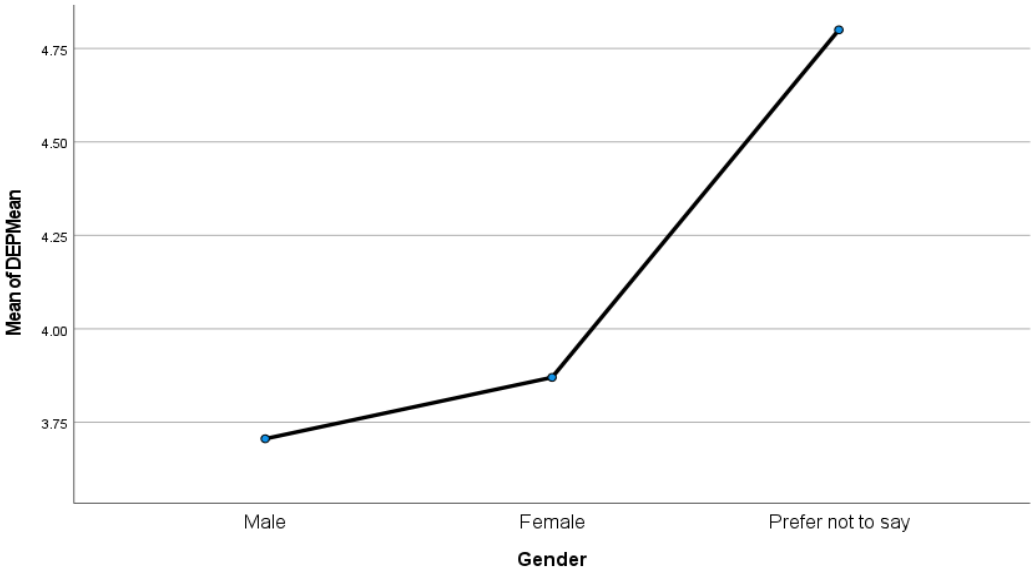

Figure 26: Gender to DEP

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What can be observed from the above is that the total mean for this construct was 3.79. The male participants were observed to have a mean of 3.70 in the DEP construct. Whereas the female participants had a higher mean of 3.87. The final category was that which preferred not to state their gender and their observed mean was 4.80.

4.5.3. ANOVA Education Level

The different levels of education of the participants and how they responded to each of the four constructs was done by obtaining the mean score per construct based on the responses to the questions posed. These findings are critical as they will highlight how having a certain level of education impacts a customer's DCx. They are all deemed not significant at they all exceeded the less than 0.05 level. Therefore, no further analysis will be done.

4.5.4. ANOVA Income Level

Table 23: ANOVA of Income Level

		Sum of Squares	df	Mean Square	F	Sig.
DTP	Between Groups	3.411	5	.682	3.532	.005
	Within Groups	28.203	146	.193		
	Total	31.614	151			
DSE	Between Groups	2.606	5	.521	2.131	.065
	Within Groups	35.710	146	.245		
	Total	38.316	151			
DBE	Between Groups	1.266	5	.253	.966	.441
	Within Groups	38.289	146	.262		
	Total	39.556	151			
DEP	Between Groups	2.074	5	.415	1.424	.219
	Within Groups	42.528	146	.291		
	Total	44.602	151			

The analysis of variance of the four constructs against income level. It was observed that DTP was at 0.05 level of significance that is seen as significant. DSE at 0.065 level of significance is not seen as significant alongside DBE and DEP at 0.441 and

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0.219 respectively. Therefore, no further analysis will be done on those three constructs.

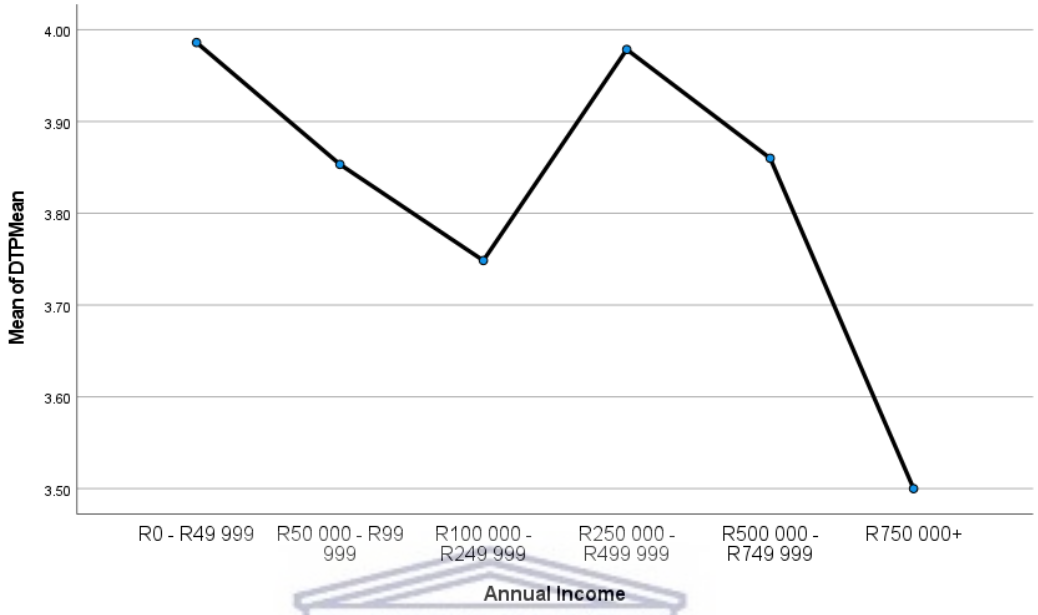

Figure 27: Annual income to DTP

What can be observed from the above is that the total mean for this construct was 3.86. The participants with an income level of between R0 - R49 999 had a mean of 3.98. There was a decline for the next two categories of participants between R50 000 - R99 999 and R100 000 - R249 999 at 3.85 and 3.74 respectively. An increase is seen for those within the R250 000 - R499 999 income level group at 3.97. The decline then resumes as those between R500 000 - R749 999 showed a mean of 3.86 and those who are at income level of R750 000+ at 3.5 mean score.

4.4.Correlation

This section will discuss the inter-item correlations between the constructs in the conceptual framework constructs. This study utilised Pearson's coefficient correlation to understand the relationship between different constructs in the study. The findings with a number near to +1 shows a strong positive correlation whilst a number near to -1 shows a strong negative correlation. On the other hand, a correlation result in the range between 0.40 and 0.50 shows a moderate correlation, then any score below 0.40 shows a weak correlation between the two variables (Neustadtl and Babbie, 1989). Furthermore, the inter-item correlations between demographics and the conceptual framework constructs were conducted. These will

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guide how the analysis of variance will be conducted based on significance levels. Between 0.05 and 0.01 significance levels were seen as significant for this study.

Table 24: Pearson Correlation result

		Age	Gender	Education Level	Annual Income	DTP Mean	DSE Mean	DBE Mean
Age	**Pearson Correlation**	1						
Gender	**Pearson Correlation**	-.180*	1					
	Sig. (2-tailed)	0.026						
	N	152	152					
Education Level	**Pearson Correlation**	-0.145	-0.046	1				
	Sig. (2-tailed)	0.074	0.575					
	N	152	152	152				
Annual Income	**Pearson Correlation**	.420**	-.194*	0.049	1			
	Sig. (2-tailed)	0.000	0.017	0.552				
	N	152	152	152	152			
DTP Mean	**Pearson Correlation**	-.306**	.218**	-0.150	-.178*	1		
	Sig. (2-tailed)	0.000	0.007	0.066	0.028			
	N	152	152	152	152	152		
DSE Mean	**Pearson Correlation**	-.246**	.264**	-0.090	-.217**	.587**	1	
	Sig. (2-tailed)	0.002	0.001	0.272	0.007	0.000		
	N	152	152	152	152	152	152	152
DBE Mean	**Pearson Correlation**	-0.151	.254**	-0.049	-0.048	.424**	.538**	1
	Sig. (2-tailed)	0.063	0.002	0.550	0.559	0.000	0.000	
	N	152	152	152	152	152	152	152
DEP Mean	**Pearson Correlation**	-.266**	.213**	0.007	-0.088	.567**	.554**	.533**

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	Sig. (2-tailed)	0.001	0.008	0.930	0.283	0.000	0.000	0.000
	N	152	152	152	152	152	152	152

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

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

The above Table 24 represents the findings of the correlation on all constructs in pairs. In relation to the study objectives, these findings will show the relationship between the constructs in relation to their experience when engaging with retailers online. These are to be discussed below:

4.4.1. Correlation Matrix discussion

a) Digital Touchpoint experience (DTP) as an independent variable

The conducted analysis was done to examine the relationship between DTP/Demographic variables and DTP/other constructs. DTP/Age was significant at 0.000 and a weak negative correlation of -.306. This indicates that as age increases, the lower the DTP experience is for customers. DTP/Gender was significant at 0.007 and a weak positive correlation of 0.218 was realised. DTP/Education Level was insignificant at 0.066 and will not be analysed further. DTP/Annual Income is significant at 0.028 and has a weak negative correlation of -0.178. This indicates that as the income level increases, there is a reduction in the DTP experience for customers.

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b) Digital Service Experience (DSE) as an independent variable

The conducted analysis was done to examine the relationship between DSE/Demographic variables and DSE/other constructs. DSE/Age was significant at 0.002 and a weak negative correlation of -.246. This indicates that as age increases, the lower the DSE is for customers. DSE/Gender was significant at 0.001 and a weak positive correlation of 0.264 was realised. DSE/Education Level was insignificant at 0.272 and will not be analysed further. DSE/Annual Income is significant at 0.007 and had a weak negative

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correlation of -0.217. This indicates that as the income level increases, there is a reduction in the DSE for customers.

c) **Digital Brand Experience as an independent variable**

The conducted analysis was done to examine the relationship between DBE/Demographic variables and DBE/other constructs. DBE/Age was not significant at 0.063. This shows that age did not affect the DBE of a customer. DBE/Gender was significant at 0.002 and a weak positive correlation of 0.254 was realised. DBE/Education Level was insignificant at 0.550 and will not be analysed further as it has been shown that education level does not have a significant impact on DBE. Furthermore, DBE/Annual Income is also not significant at 0.559. This indicates that the income level does not impact DBE.

d) **Digital Experience Platforms as an independent variable**

The conducted analysis was done to examine the relationship between DEP/Demographic variables and DEP/other constructs. DEP/Age was significant at 0.001 and a weak negative correlation of -0.266 was shown. This shows that as a customer gets older, there is a reduction their DEP. The DEP/Gender was significant at 0.008 and a weak positive correlation of 0.213 was realised. DEP/Education Level and DEP/Annual Income were insignificant at 0.930 and 0.283 respectively. This result showed that neither education level nor income level had a significant impact on DEP.

4.4.2. Correlation Coefficients amongst constructs discussion

a) For DTP/DSE, DTP/DBE and DTP/DEP, all these pairs, the level significance can be seen at a 0.000 ($p < 0.001$) which meets acceptable level of 0.01. Therefore, seen as significant and linearly related. The findings show a strong positive correlation is seen at 0.559** between DTP and DSE. This showing that the higher the DSE then DTP increased. There is a weak

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positive correlation of 0.353** between DTP and DBE. This showing that the higher the DBE then DTP increased accordingly. Finally, a moderate positive correlation of 0.477** between DTP and DEP showed that as DEP increased, the higher the DTP experience.

b) The conducted analysis was also done to examine the relationship between DSE/DTP, DSE/DBE and DSE/DEP. For all these pairs, the level significance can be seen at a 0.000 ($p < 0.001$) which meets acceptable level of 0.01. Therefore, seen as significant and linearly related. The findings show a strong positive correlation is seen at 0.559** between DSE and DTP. There is a moderate positive correlation of 0.523** between DSE and DBE. Finally, another moderate positive correlation of 0.496** between DTP and DEP.

c) The conducted analysis was also done to examine the relationship between DBE/DTP, DBE/DSE and DBE/DEP. For all these pairs, the level significance can be seen at a 0.000 ($p < 0.001$) which meets acceptable level of 0.01. Therefore, seen as significant and linearly related. The findings show a weak positive correlation is seen at 0.353** between DBE and DTP. There is also a moderate positive correlation of 0.523** between DBE and DTP. Finally, a moderate positive correlation of 0.481** between DBE and DEP.

d) The conducted analysis was also done to examine the relationship between DEP/DTP, DEP/DSE and DEP/DBE. For all these pairs, the level significance can be seen at a 0.000 ($p < 0.001$) which meets acceptable level of 0.01. Therefore, seen as significant and linearly related. Between DEP and DTP there was a moderate positive result of 0.477**. There was a moderate positive correlation of 0.496** between DEP and DSE. Finally, a moderate positive correlation of 0.481** between DEP and DBE.

4.5.Regression

This section tests and examines the hypotheses that have been developed for this study. What was interesting is that all the R square values were relatively low as they were below 0.20 (20%). This value is a statistical measure of how data is to the fitted regression line expressed as a percentage that is generally

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interpreted as the higher, the better the fit of the model (Minitab Blog Editor, 2013). However, in a Social Sciences, low values are acceptable as human behaviour is not easy to accurately predict. For this study this low value was deemed acceptable as it indicated that the dependent variable was affected by other variables which may not have been considered in the analysis and do not affect the quality of the model (Moksony, 1990).

4.5.1. Regression analysis for H1 demographic factors

Table 25 below shows the model summary for H1. The R2 of the model is 0.122, suggesting that this study depicts that 12.20% of the variation on the dependent variable Digital touchpoint experience enhances customer experience as explained by independent variables annual income, gender and age.

Table 25: H1 summary

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.349[a]	0.122	0.104	0.43306

a. Predictors: (Constant), Annual Income, Gender, Age

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Table 26 below depicts the regression analysis between the dependent variable DTP and the independent variables age, gender and annual income. Age and gender are accepted as they had p-values below 0.05 whilst annual income was rejected as it had a p-value above 0.05. These findings show that age and gender affect the customers digital touchpoint experience, while annual income does not.

Table 26: DTP Regression

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Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.941	0.152		25.928	0.000
	Age	-0.116	0.038	-0.261	-3.054	0.003
	Gender	0.142	0.069	0.164	2.070	0.040
	Annual Income	-0.011	0.025	-0.037	-0.434	0.665

a. Dependent Variable: DTPMean

4.5.2. Regression analysis for H2 demographic factors

Table 27 below shows the model summary for H2. The R^2 of the model is 0.12, suggesting that this study depicts that 12% of the variation on the dependent variable DSE as explained by independent variables annual income, gender and age.

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Table 27: H2 summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.346[a]	0.120	0.102	0.47738

a. Predictors: (Constant), Annual Income, Gender, Age

Table 28 below depicts the regression analysis between the dependent variable DSE and the independent variables age, gender and annual income. Gender was accepted as it had a p-value below 0.05 whilst age and annual income were rejected as they had p-values above 0.05. These findings show that only gender affects the customers digital service experience, while age and annual income do not.

Table 28: DSE Regression

Coefficients[a]

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Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.583	0.168		21.384	0.000
	Age	-0.080	0.042	-0.163	-1.901	0.059
	Gender	0.205	0.076	0.214	2.708	0.008
	Annual Income	-0.035	0.028	-0.107	-1.246	0.215

a. Dependent Variable: DSEMean

4.5.3. Regression analysis for H3 demographic factors

Table 29 below shows the model summary for H3. The R^2 of the model is 0.065, suggesting that this study depicts that 6.5% of the variation on the dependent variable DBE as explained by the independent variable gender.

Table 29: H3 summary

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Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.254[a]	0.065	0.058	0.49667

a. Predictors: (Constant), Gender

Table 30 below depicts the regression analysis between the dependent variable DBE and the independent variable gender. The result showed that gender was accepted as it had a p-value below 0.05. These findings show that only gender affects the customers digital brand experience.

Table 30: DBE Regression

Coefficients[a]

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Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.705	0.120		30.964	0.000
	Gender	0.247	0.077	0.254	3.217	0.002

a. Dependent Variable: DBEMean

4.5.4. Regression analysis for H4 demographic factors

Table 31 shows the model summary for H4. The R^2 of the model is 0.10, suggesting that this study depicts that 10% of the variation on the dependent variable DEP as explained by independent variables educational level, gender and age.

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Table 31: H4 summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.316[a]	0.100	0.081	0.52092

a. Predictors: (Constant), Education Level, Gender, Age

Table 32 below depicts the regression analysis between the dependent variable DEP and the independent variables age, gender and education level. Age and gender were accepted as they had a p-value below 0.05 whilst education level was rejected as they had p-values above 0.05. These findings show that only gender affects the customers digital service experience, while age and annual income do not.

Table 32: DEP Regression

Coefficients[a]

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Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	3.863	0.289		13.347	0.000
	Age	-0.126	0.043	-0.239	-2.973	0.003
	Gender	0.175	0.082	0.169	2.131	0.035
	Education Level	-0.015	0.059	-0.020	-0.249	0.803

a. Dependent Variable: DEPMean

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4.6.Final Framework

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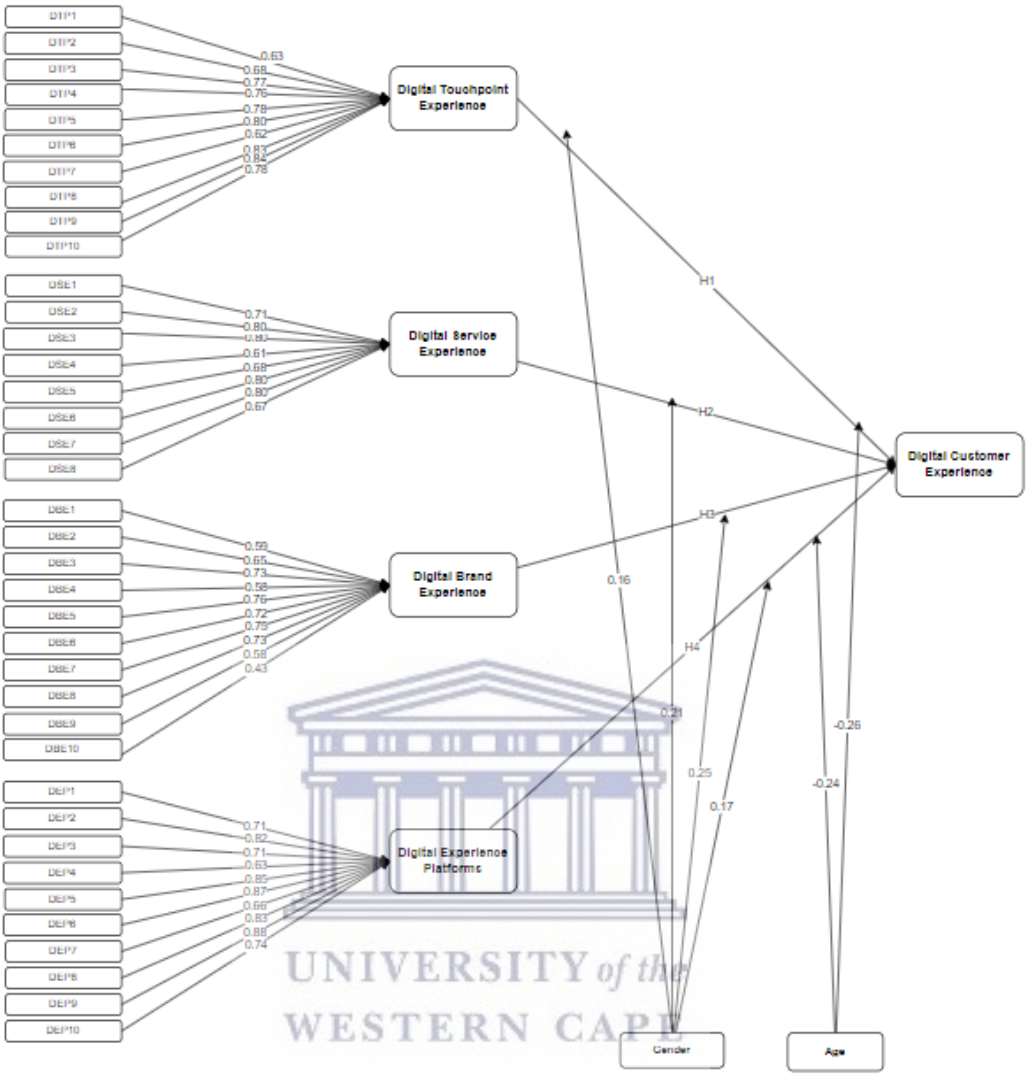

Figure 28: DCX Model

The study findings enabled the construction of the above framework in Figure 25. From the framework as age increase the DTP and DEP experience decreased. On the other hand, gender was seen to be a significant as the female participants showed they had a better experience across all four constructs. Income and education level were seen to not be significant for inclusion on the final framework. On the DTP variables, the study indicated that customers prefer buying online without leaving their social media page (DTP9), receiving communications from brands on their social media (DTP8) and prefer transacting on their cell phone (DTP6). The participants indicated that it was not always feasible to shop online (DSE7), it takes long to complete transactions online (DSE6) and that they prefer a personalised experience (DSE2). From a DBE perspective it was found that what affects their

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brand experience are customer reviews (DBE5), being referred to by their first name (DBE8) and the brand embracing their culture (DBE7). What was surprising was the online brand perception (DBE10) had so little impact on customers. Finally on DEP, participants indicated that they would be open to using chatbots (DEP9) and virtual assistants (DEP6). It however came as no surprise that the participants found that their financial position impacted their use of the various digital platforms.

4.7.Chapter Summary

This chapter comprised of the data analysis for this study. The analysis was conducted through the statistical package for social sciences (SPSS). It comprised of the demographic data which was collected. This included age, gender, education level and annual income of the sample. This chapter also covered the frequency across the four constructs of DTP, DSE, DBE and DEP. This informed the Analysis of variance across all constructs which provided base data for the correlation and regression analysis that followed. The chapter concluded with a final framework that the study findings brought forward.

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CHAPTER 5: DISCUSSION AND CONCLUSION

5.1. Introduction

This chapter will present the research findings and how they have been interpreted. It will draw on findings from the study and literature that was reviewed. Furthermore, it will draw on anomalies and unexpected findings. Thereafter the contribution and limitation of the study will be discussed. Finally, the recommendation and conclusion are then presented.

5.2. Interpretation of the Research findings

5.2.1. Digital touchpoint experience

H1: *Digital Touchpoint Experience enhances customer experience*- **Accepted**

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The digital touchpoint experience was found to be a significant construct in enhancing the DCx. The study found that ease of use, Social Media integration and real-time interactions are vital in enhancing the online customer's experience. The participants indicated a high degree of comfortability in using online platforms which aligns with what literature suggests in the perceived simplicity and minimal effort in shopping online (Shaikh, Alharthi and Alamoudi, 2020). While the study also found that only about 8% of users do not have an active social media and that most of the participants do prefer it as a channel to make purchases or be directly contacted by brands. However, the participants had an expectation that their interactions with retailers be done in real-time as per the findings in literature which support this. The literature states that customers need to know product availability, prices and promotions in their moment of need (Faulds, Mangold, Raju, and Valsalan 2018).

From the study it was found that generally as the customers get older, their digital touchpoint experience is reduced. This observation is supported by literature which suggests that age is a proven determining factor in customers' acceptance of shopping online (Fridh and Dahl, 2019). Regarding gender, there was a slight difference observed between male and female customers. With females being seen to be more sensitive to their digital touchpoint experience. While in terms of annual income, this study showed how those who earn from R0 to R49000 had the best digital touchpoint experience. This came as no surprise given that the age 18-25 bracket had similar outcome. These participants are most likely to be unemployed or students with minimal income are most likely to fall within this age and income level bracket. This is supported by the rising unemployment rate in South Africa that is around 33% of which 55,20% is between the age of 15-24 years (Statistics South Africa, 2020).

5.2.2. Digital Service Experience

H2: *Digital service experience enhances customer experience* - **Accepted**

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The digital service experience was seen to be a significant construct in enhancing the DCx. The study found that customer satisfaction, customer engagement and service experience were vital in enhancing the online customer's experience. The participants responses indicated that service experience is most essential to them. This aligns with what literature that highlighted the need to invest in the right technologies to produce an enhanced customer experience (Delloite, 2019). In addition to that, customer satisfaction was seen as another vital aspect, which came as no surprise as it complements a good service experience. A study by Klaus indicated that amongst other things, a great customer experience enhances customer satisfaction (2014).

Customer engagement stood out as another driver for an enhanced digital service experience with the personalisation of these engagements taking the experience to the next level for customers. What was interesting to note was that only a minority of participants indicated that they preferred to shop online. This is contrary to the growth of IKEA study from users in the United Kingdom (Rigby, 2016). This could be seen as an indication of customers in developing countries preferring in-store shopping over online shopping. The effects of the Covid -19 pandemic will surely shift these statistics across the globe given the effects of the lockdown measures put in place which saw people stay at home (Alex, Herkulaas and Benjamin, 2020).

From the study it was found that generally as the customers get older, their digital service experience increased, peaking at just below 4 for the 46-55 age group. From there it descended drastically to nearly 2 for the 65+ age group. It must be noted that this age group has seen the capabilities of the internet grow from strength to strength and are most likely to have had memorable experiences (Amoroso, 2019). With gender, there was a slight difference observed between male and female customers. With females being seen to have had their digital service experience rating higher than their male counterparts, which was expected. The ones who preferred not to say were not a significannot segment of the population. While in terms of annual income and education level, it was surprising that this study found these to not be significannot. The expectation was for those with limited incomes and less education to face digital exclusion (Cheng and Foley, 2018).

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5.2.3. Digital Brand Experience

H3: *Digital brand experience enhances customer experience* - **Accepted**

The digital brand experience was found to be a significant construct in enhancing the DCx. Based on the findings of this study, recommendations, memorable experiences, and the digital marketing around the brand are of high importance in enhancing the digital brand experience. Participants were agreeable to only recommending the brand to others only if they had a memorable experience. Furthermore, they would only engage with the brand again if this memorable experience were to be achieved. This behaviour is expected as a memorable experience mostly leads to positive behaviour towards the brand (Straker and Wrigley, 2016). This study also found that the importance of digital marketing should not be underestimated as the perception portrayed online impacts customers, be it positively or negatively. Customers often base their perceptions about the brand based on information they receive online (Rodriguez, Reyner, Gelmar and Rodobaldo, 2017). As expected, culture came up as an essential variable within the digital brand experience construct.

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It was found that from the age of 18 up to 55 the digital brand experience steadily increased showing that as the participants got older, so did their sentiment around that. However, post 55 this all falls away as the digital brand experience drops drastically. In this study, females are seen to value digital brand experience far greater than their male counterparts. This aligns with findings from literature which found female customers attach more importance on aesthetics, convenience, and service delivery process (Khan and Rahman, 2017).

5.2.4. Digital Experience Platforms

H4: *Digital experience platforms enhance customer experience* – **Accepted**

Customers need digital experience platforms extended to them so that they can be a part of the online market. This study found that regardless of any other factor, online purchases were easy to complete , participants were open to using tools like

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virtual assistants and chatbots. Ease of use, convenience and customer satisfaction are said to encourage repeat purchases (Pansari and Kumar, 2017; Han, 2019). This alongside the fact that findings from this study suggested that these digital platforms are available and accessible all the time. This certainly would help any online retailers bottom line. What was surprising was the awareness shown by many participants of the emerging technology, Internet of Things (IoT). For a developing country like South Africa indicates the velocity at which emerging technologies are growing and customer awareness. However, the low agreeability to the importance of privacy was surprising. Fridh and Dahl ranked privacy as one of the two top factors in when they engage online (2019).

The study indicated that the elderly, above 56 years old, placed little value on their experience on the digital platforms. However, this does not mean that the digital platform must then be neglected if it is for the elderly as the brand image remains essential (Hossain, Kattiyapornpong and Dwivedi, 2019). It came as no surprise that female participants placed more value on the digital experience on the platform rather than their male counterparts. Education level and income levels were found on the most to not be significant in this study which was unexpected. This could have been because of the purposive sampling technique that was used which in essence did not factor in those who may have transacted online but have limited access to the internet.

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5.3. Contributions of the Study

This study is set to contribute to the academic body of knowledge and in practice. From an academic perspective, it provides a vantage point on DCx from the perspective of a developing country. The framework drawn from this study also provides a novel viewpoint of customer experience from a digital point of view. Traditionally customer experience was often only looked at from a marketing or psychological point of view, this study brings it to the fore from an Information Technology perspective, embracing the digital era. Which in practice can also be useful especially for those in the retail industry.

Retailers in developing countries could look to this framework to better understand customers in their region. Moreso, on their uptake on digital solutions that maybe

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offered in their specific region. As experienced in compiling literature for this study, majority of the countries the articles are based on are developed countries that do not share the same challenges as developing countries. As found in this study, cities in developing countries have unique challenges which precede the actual technological solution presented to customers. Traditional DCx frameworks often do not take heed of the challenges faced by customers in developing countries. The framework in this study seeks to give context to those factors affecting the DCx in developing countries. This framework seeks to guide retailers on the specific challenges to overcome in an effort to enhance DCx in a developing country based on the findings from Cape Town South Africa.

5.4. Limitations

The limitations of this study include characteristics of design or methodology from both a theoretical and contextual point of view that impacted the findings of this study. These will be presented by stating the limitation, providing context and finally how this limitation was overcome.

Access to participants was limited. The data collection of this study was done during the peak of Covid-19 scourge which barred face to face contact. Covid-19 is a virus that can be spread through air particles and physical contact (Alex, Herkulaas and Benjamin., 2020). To overcome this challenge, an anonymous online survey was designed and distributed to participants for virtual completion from their respective locations.

Social desirability bias. This can be conscious or unconscious bias. It was essential to not make the participants feel that any bias will occur due to their identity being exposed. It also then allowed them to be more receptive to answering the survey freely. To achieve this, the survey did not ask participants for any personal details that would identify them and they were also asked to give consent that their participation was voluntary in a bid to reduce any social desirability bias.

Non-response bias. Participants requiring access to a stable internet connection to complete the survey, this could have led to a non-response bias. To overcome this, the time given to participants to complete the survey had to be increased. Efforts were made to distribute the survey in a manner that gave the target participants an equal opportunity to complete it. The distribution channels included sharing the

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survey link on multiple social media platforms and messaging applications. This was done at a variety of times and days in as this randomized the recipients of the survey.

5.5. Recommended future studies

The findings of this study focused on factors affecting DCx in online retail based on usage. Given that online shopping has not yet been fully embraced in developing countries, it would be recommended to conduct a study based on non-usage factors. Further research will derive these factors from a different perspective and enrich the findings on DCx in developing countries. This can also be done from a rural perspective rather than the urban perspective taken in the above study.

The findings of this study were cross-sectional in nature and may have been impacted by the Covid-19 pandemic. The lockdown measures put in place by the South African government meant that people had to stay home and work from home for a prolonged period (Broadbent, Combrink and Smart, 2020). This impacted the accessibility of the internet to majority of those in Cape Town. Only 25.80% of people in Western Cape, where Cape Town is located, had internet access at home in comparison to 72.40% who usually get access from sources outside their home (Stats SA, 2019). Therefore, lockdown led to about 46.60% of the population having their internet access hampered by staying home. Future studies should consider conducting the research post Covid-19.

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5.7. Conclusion

DCx is a vital aspect in respect to today's high demand of online products and services. This study explored factors affecting DCx in the online retail industry in Cape Town South Africa. This enabled this study to look at DCx from the perspective of a developing country. From the four constructs examined, it was evident that there were factors within them which affect the DCx of the user. The findings of this study are largely contrary to existing literature which in most cases is written in the context of developed countries. Furthermore, the age, gender and to some extent income level were found to impact DCx. Therefore, it is vital that DCx is seen as unique, based on customer specific challenges and not seen as one

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homogeneous experience regardless of other contributing factors. This study highlighted the need to consider preceding factors prior to the customer embarking on the set-out user journey on any digital platform in a developing country.

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APPENDIX A: Ethical Clearance

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60 YEARS of hope, action & knowledge

17 June 2020

Mr GA Mamhiyo
Information Systems
Faculty of Economic and Management Sciences

Ethics Reference Number:	HS20/4/34
Project Title:	A conceptual framework for digital customer experience in retail industry
Approval Period:	12 June 2020 – 12 June 2023

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report by 30 November each year for the duration of the project.

The permission to conduct the study must be submitted to HSSREC for record keeping purposes.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

Director: Research Development
University of the Western Cape
Private Bag X 17
Bellville 7535
Republic of South Africa
Tel: +27 21 959 4111
Email: research-ethics@uwc.ac.za

NHREC Registration Number: HSSREC-130416-049

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APPENDIX B: Consent Form

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FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES
Department of Information Systems
CONSENT FORM FOR CUSTOMERS IN CAPE TOWN

RESEARCH TITLE: A Conceptual Framework for Digital Customer Experience in Retail Industry

I have read the information presented in the information letter about a study being conducted by **Godwill Anesu T Mamhiyo** towards the Masters Programme at the Information Systems Department at the University of the Western Cape.

This study has been described to me in a language that I understand and I freely and voluntary agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and was informed that I may withdraw my consent at any time by advising the student researcher.

With full knowledge of all foregoing, I agree to participate in this study.

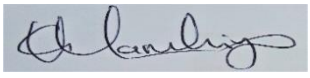
Participant Name : _____

Participant Signature : _____

Date : _____

Place : _____

Student Researcher : Godwill Anesu T Mamhiyo

Student Researcher Signature : 

Student Number : 3605048
Mobile Number : +27 603591826

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Email : 3605048@myuwc.ac.za
I am accountable to my supervisor : Prof Osden Jokonya
Department : Information systems department

Telephone : +27 21 959 1610
Fax : +27 21 959 3522
Email : ojokonya@uwc.ac.za

This research project has received ethical approval from the Humanities and Social Sciences Research Ethics Committee, Research Development, of the University of the Western Cape,
Tel. 021 959 2988,
Email: research-ethics@uwc.ac.za

http://etd.uwc.ac.za/

APPENDIX C: Participation Information Sheet

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FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

Department of Information Systems

PARTICIPATION INFORMATION SHEET FOR DIGITAL CUSTOMER EXPERIENCE ADOPTION IN CAPE TOWN

RESEARCH TITLE: A Conceptual Framework for Digital Customer Experience in Retail Industry

Dear Participant

You are invited to participate in a research study conducted by **Godwill Anesu T Mamhiyo** and Student Number: **3605048**. It is in partial completion of the researcher's thesis towards a Masters degree at the Information Systems Department, at the University of the Western Cape.

Before you decide to participate, it is important for you to understand the purpose of the research and what it would entail. Please take time to read the following information carefully and discuss it with others if you wish. If you are unclear of anything, I would be happy to answer any questions you may have.

PURPOSE OF THE STUDY

The purpose of this study is to contribute towards the Digital Customer Experience (DCx) research by better understanding the customer's user experience when engaging with online retailers and what framework can assist in the adoption of solutions that enhance DCx. To achieve this, the study will explore factors affecting the DCx in the retail industry by giving some insight as to what is needed to enhance customer experience for online retail customers.

DESCRIPTION OF STUDY AND YOUR INVOLVEMENT

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The paper presents a descriptive study to explore what are the factors affecting the adoption of DCx in the retail industry for customers in Cape Town. Your involvement will contribute to the gathering of primary data through survey questionnaires which will be helpful to create a better understanding of DCX adoption in Cape Town. The survey questionnaires will take approximately 20 minutes to complete.

CONFIDENTIALITY and ANONYMITY

Please be advised that the findings of the study will neither divulge the individual's particulars, as to maintain confidentiality at all times. Any information that can connect the responses to an individual or organisation will remain confidential and will be disclosed only with your permission. The researcher shall keep all records and tapes of your participation, including a signed consent form which is required from you should you agree to participate in this research study, and always locked away.

(***Example:*** *All the data will be kept in password protected computer files known only to the researcher. Data collection questionnaires will be kept safely in a lockable filling cabinet accessed only by the researcher. All raw data including written documents will be destroyed after three months of the final dissertation being marked and graded. If we write a report or article about this research project, your identity will be protected.)*

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RISKS OF THE RESEARCH

There are no risks to participating in this research as I shall take all necessary measures to ensure the overall physical and psychological safety of all participants. I will uphold the ethical values of voluntary participation, avoid all forms of harm, deception, ensure the participants' privacy, and right to withdraw from my research at any time without any consequences for the participants. I will use clear language and under no circumstances shall I force you to participate in my research.

The risk/s of the study are outlined as follows:

- No risks.

BENEFITS OF THE RESEARCH

The Benefits of this research are outlined as follows:

- To contribute to DCx adoption research by proposing a DCx Framework

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VOLUNTARY PARTICIPATION AND WITHDRAWAL

Your participation in this research is entirely voluntary, which means that you are free to decline from participation. It is your decision whether or not to take part. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. If you decide to participate in the study, you are free to withdraw at any time – and without giving a reason. You may also choose not to answer particular questions that are asked in the study. If there is anything that you would prefer not to discuss, please feel free to say so.

PAYMENT FOR PARTICIPATION

There are no costs or payments to the participant for partaking in the study.

INFORMED CONSENT

Your signed consent to participate in this research study is required before you complete the questionnaire. I have included the consent form with this information sheet so that you will be able to review the consent form and then decide whether you would like to participate in this study or not.

QUESTIONS

Should you have further questions or wish to know more, I can be contact as follows:

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Student Name : Godwill Anesu T Mamhiyo
Student Number : 3605048
Mobile Number : +27 603591826
Email : 3605048@myuwc.ac.za
I am accountable to my supervisor : Prof Osden Jokonya
Department : Information systems
Telephone : +27 21 959 1610
Fax : +27 21 959 3522
Email : ojokonya@uwc.ac.za

This research project has received ethical approval from the Humanities and Social Sciences Research Ethics Committee, Research Development, of the University of the Western Cape,

Tel. 021 959 2988,

Email: research-ethics@uwc.ac.za

http://etd.uwc.ac.za/

APPENDIX D: Questionnaire

Digital Customer Experience Survey on Online Retailers

Dear Participant

You are invited to participate in a research study conducted by Godwill Anesu T Mamhiyo. It is in partial completion of the researcher's thesis towards a Masters degree in the Information Systems Department, at the University of the Western Cape.

Before you decide to participate, it is important for you to understand the purpose of the research and what it would entail. Please take time to read the following information carefully and discuss it with others if you wish. If you are unclear of anything, I would be happy to answer any questions you may have.

PURPOSE OF THE STUDY
The purpose of this study is to contribute towards the Digital Customer Experience (DCx) research by better understanding the customer's user experience when engaging with online retailers and what framework can assist in the adoption of solutions that enhance DCx. To achieve this, the study will explore factors affecting the DCx in the retail industry by giving some insight as to what is needed to enhance customer experience for online retail customers.

DESCRIPTION OF STUDY AND YOUR INVOLVEMENT
The paper presents a descriptive study to explore what are the factors affecting the adoption of DCx in the retail industry for customers in Cape Town. Your involvement will contribute to the gathering of primary data through survey questionnaires which will be helpful to create a better understanding of DCx adoption in Cape Town. The survey will take approximately 5-10 minutes to complete.

CONFIDENTIALITY & ANONYMITY
Please be advised that the results of the study will neither divulge the individual's particulars, as to maintain confidentiality at all times. No information that can connect the responses to an individual or organisation will be collected.

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RISKS OF THE RESEARCH?
There are no risks to participating in this research as I shall take all necessary measures to ensure the overall physical and psychological safety of all participants. I will uphold the ethical values of voluntary participation, avoid all forms of harm, deception, ensure the participants' privacy, and right to withdraw from my research at any time without any consequences for the participants. I will use clear language and under no circumstances shall I force you to participate in my research.

VOLUNTARY PARTICIPATION AND WITHDRAWAL
Your participation in this research is entirely voluntary, which means that you are free to decline from participation. It is your decision whether or not to take part. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. If you decide to participate in the study, you are free to withdraw at any time – and without giving a reason. You may also choose not to answer particular questions that are asked in the study. If there is anything that you would prefer not to discuss, please feel free to say so.

PAYMENT FOR PARTICIPATION
There are no costs or payments to the participant for partaking in the study.

INFORMED CONSENT
Your signed consent to participate in this research study is required just before you submit the survey.

This research project has received ethical approval from the Humanities and Social Sciences Research Ethics Committee, Research Development, of the University of the Western Cape,

Please note that should you answer NO to anyone of the first two questions, you will be navigated to the submit page as you do not meet the criteria. The questions that will follow are about your demographics which will be completely anonymous. The questions thereafter will be answered by making a single selection on a sliding scale from strongly agree to strongly disagree.

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Have you had a prior online shopping experience? *

- Yes
- No

Do you live in Cape Town? *

- Yes
- No

Demographic Details

You will remain anonymous

Age *

1. 18-25
2. 26-35
3. 36-45
4. 46-55
5. 56-65
6. 65+

Gender *

- Female
- Male
- Prefer not to say

Education Level *

- Primary School
- Some High School
- Matric
- Diploma
- University Degree

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Annual Income *

- ○ R0 - R49 999
- ○ R50 000 - R99 999
- ○ R100 000 - R249 999
- ○ R250 000 - R499 999
- ○ R500 000 - R749 999
- ○ R750 000+

Digital Touch Point Experience Factors

Please tick the most appropriate answer *

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I have had a prior online experience with a retailer	☐	☐	☐	☐	☐
I am comfortable completing online purchases	☐	☐	☐	☐	☐
I would much rather shop online rather than instore	☐	☐	☐	☐	☐
I prefer multiple online channels where I can complete my purchases.	☐	☐	☐	☐	☐
I prefer to complete online transactions on my cell phone or tablet	☐	☐	☐	☐	☐
I prefer to complete online transactions on my PC or Laptop	☐	☐	☐	☐	☐
I am active on at least one Social media platform	☐	☐	☐	☐	☐

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I would like be contacted by brands on Social media	☐	☐	☐	☐	☐
I would like to be able to buy products without leaving my social media page	☐	☐	☐	☐	☐
I expect real time interactions from any online retailer	☐	☐	☐	☐	☐

Digital Service Experience Factors

Please tick the most appropriate answer *

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I am satisfied with available online shopping options	☐	☐	☐	☐	☐
When I engage with the retailer I prefer a personalised experience	☐	☐	☐	☐	☐
The level of service I get online is much better than the one I get in store	☐	☐	☐	☐	☐
My online experience is often pleasant and allows me to do what I set out to	☐	☐	☐	☐	☐
I can always access retailers online	☐	☐	☐	☐	☐
I often get frustrated with how long it take me to complete transactions online.	☐	☐	☐	☐	☐
It is not always feasible for me to engage with retailers online	☐	☐	☐	☐	☐

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I feel secure transacting online	☐	☐	☐	☐	☐

Digital Brand Experience Factors

Please tick the most appropriate answer *

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I am loyal to brands that display alignment to my personal values	☐	☐	☐	☐	☐
I trust reviews written by other people over the ones written by companies	☐	☐	☐	☐	☐
I am less likely to recommend a brand if I have a bad experience with them	☐	☐	☐	☐	☐
How a brand engages me online will determine if I will shop there or not	☐	☐	☐	☐	☐
Other customers' reviews will affect my perspective of the brand	☐	☐	☐	☐	☐
The feeling of being made special by the brand will impact my purchasing decision	☐	☐	☐	☐	☐
The brand must embrace my culture	☐	☐	☐	☐	☐

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I am drawn to brands that refer to me by my first name in all communications	☐	☐	☐	☐	☐
I am most likely to engage with brand that I have had a memorable experience with	☐	☐	☐	☐	☐
How the brand is portrayed online will impact my perspective of the brand	☐	☐	☐	☐	☐

Digital Experience Platform Factors

Please tick the most appropriate answer *

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I find it easy to complete most online purchases.	☐	☐	☐	☐	☐
Most digital platforms are available 24/7	☐	☐	☐	☐	☐
If using online digital platforms was free then I would use them more frequently.	☐	☐	☐	☐	☐
I feel that my use of digital platforms is reduced by my financial position	☐	☐	☐	☐	☐
I am familiar with the concept of Internet of Things	☐	☐	☐	☐	☐
I am familiar with the concept of Machine learning	☐	☐	☐	☐	☐

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Given the opportunity, I would use a virtual assistant to help me with shopping.	☐	☐	☐	☐	☐
I feel comfortable with the use of Artificial Intelligence by retailers	☐	☐	☐	☐	☐
I feel comfortable with the use of Chat Bots to assist me online	☐	☐	☐	☐	☐
I feel the monitoring of my online activities violates my rights to privacy.	☐	☐	☐	☐	☐

Consent

I have read the information presented in the information letter about a study being conducted by Godwill Anesu T Mamhiyo towards the Masters Programme at the Information Systems Department at the University of the Western Cape.This study has been described to me in a language that I understand and I freely and voluntary agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and was informed that I may withdraw my consent at any time by advising the student researcher. With full knowledge of all foregoing, I agree to participate in this study. *

- ◯ Yes
- ◯ No

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