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School of Economic and Business Sciences

Marketing Department

University of the Witwatersrand



Privacy concerns about data-usage for South African retail loyalty programs

by

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Marketing

Under the supervision of:

Dr Melissa Zulu

&

Professor Thomas Dorson Anning

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ABSTRACT

Data usage has arisen as a growing topic for researchers and practitioners in South Africa. This is particularly true for Loyalty Programs, where increased personalisation and consumer data usage are being used to fuel business decisions. However, the consumer perspective on data-related privacy concerns provides room to be explored, alongside the investigation of culture, trust, personalisation and the privacy paradox. In this investigation into privacy concerns, the relevance of culture comes into place for its influence on such South African privacy related behaviour and perceptions. This study, therefore, explores privacy concerns and data usage in retail Loyalty programs, to better understand South African consumers' perceptions of data privacy, and their intention to engage with the program. This was done through a multi-theoretical analysis, utilizing the Privacy Calculus Theory (PCT), the Theory of Planned Behaviour (TPB), and the Customer Relationship Management Theory (CRM).

This study achieved its objectives through a quantitative research method utilising surveys distributed online. South African consumers above the age for 18 were used as the sample for the research for data collection, of which a non-probability sampling technique was used, and a total of 277 valid questionnaires were collected. Structural Equation Modelling (SEM) was utiliseutilised to analyse the data through partial least squares regression (Smart-PLS) to evaluate the relationship between the constructs. Here, the results indicated that privacy concerns exist and are positively influenced by Awareness, Data Breach and Attitude. Furthermore, these concerns were negatively influenced by Intention, Trust, and Culture; and, therefore, a privacy paradox was not confirmed. Furthermore, Personalisation was shown to have no bearing on Privacy Concerns. However, Personalisation had a negative relationship with Attitude, while Trust had a positive one. Perceived Risk was also found to have a negative relationship with Intention. Moreover, this study revealed the existence and South African consumer perspective of privacy concerns and provides benefits for marketers and scholars in the retail industry, such as fueling trust through the recognition of consumer privacy.

Keywords: Privacy Concerns, South Africa, Loyalty Programs, Privacy Calculus Theory, Theory of planned behaviour, Customer Relationship Management, Privacy Paradox, Hofstede’s dimensions

Student number: 1452711

DECLARATION

I, Alexandra Cameron Dearden, hereby declare that this thesis, titled "Privacy concerns towards data-usage for South African loyalty programs", is my own work. It is submitted for the degree Master of Commerce (Research), in the field of Marketing, at the school of Economic and Business Sciences at the University of Witwatersrand, Johannesburg in South Africa. It has never been submitted before for any degree or examination at this or any other university.



_____

Alexandra Cameron Dearden

Signed at Johannesburg on the…….. 31st……. day of…. March…. 2023

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Chapter 1

1.1 Introduction and Background

Datausage and technology have become the building blocks on which a business can thrive (Mikalef, Pappas, Krogstie, and Pavlou, 2020). This study puts a focus on consumer data specifically, entailing the raw data companies collect through consumer behaviour, e.g., personal information, website visits, and purchasing history. Raw data is unprocessed data that can then be used to provide useful information and be sorted to make decisions (Ot, 2023; Wright, 2021). As technology has progressed, consumers have created vast amounts of consumer data through multiple sources accessed daily, i.e., social media, transactions, e-commerce, mobile app usage, website usage, etc. (Ali, Septyanto, Chaudhary, Al Hamadi, Alzoubi and Khan, 2022; Belarbi, Tajmouati, Bennis, and Tirari, 2016). Businesses can, thereafter, use this data generated from customers to benefit themselves, such as to support their decision-making, identify specific customer buying behaviour, offer targeted services, increase engagement, and identify what consumers need and value from the business (Balakrishnan, Chui, Hall and Henke, 2020; Rejeb, Rejeb and Keogh, 2020). This data usage has also grown considerably in line with the COVID-19 outbreak, in which consumers' online presence increased and businesses moved towards hybrid models utilising e-commerce (Omoruyi, Dakora and Oluwagbemi, 2022). Additionally, digitalisation in retail was spedup as lockdown added pressure through limited in-person shopping for consumers and businesses alike (Njomane and Telukdarie, 2022).

Moreover, the use of data to assist in decision support systems has been ongoing and beneficial for many industries, including the retail industry (Aluri, Price, and McIntyre, 2019; Kliestik, Zvarikova and Lăzăroiu, 2022). Some examples of additional industries that have benefited from data usage include the healthcare industry, the finance industry, and the entertainment industry. Here, datausage allows these industries to adjust business decisions and manage their customer relationships for a better outcome, i.e., the finance industry monitoring data for security and risk analysis; the healthcare industry providing quick insights into patient health; and the entertainment industry creating better content and monitoring performance on different platforms using data collected (Aceto, Persico and Pescapé, 2020; Bleier, Goldfarb and Tucker, 2020; Lee, Li, Yu and Zhao, 2021; Raunch, 2023; SuccessiveCloud, 2023; van Es, 2023). These industries obtain similar data-usage benefits through observing and monitoring trends or consumer behaviour, improving the user experience and creating personalised content for users. The brand Netflix is a well-known example of this, making recommendations to users based on watch-history, as well as using data analytics to pitch ideas for future shows using

"touch-points" that can make a show popular (Mixson, 2021). Of the aforementioned industries, the retail industry provides the focus for this study.

Globally, the retail environment comprises one of the largest industries and continues to grow (Statista, 2022). In South Africa alone, the retail sector makes up approximately 20% of the country's GDP (Retail Sector Report, 2022). Moreover, customer transactions within the retail industry can reach over 2.5 petabytes (PB) of data collected every hour, which the retailers can then use to better target their consumers (Chauhan, 2020). Extant research on the benefits of using such data has emerged through aspects such as engagement, value creation and improved experience (Calder, Malthouse, and Maslowska, 2016; Rejeb, Rejeb and Keogh, 2020; Zeng, and Glaister, 2018). These benefits have received the attention of retailers, and the popular South African grocers "Woolworths South Africa, Pick n Pay and Shoprite", have now invested heavily to incorporate data-driven decision-making into their strategies (Global Powers of Retailing, 2021; Hartzenberg, 2019; Woolworths Holdings, 2022; Pick n Pay, 2022; Shoprite, 2022).

Furthermore, the African market has forecasted a growth of 28% every year until 2025 for data analytics (AfricanBusiness, 2020). In South Africa, mass data usage has been observed as an emerging but slow phenomenon due to the still-developing infrastructure, policies, standards, and training concerns in data analytics applications (Masenya and Ngulube, 2019; Mhlanga and Moloi, 2020). Regardless of this, many businesses, as mentioned, have implemented the various tools and techniques of managing data in their business strategies (Le Roux, 2019). One way in which retailers' access and accumulate consumer data is with loyalty programs.

Loyalty programs allow a company to build a relationship with their consumers through rewards systems (sometimes tiered), provide targeted support, and directly engage them (Lakshman, and Faiz, 2021; Sukmaningsih, Meyliana, Prabowo and Nizar Hidayanto, 2019). For example, consumers can be encouraged through a loyalty program to engage and make purchases to earn points for prizes, discounts, or special promotions. Additionally, retailers may design and adapt their loyalty programs based on the consumer data acquired, which allows them to understand how different consumers perceive and react to the loyalty program features and rewards. This in turn could help brands standout amongst competitors and improve their relationship and engagement with consumers (Hallikainen, Luongo, Dhir and Laukkanen, 2022; Seetharaman, Niranjan, Tandon, and Saravanan, 2016). Loyalty programs in South Africa differ slightly, as none of the retailers require the consumer to pay to participate (Le

Roux, 2019). Although the usage of data has, therefore, been shown to be beneficial for a business, understanding the consumer's direct response, awareness and attitude towards this data usage provides another avenue to be explored further (Yartey Ajayi, Omojola, Amodu and Ndubueze, 2020). One important topic that arises alongside this is the subject of privacy.

Data-sharing behaviour and personalised advertising from firms can lead to consumers feeling concerned or apprehensive about their data being used (Shomakers, Lidynia and Ziefle, 2020). These concerns over the storage, control and usage of this data have been shown to have grown significantly in recent years (Gerber, Gerber and Volkamer, 2020). It has, therefore, become a necessity for businesses to safeguard and acknowledge their consumers' privacy to retain their loyalty and trust (Bandara, Fernando and Akter 2020). Within retail promotions, various privacy policies and requirements have been put in place, such as ensuring the consumer's consent is received prior to their involvement (Bandara, Fernando and Akter, 2020). However, these privacy policies can be overlooked or even neglected by consumers (Gerber, Gerber and Volkamer, 2020). For example, a consumer may skim over the terms and conditions about datausage or simply ignore them. This interestingly leads to the concept of a privacy paradox, where consumers have been shown to value their data privacy and show concerns for it, but still provide their data willingly (Acquisti, Brandimarte and Loewenstein, 2020).

Researchers have made attempts to understand the paradox; however, there is still a present need to explore it further (Dienlin and Trepte, 2015; Gerber, Gerber and Volkamer, 2020). Moreover, the privacy paradox can provide an extra layer into understanding consumers' actual behaviour, which can then assist marketers in assessing how they should tackle any privacy concerns held (Gerber, Gerber and Volkamer, 2020). As a result, it is essential to consider the underlying variables that influence South African consumers' concerns about data privacy and, therefore, their intention to disclose their data to retailers. Although investigating privacy concerns has been highlighted as a necessity in literature (see Martin and Murphy, 2016; Gerber, Gerber and Volkamer, 2020), there are limited privacy related studies that have focused on the South African and Loyalty Program contexts. Studies have focused primarily on online privacy concerns through websites and social media (Bandara, Fernando and Akter 2020; Bevan-Dye and Akpojivi, 2016; Shomakers, Lidynia and Ziefle, 2020; Vu, Law and Li, 2018), investigating privacy concerns and data security in politics and South African governments (Maduku, 2020; Manda and Backhouse, 2016) and data concerns within bank

policies (Keshav, 2010). An extension of privacy research into South African Loyalty programs, therefore, helps with closing this knowledge gap.

Moreover, South African consumers attitudes and comprehension of their privacy and data-usage may differ from the findings of previous studies due to the culture, country-level factors, and diverse consumer needs that require a country-specific analysis (Fam, Brito, Gadekar, Richard, Jargal, and Liu, 2019). A consumer's culture plays an interdisciplinary role when it comes to privacy concerns; through its relation to consumer behaviour and attitude (Schumacher, Eggers, Verhoef, and Maas, 2023). This provides for an interesting investigation in research on privacy-related behaviour, which this study then explored. Privacy is also contextual, so research within a specific field or country provides optimal results in understanding consumer behaviour and preferences (Bandara, Fernando and Akter, 2020). This study, therefore, looked to investigate privacy concerns and attitudes among South African consumers as well as identify whether the privacy paradox exists. In this search, this study used existing South African grocery retailers' to contextualise retail Loyalty Programs and data privacy. Additionally, this study provided an investigation into culture and privacy-related behaviour for a South African culture analysis and an understanding of South African consumers perceptions towards privacy.

1.2 Problem statement and Research Gap

Within retail, it has been noted that data privacy and awareness are lacking in existing firms, with only 20% of retailers globally integrating privacy policies into their overall strategies (Sides, Marsh, Goldberg and Mangold, 2019). Moreover, businesses may not be as mindful of customers' potential ignorance or naivety towards their data being used, i.e., consumers skimming over or ignoring the terms and conditions (Yartey Ajayi, Omojola, Amodu, and Ndubueze, 2020). Moreover, consumers may make use of the privacy paradox, where their actions contradict their beliefs and attitudes, causing a misunderstanding of what businesses interpret to drive consumers (Acquisti, Brandimarte and Loewenstein, 2020). This presents itself as an issue from the standpoint of businesses needing to practice good governance and a lack of understanding from a consumer perspective. This study, therefore, proposed the examination of how different elements affect privacy concerns and, thereafter, the intention to use loyalty programs. By understanding the consumer perspective and relative behaviour, businesses and policymakers can overcome any existing issues surrounding privacy concerns and specifically understand and identify how and why the different theoretical constructs

influenced this concern. A justification for these firms to then integrate privacy elements or additional policies into their overall strategy can be developed.

Additionally, data usage has arisen as a growing topic for researchers and practitioners in South Africa (Le Roux, 2019). Regardless of this, there is a paucity of research on South African customers' privacy awareness and standpoint on their data being used to market to them (Akpojivi, 2013; Le Roux, 2019). As South Africa is a developing country with different cultural, legal, and socioeconomic factors, a country-specific analysis provides an addition to the focused problem in order to develop the desired understanding (Gielens and Gijsbrechts, 2018). Previous literature exploring privacy concerns using culture has done this through demographics, proximity, ethics, organisation, and specific cultures or cultures in developed countries (Chai, 2020; D'Acunto, Volo and Filieri, 2021; Fleming, Bayliss, Edwards and Seger, 2021), though these do not apply to the South African Loyalty Program contexts and necessary understanding of this study, presenting a research gap. Hofstede's culture model is a rational, well-tested strategy that has been used globally, has evolved to respond to world developments, and therefore provides a useful way to measure culture in South Africa (Chun, Zhang, Cohen, Florea, and Genc, 2021; Ibanez and Sisodia, 2020). Moreover, South African businesses have a lawful requirement to practice good governance and have privacy and security measures in place relative to consumer data (Western Cape Government, 2022; Sutherland, 2021). Furthermore, they need to receive customers' agreement to use their data in accordance with Acts such as the Cybercrimes Act 19 and POPI Act (Cybercrimes Act, 2021; POPIA, 2019; Western Cape Government, 2022; Sutherland, 2021; Thaldar, Townsend, Donnelly, Botes, Gooden, van Harmelen and Shozi, 2022).

However, there has been some criticism from scholars stating that active privacy policies may also need to be incorporated by businesses to soothe consumers' potential concerns and ensure they are actively protected (POPIA, 2019; Hoffmann, Lutz, and Ranzini, 2016; Jones, 2022; Townsend, Gooden, Botes and Thaldar, 2023). Townsend and Botes (2023) furthered this by stating that, although obligated by acts such as POPIA, the protection of consumers' privacy is left "up to the discretion of each responsible party". Although acts like the POPIA have shifted the way businesses conduct themselves, data protection in the country remains imperative, with South Africa presenting among the top 3 highest African countries facing cybersecurity threats (Darwin and Nkongolo, 2023; INTERPOL's 2022 Africa Cyberthreat Assessment, 2022).

Consumers' varying preferences and perspectives towards privacy and data usage have become an emerging research avenue for researchers and practitioners alike (Narang and Shankar, 2019). More specific to privacy, there have been few studies highlighting the privacy paradox in marketing (Bandara, Fernando and Akter, 2020). Moreover, there are few studies that have explored personalisation alongside privacy concerns and the privacy paradox, even though research into privacy and privacy issues has accelerated in recent years (Ameen, Hosany and Paul, 2022; Cho, Ko and Lee, 2018; Ozturk, Nusair, Okumus and Singh, 2017). Personalisation is a reoccurring and core theme when analysing data usage in Loyalty programs, as it provides a way to gratify and effectively target consumers; making it a useful avenue to explore further to benefit practitioners and scholars alike (Ioannou, Tussyadiah and Lu, 2020; Pingo, 2020; Volchek, Yu, Neuhofer, Egger and Rainoldi, 2021). Researchers have also emphasised the importance of researching loyalty programs through data, as the information accessed through the programs is otherwise untraceable and provides value for the business (Breugelmans and Liu-Thompkins, 2017; Lakshman and Faiz, 2021). Nobre and Rodrigues (2018) noted the importance of understanding the impact of loyalty programs on different aspects of consumer behaviour, which this study explored through data usage privacy concerns and, thereafter, how this affects the intention to participate in the loyalty program. Moreover, there are limited studies focusing on retail and data analytics, providing a knowledge gap for this research paper (Belarbi, Tajmouati, Bennis and Tirari, 2016). Research on data-usage in the retail industry has also been reflected as a crucial area of study for researchers and practitioners due to the magnitude of the industry, the growth of the middle class and technological improvements (Seetharaman, Niranjan, Tandon and Saravanan, 2016).

From a theoretical perspective, this study provides a multifaceted model of privacy concerns and intention by integrating the Privacy Calculus Theory with elements of the Theory of Planned Behaviour and Customer Relationship Management Theory, i.e., culture, trust, and personalisation, which have been reflected as necessary for future research development (Ameen, Hosany and Paul, 2022; Ioannou, Tussyadiah and Lu, 2020). Therefore, the usage of these elements and the specific research context provide for a unique contribution through the knowledge gap filled. Additional research exploring privacy concerns has made use of the TPB alone as well as the Technology Acceptance Model in their investigations (Adebiyi and Olayemi, 2022; Bayaga and Ophoff, 2019; Cho, Ko and Lee, 2018; Dutot, Bhatiasevi and Bellallahom, 2019; Guhr, Werth, Blacha, 2020; Ismail, Hamzah, Hussin, Affandy and Ahmad, 2023; Li, 2020). However, the Privacy Calculus Theory allows for a specific insight into

consumer perspectives towards privacy, while the integration of the TPB and CRM elements provides a contextualised and comprehensive exploration, which this study looks to explore (Trepte, Scharkow, and Dienlin, 2020).

This study will allow these research gaps to be shortened, provide a theoretical contribution, and also provide guidance and knowledge for South African retailers and policymakers to recognise.

1.3 Research objectives

1.3.1 Aims and objectives

The aim of this study is to explore the variables surrounding privacy concerns and data-usage in Loyalty programs, to better understand South African consumers' perception of data privacy, and, thereafter, their intention to engage with the program.

1.3.1.1 Objectives

1. To assess the influence of trust, culture and privacy awareness as key antecedents for privacy concerns in South African retail Loyalty programs

2. To investigate the relationship between Privacy Concerns and Privacy Attitude for South African consumers in South African retail Loyalty programs

3. To investigate the relationship between Privacy Concerns and the intention to participate in South African retail Loyalty programs

4. To investigate the relationship between Perceived Risk and Intention to participate in South African retail Loyalty Programs

5. To investigate the relationship between Personalisation on one hand and Trust, Privacy Attitude and Privacy Concerns on the other hand

6. To investigate whether the Privacy Paradox exists within South African consumers, based on the found relationship between Privacy Concerns and their intention to participate in Loyalty Programs.

1.3.2 Research question

Do South African consumers show privacy concerns for their data-usage in South Africa?

1.4 Ethical considerations

Ethical considerations include the researcher's personal dignity and the respect, permission, and confidentiality that the researcher extends to the study and individuals involved (Connelly, 2014). Therefore, gender, age, race, education level, socioeconomic circumstances, and disability arise as ethical considerations and have no influence on participation in the study. Before participating in the study, individuals were informed of the study's aim, duration, and the option to leave the study ahead of time should they not wish to participate. Respondents were required to agree to participate in the study prior to their involvement. Respondents were also provided with contact details should they have any concerns or comments about the study. All demographic information that is regarded as sensitive was confidential, with the option for respondents to "prefer not to say". Moreover, the collection of data only commenced post-ethics clearance from the University of Witwatersrand.

1.5 Chapter outlines

Chapter 1

This chapter provides the brief background and context of the study as well as the research problem, to introduce the reader to the topic. Thereafter, the research objectives and question were highlighted to provide the direction for the study before the review of literature and theoretical aspects of the study are touched on. Finally, a brief outline of the methodology of the study was reviewed.

Chapter 2

This chapter gives a detailed review on the industry surrounding the topic, namely: The Retail Industry. Here, the contextualisation of the topic, the African, Global and South African markets are observed; to provide an understanding of the research context. Here, the topic of privacy and data-usage within this context will also be observed.

Chapter 3

This chapter provides the theoretical framework used for the study as well as an in-depth investigation into the constructs utilised and the different literature contexts that surround them. Here, previous literature will be explored and discussed relative to the topic to form the basis of what is already known about the topic, and its importance. The different models used in previous studies will also be explored, as well as the proposed model and constructs for this study, before; finally, presenting the hypothesis formation for the topic as well as the conceptual model.

Chapter 4

This chapter will provide the proposed research methodology for the study by exploring the different layers of the research onion, following the quantitative method of research. Here, the researcher will highlight the different strategies, techniques, target audience and data analysis that will be appropriate for this study.

Chapter 5

This Chapter will provide the results of the study, based on the data collected in the survey. Here, SEM techniques using SPSS and Smart-PLS will be used to analyse the data. Graphs and tables will be used in this Chapter to assist in visualizing the data. Lastly, previous literature will be explored relative to the results of the study, for comparison and review.

Chapter 6

This Chapter and will provide the findings from Chapter 5. Here a summary and the conclusions of the study will be presented, based the objectives of the study.

Chapter 7

This is the last Chapter for the study and will provide the Recommendations and contributions of the study. Moreover, the practical implications, limitations and recommendations for future research will be discussed, based on the findings of the study.

Chapter 2 - Industry and Background

2.1 Introduction

This chapter provides insight into the Global, African, and South African retail industry contexts, and more specifically, the grocery retail industry, for a detailed description of privacy concerns for data usage in Loyalty Programs. Here, the retail industry will be discussed, providing a deeper understanding of grocery retailers, data privacy and a brief look at the literature that has explored this focus and corresponding consumer viewpoints. Insight into South African grocery retailers' Loyalty Programs will also be provided, as well as their approach to data privacy and privacy concerns, to provide a contextualised understanding of the study.

2.2 The Retail Industry

The retail industry is among the largest in the world and continues to grow (Seetharaman, Niranjan, Tandon and Saravanan, 2016). The retail grocery industry provides general goods that are essential to consumers' day-to-day lives, making it one of the most popular and highest-grossing industries worldwide (Johnson and Iyamu, 2019). Statistically, the retail sector has forecasted global sales of over 30 trillion US dollars by the year 2024 (Sabanoglu, 2022). Retailers can be divided into informal Spaza shops, Microbusinesses, Small businesses, and formal larger convenience stores and supermarkets, to name a few (Masojada, 2021). Moreover, numerous retailers have adopted an online marketing strategy, alongside or as a replacement for their retail sales in-store; to target consumers in other avenues that they access daily, such as social media and website pop-ups (Grewal, Hulland, Kopalle and Karahanna, 2020; Vieira, de Almeida, Agnihotri, da Silva and Arunachalam, 2019). This could partly be due to the shift in internet access and consumer movement online, the technology dependency that is being seen amongst consumers, as well as the visual and engagement benefits that a digital strategy holds (Heinze, Fletcher, Rashid and Cruz, 2016; Seetharaman et al., 2016; Valentini, Romenti, Murtarelli and Pizzetti, 2018). The emergence of data usage in recent years has also been optimised by these higher-earning retailers as a strategic asset to then provide a competitive advantage, make use of valuable consumer information, and, thereafter, achieve their objectives (Santoro, Fiano, Bertoldi and Ciampi, 2018).

2.2.1 Loyalty Programs in Retail

In efforts to meet increasing consumer demand and achieve a competitive advantage, retailers have begun implementing techniques and strategies through information and communication technologies (Johnson and Iyamu, 2019; Lakshman and Faiz, 2021). Here, methods such as e-commerce and Loyalty Programs, are then used to engage with consumers and increase sales. These typically involve reward-based strategies such as reward cards, points, support, price savings, gifts, and tiers of service (Lakshman and Faiz, 2021). Loyalty Programs in retail have been noted as a crucial marketing technique to retain and activate customers, influence long-term customer behaviour or repeated patronage, and fuel a customer-company relationship (Alshurideh, Gasaymeh, Ahmed, Alzoubi and Kurd, 2020; Mackay and Major, 2017). However, within the retail sector, literature has reflected dissatisfaction and disappointment amongst consumers, with over 70% noting frustration with their experiences and data privacy (Martin and Palmatier, 2020). Moreover, the necessary shift to account for these privacy concerns can cause retailers to allocate more time and resources to new strategies that would otherwise be used to build customer relationships and improve acquisition and retention strategies. Thus, it becomes imperative to understand the degree of concern and the cause of this concern to effectively target it.

Retail, Loyalty Programs and Privacy concerns can further be examined through a Global lens.

2.3 The Global state of the Retail industry

2.3.1 Global market performance

The global retail industry has grown consistently over the years, with the rise of the middle class, emerging markets, and technology development around the world (Mjongile, 2020). Globally, retailers have also reflected a shift towards online shopping, with consumers' purchasing behaviour changing around the world to make more and more purchases online, as well as retailers evolving to make use of technologies such as Artificial Intelligence, Augmented Reality, Cloud Computing and the usage of Big Data (Dwivedi, Ismagilova, Hughes, Carlson, Filieri, Jacobson, Jain, Karjaluoto, Kefi, Krishen and Kumar, 2021; Har, Rashid, Te Chuan, Sen and Xia, 2022). Moreover, with the rise of the COVID-19 pandemic, developing countries have seen a shift towards an increase in consumer purchasing behaviour online and the usage of these technologies in retail; however, these are still somewhat limited

(Gu, Ślusarczyk, Hajizada, Kovalyova and Sakhbieva, 2021; Rossolov, Aloshynskyi and Lobashov, 2022). This is further discussed in the South African context later in the chapter. Furthermore, the global e-commerce market has seen an increase in online sales of a significant 19% during the pandemic (UNCTAD, 2021). Extant literature corroborates this through studies ranging from Portugal, the United Kingdom, Nigeria, South Africa, Belgium and India, to name a few (Beckers, Weekx, Beutels and Verhetsel, 2021; East, 2022; Gao, Shi, Guo and Liu, 2020; Gomes and Lopes, 2022; Nivethitha, Manjula and Mallika, 2020; Okpara, 2021; Paramannand, 2021).

Although this online performance is clear, globally, in-store or brick-and-mortar retailing remains the dominant method for sales (Camarena, 2020; Sabanoglu, 2022). Particularly in more developing countries, where the internet and online shopping are relatively new, shopping in-store remains a priority focus for retail strategies (Mwamba and Qutieshat, 2021). Thus, many retailers have an omni-channel model integrating their online and offline strategies (Staflund and Kersmark, 2015). A prominent global brand that can be used to exemplify this is Walmart Inc, which has utiliseutilised technology and data usage through its digital strategy alongside in-store retailing (Jindal, Gauri, Li and Ma, 2021). The performance of the different retail channels can further be seen in Figure 1. below, which visualises the current market segmentation for retail, focusing on supermarkets and e-commerce retailing (ExpertMarketResearch, 2022). The integration of an omni-channel strategy sees retailers globally focusing on sales in-store and promotional or delivery strategies online, using an online marketing strategy (Staflund and Kersmark, 2015). For example, online promotional tools through Loyalty Programs, apps, and AR-usage alongside in-store sales.

Figure 1. Retail Market Segmentation (ExpertMarketResearch, 2022)



Moreover, the retail space globally is highly competitive, with brands entering and expanding into different markets and providing additional options to consumers (Gawankar, Kamble and Raut, 2016; Görçün, Zolfani and Çanakçıoğlu, 2022). Walmart is currently the top global retailer, successfully expanding into markets such as Brazil and Japan (Pandey, Dillip, Jayant, Vashishth, Nikhil, Qi, Kee, Mei, Xin and Qhi, 2021). This has brought about avenues of competing through price, service, quality, delivery, technology advancement, convenience, efficiency, and relationship building for retailers to stand out amongst competitors globally (Martin and Murphy, 2017; Mustikowati, Sarwoko, Arief and Nurfarida, 2021; Saha, Banaszak, Bocewicz and Nielsen, 2022). When examining the key leading retailers around the world, brands originating from the United States, such as Walmart Inc, Amazon.com Inc and Costco Wholesale Corporation, emerge as the top 3 industry players based on revenue reports, with brands from Germany and China following suit (Statista, 2020). Moreover, when exploring the current global retail space, Har et al., (2022) referred to North America and European economies as being more prepared in their usage, implementation, and adoption of data-usage technologies, while more developing areas in Sub-Saharan Africa were then described as unprepared due to the limitation of universal internet access and necessary skill development. Globally, retailers moving and emerging into different markets that are more saturated will also give suppliers within the areas an advantage, as they can use price and quality competition to control the market and forge agreements with retailers (David and Adida, 2015; Littlechild, 2018; Wang, Zhang and Fan, 2020). Moreover, a trend of network internationalisation amongst global retailers has been seen, with flexibility and utilising local

supplier relationships, granted such a relationship is suitable and beneficial for the business (Kalchschmidt, Birolini, Cattaneo, Malighetti and Paleari, 2020).

In terms of retail consumers within the global space, research within western areas has reflected more consumers growing up surrounded by technology, and so they may have also had their thoughts and behaviours shaped by it (Tshiani and Tanner, 2018). As a result, these consumers have different technological competencies and tendencies compared to consumers in developing or less technologically advanced societies (Tshiani and Tanner, 2018). Moreover, from a data-privacy perspective, culture variances across countries reflect differences in how consumers in these spaces will respond to Loyalty Programs making use of their data (Li, 2022; Okazaki, Eisend, Plangger, de Ruyter and Grewal, 2020; Tshiani and Tanner, 2018). However, the same may be true for retail consumers who have more experience with technology therefore having been exposed to more threats and databreaches, which may then affect their data and privacy perceptions in retail Loyalty Programs. This brings the focus to the challenges in the global retail marketing landscape.

2.3.2 Global market challenges

Globally, various privacy policies and regulations have been implemented to protect consumers' privacy and their data usage. Regulations such as Europe's General Data Protection Regulation (GDPR), the California Consumer Privacy Act (CCPA), and the Protection of Personal Information Act (POPI Act) are some of the few to mention (Manda and Backhouse, 2016; Tshiani and Tanner, 2018). Moreover, retailers themselves can implement various privacy policies and strategies alongside these regulations to ensure consumers are properly protected and aware of what they agree to. These regulations present challenges for retailers in a global market, as strategy adjustments and alterations to policies will need to be adhered to (Vincent, 2020; Yang and Gu, 2021). Improper enforcement of such adjustments will result in monetary and even legal repercussions for retailers (Mignacca, 2022; Theys, Ruhode and Harpur, 2021). Therefore, retailers on a global scale will need to be thorough, knowledgeable, and responsible in their international movements. Moreover, when looking at the challenges retailers face globally, the threat of new entrants and substitutes can be observed.

As mentioned, the retail space globally is highly competitive, providing challenges for retailers, particularly smaller retailers. When entering new markets and needing to deal with loyalty, favouritism, and saturation from consumers and suppliers in the market towards a particular

retailer already existing in the market and a stable CRM (Crișan-Mitra, Stanca and Dabija, 2020; Ramprabha, Gnanasundari and Kesavan, 2019). When addressing these challenges, entrance obstacles, buyer/supplier negotiating power, competitive pressure, and scale economies should all be considered (Danemo, 2018; Rodrigues, 2020). Furthermore, when entering certain markets, retailers will face the challenge of adjusting to skill levels, technological developments, and management differences that vary from their home market; e.g., countries such as the United Kingdom have retailers with self-service kiosks and 24-hour windows as their competitive point. However, other stores throughout the world lack the resources and equipment to take similar steps (Galdolage, 2021; Har et al., 2022).

Moreover, when looking at the extant literature on Loyalty Programs in retail globally, a large portion of research puts a focus on Customer Relationship Management (CRM) and investigating the retention and acquisition of consumers (Chen, Mandler and Meyer-Waarden, 2021; Kampani and Jhamb, 2020; Sota, Chaudhry, Chamaria and Chauhan, 2018). However, literature exploring the same aspect from a big data and privacy perspective, especially in a South African context, is still developing (Belarbi, Tajmouati, Bennis and Tirari, 2016; Le Roux, 2019). This provides an academic challenge to be overcome with studies such as this one. Moreover, research has noted the importance of measuring the different metrics that influence customer engagement and interaction with Loyalty Programs (Breugelmans et al., 2015), something this study will inadvertently accomplish.

2.4 The African state of the retail industry performance

2.4.1 African market performances

The African retail market has developed considerably in recent years, with the growth of malls, technology startups, and international businesses around the continent (Amungo, 2022). Moreover, this performance is expected to only grow further, with countries such as Nigeria, South Africa and Egypt being noted as the largest consumer markets for the year 2030 (Mwamba and Qutieshat, 2021; Signé, 2018). Furthermore, the African Development Bank predicted a large $2.1 trillion of African consumer spending by 2025, an exciting prospect for retailers (Signé, 2018). However, this has been somewhat halted due to the rise of the COVID-19 pandemic, where the African continent saw a decline in demand in retail as movements and engagement became restricted for consumers in lockdown (Mwamba and Qutieshat, 2021; Signé, 2018). Moreover, major operators such as Shoprite, TFG and Pep exited certain African

markets during this period (AfricanRetailReport, 2020). This, however, also allowed room for some growth with e-commerce and increased demand post-lockdown from consumers.

Nigeria is one of the few African countries that saw the rise of e-commerce during the COVID-19 pandemic, with a growth rate of 42% in e-commerce in the year 2020 (AfricanRetailReport, 2020). Popular brands, such as Jumia and Sokowatch, also aided in encouraging this e-commerce engagement with consumers, as well as bridging the gap between informal retailers and suppliers through convenience and pricing options made accessible (Deganis, Tagashira and Yang, 2021; Mwamba and Qutieshat, 2021; Ibam, Boyinbode and Afolabi, 2018). However, this performance has been somewhat limited due to boundaries in delivery structure and necessary safety regarding payments, some of the key challenges for e-commerce in Africa (Ibam, Boyinbode and Afolabi, 2018; Ndonga, 2012). This can be further examined by observing the challenges in the African retail industry.

Furthermore, the African retail space leans largely towards informal retail, with room for more formal shopping centres and international retailers to enter the market (Mwamba and Qutieshat, 2021; Tawii, 2022). From a consumer perspective, African consumers, in general, have been found to buy and trust brands they recognise, something that has assisted international competitors in successfully establishing themselves in the market (Chinomona, 2016; Haefner, Rosenbloom and Haefner, 2016; Michoma, 2019). Moreover, African countries have been reflected as those that have a young, globalised, cost-conscious, and sophisticated consumer base; surely to evolve and grow within the next 10 years (AfricanRetailReport, 2020). It's further predicted that consumer demand within retail will be fueled by elements such as increases in discretionary household spending and formal consumption (Signé, 2018). Some examples of the larger global and domestic retailers in Africa include Shoprite, Massmart, Choppies, Tuskys, Persians Group, Uchumi and the Savola Group, to name a few (Nandonde and Stanton, 2022). The past two decades has reflected an influx of these external companies into the African retailer space, with examples such as the Savola group. which is a Saudi Arabian company (source). This can also be seen with the European brand Spar, which holds a successful presence in numerous African countries, such as Botswana, Namibia, and Zimbabwe (Spar, 2023). Moreover, looking at the African retail market, a common theme of brands entering and exiting the market in recent years is also visible. For example, Shoprite exited Madagascar, Uganda, and Kenya in 2021; Mr Price exited Nigeria in 2021, and even the local Kenyan retailer Nakumatt closed in 2019; due to financial struggles (Madubela, 2021). Of the brands across the continent, Shoprite is the largest retailer across 11 different

countries in Africa and reached the top 100 in Deloitte's top 250 Global Powers of Retailing, although their success is founded in South Africa (Deloitte Global Powers of Retailing survey, 2022; Shoprite, 2023). Moreover, of the affluent brands that are noted for success in Africa, a large majority of them are found in South Africa, such as Shoprite and Pick n Pay (African Powers of Retailing, 2015). Additionally, as South Africa holds a more saturated retail market, it would be difficult for other African retailers to enter; as evident by Choppies which needed to sell their subsidiary after having trouble with their expansion into the South African market in 2019 (Crotty and Shevel, 2023). Taking the lens away from South Africa, Choppies is noted as the top leading retailer in southern Africa, as they operate across 4 different African markets, are expanding into Namibia and had a 4% increase in gross profit in 2022 (Choppies, 2023). Regardless, traditional retailing still predominates in the retail sector of most African nations, and even though these nations are beginning to embrace e-commerce, sales are still concentrated in modest traditional stores like kiosks (Ivers, Niavas, Mitchell, Sqalli and Frikha, 2022).

2.4.2 African market challenges

Challenges within retail across the African continent have arisen surrounding informal business, skill gaps, technology, and resources (Cooke, Wood and Horwitz, 2015). As mentioned, the African continent has many countries with an informal retail majority, predominantly for food and clothing (Tawii, 2022). This is particularly true for areas in sub-Saharan Africa such as Kenya and Nigeria, where informal retailers make up 67% of total retail, e.g., through market stalls and vendors alike (Siele, 2022; Skinner, 2019; Tawii, 2022). This poses a challenge within the African retail market regarding issues surrounding morality and rights for workers within these businesses, as arrangements and services are less monitored (Boubakri, El Ghoul, Guedhami and Wang 2021; Mwamba and Qutieshat, 2021). This, therefore, could pose potential ethical and safety risks for employees. Mwamba and Qutieshat (2021) even go as far as to describe informality as hindering the efforts to promote equitable development and goodwill or lawfulness within the retail business.

Moreover, African countries like Angola and Zambia are good examples of challenges surrounding the continent's resources, specifically for power supply, where retailers must manage inconsistencies with power through excessive generator reliance (Blimpo and Cosgrove-Davies, 2019; Hugo, 2016). This extends to shortfalls in infrastructure, corruption, skills development, and general macroeconomic environment volatility (Malikane, 2015;

Meyer and Meyer, 2017). Moreover, currency devaluations and the rise of inflation over recent years pose challenges for local and international businesses alike (Mwamba and Qutieshat, 2021). In terms of technology, various emerging markets in Sub-Saharan African countries are still in the embryonic stage of implementation, with retailers struggling to overcome its challenges, i.e., shifting towards an omnichannel strategy, digitalizing expectations, lack of data and security risks (allAfrica, 2021; Choi, Dutz and Usman, 2020; Ibam, Boyinbode and Afolabi, 2018). Moreover, retailers that have implemented various digital marketing strategies in Africa still need to account for the threat of personal data usage that can occur (Findlay and Remolina, 2022; Mage, 2020; Wang, 2021). This is particularly true for banking and pharmaceutical retailers that store valuable personal data.

However, with these challenges considered, the growth and technological potential that exists within the different African countries are clear, making it an exciting region to watch over the next few years (Choi, Dutz and Usman, 2020). This shift is already somewhat evident through major marketplace brands such as Shoprite utilising data-technology usage to analyse customers' behaviour and provide key market insights, an innovation that has advanced in the South African market in recent years (Dakora, and Rambe, 2022).

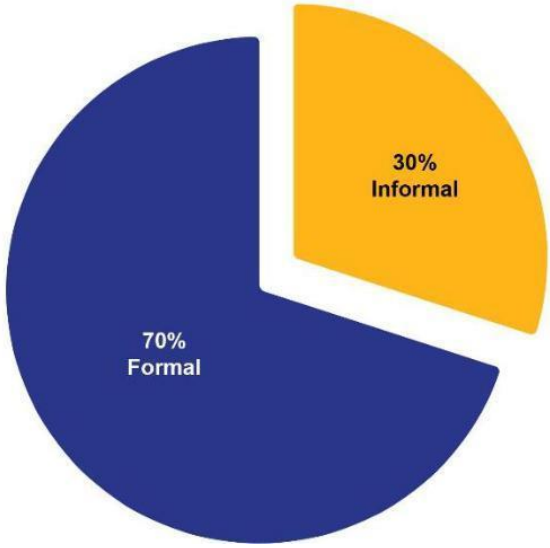
2.5 The South African retail industry

2.5.1 Performance of the industry

In South Africa alone, the retail sector makes up approximately R135 984 billion of the country's GDP (Statssa, 2018). Moreover, retail sales were shown to have increased by 1,7% from 2021 to 2022 within the country (Statssa, 2022). Performance-wise, the country stands out as the most developed formal retail industry on the continent, with relatively better infrastructure and policies than other sub-Saharan areas (Mwamba and Qutieshat, 2021). The formal/informal divide can further be visualised in Figure 2 below. Moreover, the industry is highly concentrated, with big retailers like Woolworths, Pick 'n Pay and Spar dominating the market and expanding into other African markets (Malgas, Khatle and Mason, 2017). In terms of e-commerce in South African retail, revenue of $4, 062 million was recorded in 2020, of which is only expected to grow (van Rooyen and Amoah, 2021). This can be linked with the influence of the COVID-19 pandemic, which saw many retailers using delivery systems and online shopping due to concerns and limitations in lockdown (Njomane and Telukdarie, 2022; Reardon, Heiman, Lu, Nuthalapati, Vos and Zilberman, 2021). For example, this hybrid

approach saw three of the most popular brands launch on-demand grocery systems: Dash (Woolworths), Sixty60 (Checkers) and ASAP! Bottles (Pick n Pay), of which these can then be linked with the brand's rewards program (Dakora. and Rambe, 2022; Njomane and Telukdarie, 2022). Additionally, a comparison done by Njomane and Telukdarie (2022) on the three retailers showed the resilience of the brands as they each reflected a growth in turnover during the pandemic period.

Figure 2. Formal and Informal grocery retail in South Africa (based on rand sales) (Masojada, 2021).



Extant research on the benefits of using data has also emerged through aspects such as engagement, value creation, and improved experience (Calder, Malthouse and Maslowska, 2016; Rejeb, Rejeb and Keogh, 2020; Zeng and Glaister, 2018). These benefits have received the attention of retailers, and the popular South African grocers "Woolworths South Africa, Pick n Pay and Shoprite", have now invested heavily to incorporate data-driven decision-making into their strategies (Global Powers of Retailing, 2021, Hartzenberg, 2019, Woolworths Holdings, 2022, Pick n Pay, 2022, Shoprite, 2022). These supermarkets have a broad product focus ranging from groceries and household goods to clothes (Beneke, Chamberlain, Chohan and Neethling, 2015). Therefore, these retailers will be mentioned and referenced in this study as a guide for the status of retailers in South Africa; as well as to assist participants in understanding the area of study. In terms of loyalty programs, these retailers are all among the key players to have implemented the promotional tool in South Africa, with Shoprite being one of the most recent additions (BusinessTech, 2021; Perumal, 2021).

Furthermore, when observing the performance of retailers in the country, Loyalty Programs stand out as a key aspect, with South Africa having one of the highest incidences of loyalty card usage globally, with the average South African being a member of at least nine different loyalty programs (Nielson, 2018; Thukwana, 2021). This is possibly due to the nature of the majority of retail Loyalty Programs being free in the country; therefore, removing price factoring that might deter consumers (Moneytoday, 2022). However, as consumers' account information and shopping behaviour are almost always utilised in these instances, concerns for privacy and the inconvenience of creating an account can still play factors in consumers not engaging with respective retailer Loyalty Programs (Awotunde, Jimoh, Folorunso, Adeniyi, Abiodun and Banjo, 2021; Chen, Sun and Liu, 2022). The top 10 most-used retail Loyalty Programs from 2019 to 2021 can be further visualized in Figure 3. below.

Figure 3. Highest retail Loyalty Programs in South Africa in 2019 and 2021 (BusinessTech, 2021)

2019	
1. Clicks ClubCard	71%
2. Pick n Pay Smart Shopper	58%
3. Dis-Chem Benefit	51%
4. Woolworths WRewards	40%
5. Thank U card	32%
6. Spar Rewards	25%
7. Makro mCard	23%
8. myTFGrewards	18%
9. Cotton On Perks	10%
10. Exclusive Books Fanatics	8%

2021		Growth % 2019 to 2021
1. Pick n Pay Smart Shopper	80%	+ 22% pt.s
2. Clicks ClubCard	79%	+ 8% pt.s
3. Dis-Chem Benefit	62%	+ 11% pt.s
4. Checkers Xtra Savings	60%	NEW
5. Woolworths WRewards	54%	+ 14% pt.s
6. Spar Rewards	41%	+16% pt.s
7. Makro mCard	37%	+ 14% pt.s
8. thank U card	27%	+ -5% pt.s
9. myTFGrewards	26%	+ 8% pt.s
10. Shoprite Xtra Savings	25%	NEW

2.5.2 Growth factors of the industry

Within the South African retail market, one of the most notable growth elements has been the development and implementation of e-commerce in recent years (Malgas, Khatle and Mason, 2017). It will be interesting to see how this changes further in the coming years as growth in internet access continues across the country. Moreover, this area provides an opportunity for expansion, as smaller retailers and producers can also access external and internal markets that previously may have been unattainable (Goga, Paelo and Nyamwena, 2019; Johnson and Iyamu, 2019; Malgas, Khatle and Mason, 2017). Moreover, the retail industry for grocery and supermarket retailers has been described as having the highest potential for growth (van Rooyen and Amoah, 2021).

From a consumer perspective, growth has also been highlighted in the focus of more retailers on customer relationship management (CRM) techniques as retailers shift towards acquisition and retention strategies. This is central to current retailing efforts as brands struggle to deal with consumer switching and need to find competitive strategies to build relationships and meet consumer preferences, often through Loyalty program rewards and differences to persuade consumers and combat consumer attrition (Mackay and Major, 2017). This brings the focus to the challenges within the South African industry.

2.5.3 Challenges of the retail industry in South Africa

As the retail market has shifted in recent years, so has consumer behaviour. South African consumers have become more knowledgeable and selective about the types of service and quality that they receive (Mackay and Major, 2017). Moreover, the increasing demands of consumers create additional challenges for brands to meet preferences while considering the highly competitive nature of the industry and frequent consumer switching behaviour (Ernst and Young 2017; Mackay and Major, 2017; Malgas, Khatle and Mason, 2017). This extends to the challenge for retailers to keep up with trends in the market as consumer behaviour shifts towards different buying patterns and product options. Checkers is a good example of a retailer adapting themselves according to consumer needs, as they released the “Simple Truth” line for healthier and more natural products that meet the needs of their vegetarian and eco-friendly consumers (Shopriteholdings; 2018). Additionally, the South African retailer market poses a particularly large challenge for new entrants due to the oversaturation of retailers in the country (Charman, Petersen and Piper, 2012; Reinert, 2016).

From a technological standpoint, certain wealth and technological gaps exist within the country, as many consumers are only recently accessing and utilising the internet (Malgas and Zondi, 2020). This presents challenges for retailers engaging this consumer base and behavioural constraints that may exist for actively using Loyalty Programs (Malgas and Zondi, 2020; Teuteberg, 2020). Literature on data privacy has discovered that, while South Africa has adopted various steps to address existing privacy issues, inadequate implementation, integration, management, and compliance, as well as contradictions in policy and regulation, all serve as countermeasures to these efforts (Manda and Backhouse, 2016).

2.5.4 The South African population – size and potential

The South African population is made up of around 60,6 million people, with a growth rate, despite the terrible impact of the COVID-19 pandemic (Statitsa, 2022). Moreover, Gauteng is reflected as having the largest share of the population, with roughly 26.6% of youth and adults in the province. Furthermore, the country is widely diverse, with numerous cultures, religions, and races (Stiehler, 2017). From a national cultural perspective, the country has been defined as individualistic, masculine, more risk-averse and indulgent (HofstedeInsights, 2016). These findings, however, are somewhat outdated and will be explored more recently in this study. Moreover, this study specifically looks at South Africans in general, with no particular focus on one group and a majority focus on South African consumers in Gauteng for convenience purposes.

In targeting the South African population, major retailers in the industry have evolved towards a diversified format that targets the different income segments in South Africa through their product offerings and geography (Masojada, 2021). Retailers can also acknowledge various celebrations and traditions in their product and service offerings, provided they have proper research and understanding of these events, for example, through specific cuisine offerings to meet a certain consumer base. However, as per South African regulations, retailers will not be able to segregate or observe specific consumer groups with product offerings, rewards, and their data usage in Loyalty Programs (Consumer Protection Act, 2008: 8:1(g)). From an ethical research standpoint, observing a particular group over another would also require a specific research benefit for that group, of which the retail industry is nation-focused, not group-focused; providing reasoning for exploring South Africans as a whole (Wynn, Mason and Everett, 2008). Moreover, in exploring privacy concerns amongst South Africans, this study will investigate general consumer opinion

and not only Loyalty card users, to include potential consumers who aren't engaging in Loyalty Programs due to this concern. This brings the focus towards Privacy for data usage in South Africa and existing trends in literature.

2.5.5 Privacy concerns and South African Loyalty Programs

Within the context of South Africa, various regulations exist to protect South African consumers' data and their privacy (Manda and Backhouse, 2016). These are highlighted below:

- The Protection of Personal Information (POPI) Act (2013)
- The Electronic Communication and Transactions Act (2002)
- The Regulation of Interception of Communications and Provision of Communication-Related Information Act (2002)
- The Public Service Act (1994)
- The State Information Technology Agency (SITA) Act (1998)
- The Consumer Protection Act (2008)
- Cybercrimes and Cybersecurity bill (2015)

However, even with these regulations in place, the strategies and measures established have been found in research to be compromised and ineffective and require the implementation of 'micro-policies' (Hoffmann, Lutz, and Ranzini, 2016; Wright, Gutwirth, Friedewald, De Hert, Langheinrich and Moscibroda, 2009). Moreover, a large portion of these existing regulations make mention of requiring permission and consent when using consumer data, of which retailers can acquire using 'terms and conditions' agreements, which are often overlooked or ignored by consumers (Gerber, Gerber and Volkamer, 2020). A consumer survey investigating app usage and privacy in America revealed that 77% of consumers admitted they don't read privacy policy terms and conditions (TheClearingHouse, 2021). The report further emphasised the lengthiness of the policies as well as the lack of confidence that consumers felt when reading the terms, which may contribute to them not reading the terms (TheClearingHouse, 2021). Moreover, a study by Griggio, Nouwens and Klokmose, (2022) had participants state that terms and conditions were "frustrating or inaccessible to read". This highlights an important issue where consumers don't come away knowledgeable after putting the effort into reading the terms and conditions. A study by Obar and Oeldorf-Hirsch, (2020) attributes this to consumers focusing on the end goal without being obstructed or held back by the privacy policy and regarding the policy as "a nuisance". For example, a consumer looking to access a

website simply accepts the terms without reading them, to not be denied access or to continue with their objective. Obar and Oeldorf-Hirsch (2020) demonstrated this through their findings, where 74% of their participants skipped the policy, and of those that accepted, 98% did not read the terms properly. Customers' failure to read the fine print may also be attributed to the policies' length, ambiguity, or complexity; as they frequently contain jargon that may be intimidating (Jilka, Simblett, Odoi, van Bilsen, Wieczorek, Erturk, Wilson, Mutepua and Wykes, 2021).

This brings about an ethical issue regarding consumers' awareness of what they're agreeing to; where retailers should consider whether consumers are aware of the privacy of their data. Delays in updates to privacy policies and regulations can also lead to a disregard for privacy protection measures and a lack of harmonisation for new laws with a focus on technology as the country evolves, and new regulatory requirements arise (Manda and Backhouse, 2016).

Moreover, from a consumer perspective, variances in consumer opinion towards data sensitivity and privacy exist depending on the culture, philosophies, and societal environment of the person, which this study will explore specifically for the focus of South African consumers (Matemba and Li, 2018; Tshiani and Tanner, 2018). Furthermore, African countries have been described as collectivist, holding philosophies such as 'Ubuntu' with a focus on values and initiatives that benefit the community; however, governments and individuals are now pushed towards reconsidering privacy for the individual as the e-commerce market grows and more individuals' data is exposed and used by companies (Tshiani and Tanner, 2018). Additionally, concerns and uneasiness surrounding how much companies know about consumers have arisen in recent years, with consumers showing concerns for aspects such as personalised marketing (Ameen, Hosany and Paul, 2022; Lee and Cranage, 2011; Riegger, Klein, Merfeld and Henkel, 2021). One example of this from a global perspective is when the brand Target received backlash after they knew a teenage girl was pregnant before her family using her data, where they then sent her marketing promotional tools along with their other pregnant consumer base (Mathur, 2019). Privacy concerns have also been described as disadvantageous to retailers, as they provide barriers to success within the market (Joubert, Murawski and Bick, 2021). These are further reflected in concerns for data usage from a risk perspective through previous or potential experiences with data breaches, unauthorised access, third-party data-selling and general uncertainty regarding confidentiality (Chakraborty, Lee,

Bagchi-Sen, Upadhyaya and Rao, 2016; Di Minin, Fink, Hausmann, Kremer and Kulkarni, 2021; Gupta and Dubey, 2016).

However, as the market shifts towards an industry fused with technology, marketing efforts and understanding consumer behaviour necessitate the use of consumer data, particularly to compete in the highly competitive and oversaturated South African retail market. Therefore, it becomes important for retailers to adapt to the market while still recognising the degree to which various privacy concerns that consumers may hold exist and how to target them.

Conclusion

This chapter reflected the growth and potential of the retail industry, specifically observing the global, African, and South African markets; alongside the exploration of Loyalty Programs, data-usage and the consumers within these markets. Moreover, considering the COVID-19 pandemic, clear directions towards e-commerce and changes to customer preferences are found, with a further increase in the data usage for an improved understanding of market consumers. Alongside this, various regulations in these markets have also been highlighted, with a need for exploring privacy concerns and, thereafter, the adaption of 'micro-policies' and input from retailers to safeguard consumers and incorporate strategies to approach data privacy concerns.

Chapter 3 - Theoretical Background

3. 1 Introduction and Background

This study observes the data-usage side of Loyalty Programs through privacy and the perspectives and corresponding concerns consumers may have towards it. Therefore, theories specifically surrounding privacy concerns and data usage will be utiliseutilised for the study. This chapter will touch on the theoretical grounding for the study by going into depth and providing justification for each of the chosen theories, the constructs and, thereafter, presenting the conceptual model and hypotheses for the study. This, along with an investigation into the literature for each of the topics, will provide an understanding of the study concepts and the development and support for the study's model.

3.2 Theoretical Grounding

Observing chosen theories in literature allows researchers to logically express relationships between concepts to better understand a certain topic, which are then connected and developed along with other theories and constructs to ground research (Varpio, Paradis, Uijtdehaage and Young, 2020). Theories themselves are not solely the data, diagrams, hypotheses, or variables but rather the understanding, the 'why', and the connections that are made surrounding the topic (Sutton and Staw, 1995). Furthermore, a strong theory is one that explains, predicts, and delights, to have an impact and inform the literature (Weick, 1995). This study looks to observe the data-usage side of Loyalty Programs with a focus on privacy, and the perspectives and corresponding concerns consumers may have towards it. Therefore, chosen theories specifically surrounding privacy concerns and data usage, from a consumer behaviour perspective, will be utiliseutilised for the study.

Over the past two decades, research on consumer perspectives towards data usage has been scarce, with a major focus being on the data itself and how companies can use it to better understand their different consumer drives and consumer targetability (De Battista, Curmi, and Said, 2021; Fam, Brito, Gadekar, Richard, Jargal and Liu, 2019; Sukmaningsih et al., 2019). For example, as technology has progressed in developing countries such as South Africa, literature has taken a focus on how companies make use of this data, how it builds brand loyalty and preference, as well as the readiness of consumers for big data elements and drivers in

marketing (Dong and Yang, 2020). In an age of personalisation and ever-increasing targeted ads, however, an avenue for understanding how consumers respond to their data privacy has arisen. Existing literature on information privacy and, in particular, privacy concerns, has a current focus on major theories such as the Privacy Calculus Theory (PCT), Theory of Planned Behaviour (TPB), Theory of Reasoned action (TRA), General Deterrence Theory (GDT), Cognitive Dissonance Theory (CDT), Protection Motivation Theory (PMT) and the Technology Acceptance Model (TAM) (Fam et al., 2019; Hagger, 2019; Rawlings, 2020).

Upon further investigation of these theories and their context in literature, the TAM, TPB, and PCT have been used in contexts that align and justify this study's aim of understanding privacy concerns rather than providing insight into e-commerce, m-commerce, technology, and branding variables (Bayaga and Ophoff, 2019; Dhagarra, Goswami and Kumar, 2020; Gutierrez, O'Leary, Rana, Dwivedi and Calle, 2019; Kang and Namkung, 2019). However, certain limitations and the overuse of the TAM provide a research avenue for this study to utiliseutilise the other theories to reach the objective of understanding privacy concerns amongst South African consumers (Dutot, Bhatiasevi and Bellallahom, 2019; Malatji, Eck, and Zuva, 2020). Furthermore, this study brings in elements of consumer relationships, examining purchase intention and Loyalty Programs alongside privacy concerns, providing room to integrate the Customer Relationship Management (CRM) theory. Some honourable mentions include the Quantum model, Cognitive theories, and Trust, which have also been explored in literature researching information privacy or have been adapted alongside other theoretical foundations (Kokolakis, 2017; Lăzăroiu, Neguriţă, Grecu, Grecu and Mitran, 2020; Smith, Dinev and Xu, 2011).

Upon investigation of what the study looks to achieve and the possible theories to ground the study, additional constructs of trust, perceived risk, culture, and personalisation are also explored alongside the theories to create an adapted model to better understand privacy concerns and subsequent purchase intention towards Loyalty Programs. Investigating privacy concerns, attitude and intention provides a way for researchers to investigate how consumers feel about their data being used (Gerber, Gerber and Volkamer, 2020; Kokolakis, 2017; von Kalckreuth and Feufel, 2021). Moreover, by exploring the antecedents of privacy concerns, a deeper analysis can be provided using past experiences and personal consumer characteristics to allow for a more detailed and context-specific observation. These will all be discussed further below.

3.2.1 Historical context and overview for the chosen theories

Privacy-related behaviour through information systems is something that has been explored in literature since the 1990's and continues to be of relevance as more consumers and companies move online and online privacy becomes more prevalent (Awad and Krishnan, 2006; Bartsch and Dienlin, 2016.; Boerman and Smit, 2022; Kitkowska, Shulman, Martucci and Wästlund, 2020; Kokolakis, 2017; Malhotra, Kim and Agarwal, 2004). Here, companies making use of data allows for marketing and engagement opportunities; however, this can be considered 'intrusive' or an invasion of privacy for some consumers. Particularly in more developed countries, where data is more frequently provided and accessed, literature has begun to understand the necessity of consumers' privacy and safety (Mohammed and Tejay, 2017; Till and Densmore, 2019). This, alongside past events, and issues regarding data privacy, such as location-tracking potential, data breaches, and leakages that have occurred over the years (Martin, Kim, Palmatier, Steinhoff, Stewart, Walker, Wang and Weaven, 2020; Nair and Tyagi, 2021). Some well-known ones in recent years include the data-breach of Facebook in 2021, which acquired 533 million user details around the world; the Aadhaar leak in 2018, where every registered Indian citizen's data stored in the biometric database was exposed and later sold for less than 6 pounds; the Syniverse breach in 2021, where over 500 million user data was exposed within the many companies that are connected with the telecommunications company, and unseen ongoing leakages were found (Komnenic, 2022). These companies have since taken the necessary action to combat such breaches and strengthen their systems; however, the damage to consumers' data and perspectives cannot be easily remedied. Over the past two decades, research on consumer perspectives towards data usage has been scarce, with a major focus being on the data itself and how companies can use it to better understand their different consumer drives and consumer targetability (De Battista, Curmi and Said, 2021; Fam, Brito, Gadekar, Richard, Jargal and Liu, 2019; Sukmaningsih et al., 2019). Furthermore, in the exploration of understanding such perspectives surrounding privacy and potential concerns, the Privacy Calculus Theory arises. Moreover, of the three theories that are chosen and combined for this study, the most observed theory when exploring privacy concerns in literature is the Privacy Calculus Theory.

3.2.2 Privacy Calculus Theory

The privacy calculus theory (PCT) was first developed by Laufer and Wolfe (1977) surrounding behaviours and decisions associated with privacy and corresponding concerns. Here, the decision typically observes consumers associating a benefit and a risk with their responsive action, based on their perspective of data privacy, i.e., a trade-off that will then lead to an outcome, such as engaging or not engaging with a Loyalty Program (Trepte, Scharkow, and Dienlin, 2020). Privacy in this case relates to information disclosure, e.g., secondary use or unauthorised access (Alashoor, Al-Maidani and Al-Jabri, 2018; Osatuyi, 2015). Moreover, when exploring Loyalty Programs and the advancement of technology, such a trade-off is often done automatically for the consumer through elements of personalization, in which machine-based learning techniques make use of respective profiling and recommendations for consumers to provide an objective benefit or predicted utility, i.e., location-services, ease, relevance and reduced risk through conflict (Knijnenburg, Raybourn, Cherry, Wilkinson, Sivakumar and Sloan, 2017). This trade-off was noted by Culnan and Armstrong (1999), and extended to reflect that consumers willingly provide private information when the benefit outweighs the risk. Moreover, the privacy calculus theory was used to understand consumer behaviour by building on the Behaviour Calculus Theory; where the outcome of sharing information indicated a greater benefit perspective and not sharing indicated a greater risk perspective, alongside the consumer's respective privacy concerns (Laufer and Wolfe, 1977).

Due to the nature of the PCT, it is also often seen alongside studies exploring the privacy paradox (Kokolakis, 2017; Lutz, Hoffmann, Bucher and Fieseler, 2018; Smith, Dinev and Xu, 2011). Dinev et al. (2015) furthered this by noting the paradoxical nature of privacy behaviour and the fact that researchers cannot make assumptions about how consumers will respond or behave. Furthermore, when examining the PCT, an imbalance is often reflected between the attitudes and behaviours observed, as consumers can still be influenced by external elements and determinants where their attitudes and behaviours don't match up; a parallel to the privacy paradox (Knijnenburg et al., 2017.). Moreover, Laufer and Wolfe, (1977) further noted the contextual dependency of the theory, as consumers cannot provide the same results due to variances in their privacy concerns and perspectives (Alashoor et al., 2018). Thus, research has reflected the importance of investigating additional factors alongside the PCT, as well as exploring privacy concerns in respective contexts.

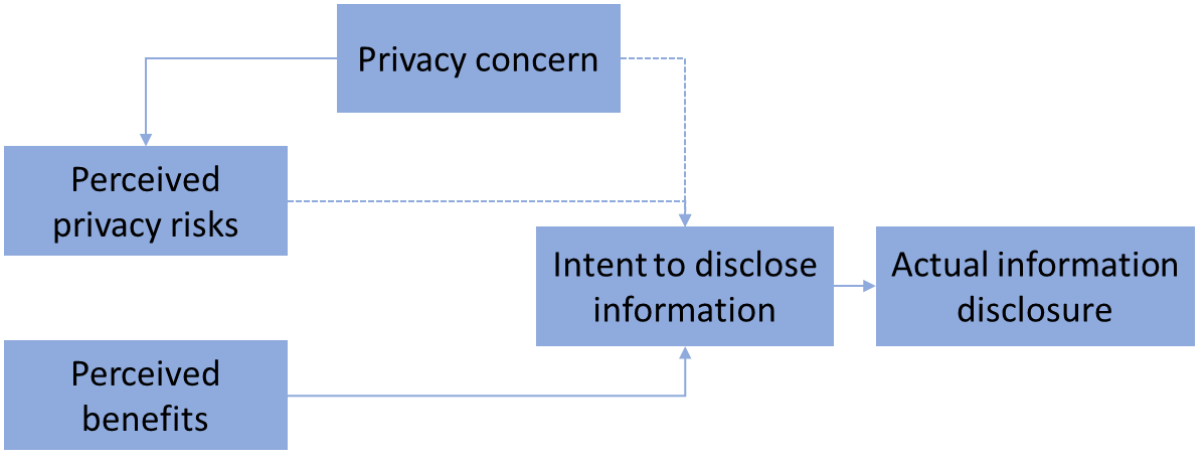
Over the years, the Privacy Calculus Theory has also been adapted to incorporate theories to provide added depth. Among these being: the Prospect theory, to manage and understand

consumer risk-aversion; Elaboration Likelihood theory, to explore the cognitive and peripheral influences of a consumer; Hofstede's Cultural Dimensions, to explore the cultural influences on behaviour; Trust theory, for trust propensity; Protection Motivation theory, for the drivers of consumer decision making; as well as the Stimulus-Organism-Response (S-O-R) Model, to explore how external stimuli affects consumer behaviour and, therefore, their privacy decisions, e.g., emotions (Alashoor et al., 2018; Bayaga and Ophoff, 2019; Kaur and Dhillon, 2021; Kezer, Dienlin and Baruh, 2022; Shiri, Peikar and Zamani, 2021; Zhai, Wang and Ghani, 2020). Additionally, theories such as the TPB, TRA and TAM have also been applied in research in correspondence with the theory, of which the TPB stands out and has been adapted for this study's model. This will be discussed later in this Chapter.

3.2.2.1 Fundamental principles of the PCT

As mentioned, the Privacy calculus theory is one that measures privacy concerns, accompanied by a respective benefit and risk trade-off (Hayes Brinson, Bott and Moeller, 2021; Princi and Krämer, 2020). Moreover, when observing literature that has made use of the model proposed by Laufer and Wolfe (1977), various perceived benefits and risks can be explored relative to information sharing (Alashoor et al., 2018). Figure 4 below, taken from (Keith, Thompson, Hale, Lowry and Greer, 2013), observes the common constructs utiliseutilised when observing this theory in literature, namely: the privacy concern, perceived risk and benefit, as well as the outcome of intention and disclosure of the consumer's privacy.

Figure 4. Privacy Calculus Theory (Keith, Thompson, Hale, Lowry and Greer, 2013)



Privacy concerns is one of the constructs most frequently seen within the PCT (Jozani, Ayaburi, Ko and Choo, 2020). Here, the construct allows researchers to observe existing and corresponding behaviour relative to information disclosure (Dinev, Bellotto, Hart, Russo, Serra and Colautti, 2006). This is done through the exploration of the relationship between the benefit and risk constructs towards the privacy concern, as well as the information disclosure intention that comes after (Dinev et al., 2006; Wang, Duong and Chen, 2016). Here, the PCT provides a framework to investigate privacy concerns as a construct and for research to then provide a broad understanding of consumer perspective towards privacy (Kokolakis, 2017). Moreover, to understand privacy concerns, Bandara, Fernando and Akter (2020) extended the typical privacy calculus model to account for additional relationship factors such as social contract, empowerment and psychological foundations that would then influence the privacy concern. In the case where consumers display concerns and corresponding avoidance to participate in Loyalty Programs, empowerment from consumers regarding their privacy can be considered. Unlike the other common theories used, the privacy calculus theory provides an insight into consumer perspective specifically, whilst also providing an avenue to explore the privacy paradox (Kokolakis, 2017; Lutz, Hoffmann, Bucher and Fieseler, 2018; Smith, Dinev and Xu, 2011). Existing studies have also observed attitude and concern as similar concepts, however, the study by Gerber, Gerber and Volkamer (2020) noted the importance of distinguishing these concepts, as well as the relationship and influence that exists between privacy concerns, attitude, perceived risk, and intention; something this study considers. These will be further explored in the relationship and hypotheses aspect of the Chapter. Within the PCT, the benefits and risks can also be explored as fundamentals within the theory.

The benefits that have been explored in literature for disclosing private information from the user perspective encompass the majority: monetary, social, technological, and personalisation rewards (Awad and Krishnan, 2006; Gutierrez, O'Leary, Rana, Dwivedi and Calle, 2019). Moreover, consumers' personal values and preferences will alter their perception of privacy and their corresponding concerns. With reference to the personalisation of privacy, the focus shifts towards ‘user-tailored’ decisions and focuses based on the consumer data provided; as well as brand building and planning, based on collective user preferences. For example, a retailer brand such as Amazon which tracks purchase and viewing history, then reminds consumers of products they have been interested in in the past and uses this for targetability of alternate products in the future; both on the Amazon website and future advertising on other platforms (Amazon, 2023). In terms of the PCT, this can be an element of privacy concerns,

either in deterrence or contribution; as consumers can recognise their data being used and feel a sense of violation or appreciation for its usage for convenience or efficiency (Lee and Chen, 2022). Therefore, in the effort to understand privacy concerns, it's an element that should be observed. When exploring the PCT, the trade-off costs that can occur with data sharing can vary between the risks and consequences associated with the information disclosure; however, one way that literature has approached this is through the perceived risk that the consumer feels, which would subsequently affect their behaviour (Cho, Ko and Lee, 2018).

When looking at extant literature on the topic, the risk within PCT arises relative to consumers feeling a sense of intrusiveness, violations, and vulnerability with information disclosure (Chen and Jai, 2021; Lee and Chen, 2022). Perceived risk has been defined as a negative outcome or the level of uncertainty that can surround a loss or consequence; in this case, the perception of financial loss, privacy violation or personal information being exploited (Lee and Chen, 2022). Moreover, perceived risk plays a critical role in influencing consumer decision-making and intention, making it a key element for behavioural studies (Lee and Chen, 2022). In the case of the PCT, this then relates to observing the relationship that exists between intention and perceived risk. Furthermore, alongside this perceived risk, an exploration into the vulnerability that consumers may feel towards their private information disclosure can be explored as a cost within the PCT trade-off.

Consumers can feel concerned about organisations using their data due to privacy failure elements such as data breaches or leakages (Johansson and Rystadius, 2022). A data breach occurs when sensitive information is deliberately or accidentally revealed to unauthorised individuals (Cheng, Liu and Yao, 2017). Consumers that have experienced said breach or who may be in fear of it occurring may then show shifts in their privacy behaviour as they wish to protect their information (Lulandala, 2020). By analysing this risk within the PCT, this study allows for a deeper understanding of whether South African consumers feel a sense of risk when disclosing their private information and how this then relates to any concerns they may have. Lastly, another common fundamental principle of the PCT is the construct of intention, which is commonly used to measure the effect of the risk/benefit trade-off on consumer behaviour (Dinev et al., 2006). This intention within PCT provides a strong predictor for behaviour surrounding information disclosure and privacy, of which extant literature has utiliseutilised to better understand consumers perspectives towards privacy. This is done through the exploration of the relationship between intention and other PCT fundamentals; in this case privacy concerns and perceived risk. From this research study, the intention to

participate in Loyalty programs can be looked at as the intention to disclose information; as consumers will choose whether they actively intend to provide businesses with access to their data when they engage with the program. Alongside exploring the fundamentals and foundation for the PCT, the limitations and criticisms should also be considered, as well as how these will be taken into account relative to this study.

3.2.2.2. Criticisms of the PCT

Although extant literature is evident on the usage of the Privacy Calculus Theory to understand privacy concerns, various criticisms and limitations surrounding the theory are also evident. Studies have argued that the PCT is too limited as it doesn't account for the additional preferences and values that consumers may hold, which would then alter their privacy-related decisions and behaviours (Dienlin and Metzger, 2016; Mini, 2017; Princi and Krämer, 2020). In response to this criticism, this study makes use of additional constructs based on previous literature and theoretical models to account for other factors that may influence these privacy concerns, i.e., trust, attitude, and culture.

Moreover, issues surrounding inconsistency with how information disclosure is achieved have also been found, where consumers prefer not to make active decisions in their disclosure (Knijnenburg, 2017; Knijnenburg, Kobsa, and Jin, 2013; Li, Cheng and Teng, 2020). Furthermore, consumers may not have complete information regarding their privacy as only the lawful privacy necessities are presented to them, or they may simply ignore the conditions surrounding how their data will be used (Bayaga and Ophoff, 2019; Knijnenburg et al., 2017). This extends to issues where consumers may be overconfident, socially dependent, not completely aware of how their data is being used or have limited cognitive processing to recognise the PCT trade-off assumptions (Alashoor et al., 2018; Custers, van der Hof and Schermer, 2014; Wagner and Mesbah, 2019). A study by Barth and De Jong (2017) mentioned that consumers could be solely focusing on the benefits of providing their data and so a counterintuitive response is held in accordance with their respective concerns. However, that puts a focus on utilising the theory to observe mainly information disclosure, whereas this study will make use of the theory to investigate privacy perspectives through concerns and then intention to disclose rather than the disclosure itself. For example, consumers being more trusting towards social networking sites using their data or being overloaded with irrelevant information regarding their privacy which leaves them making seemingly irrational decisions about their privacy disclosure. This presents issues as researchers cannot assume the rational

consideration that all consumers will make the complete respective risk/reward trade-off in their approach to privacy; however, in the exploration of privacy concerns these can still be explored and then applied based on the foundation of the theory. Moreover, this study explores the additional constructs of privacy awareness and trust to extend the model and provide a deeper understanding of the findings surrounding privacy concerns. Although these limitations have been highlighted in the literature, extant studies have also provided strong evidence for the usage of this theory in understanding privacy behaviour and perspectives (Gerber, Gerber and Volkamer 2020; Kokolakis, 2017; Schomakers et al., 2022; Smith, Dinev and Xu, 2011).

3.2.2.3 Findings in existing literature

Extant literature exploring the Privacy Calculus Theory surrounds multiple contexts and industries, such as government, hospitality, commercial, and medical settings; and includes themes surrounding e-commerce, location services, m-commerce, social commerce, and e-health (D'Acunto, Volo and Filieri, 2021; Gonzales, Kwon, Lynch and Fritz, 2018; Gutierrez, O'Leary, Ran, Dwivedi and Calle, 2019; Kang and Namkung, 2019; Princi and Krämer, 2020). Moreover, studies reflect a shift in privacy as information technology and markets evolve (Jozani, Ayaburi, Ko and Choo, 2020). Moreover, the theory has been utiliseutilised to understand information disclosure, adoption and acceptance from a value and behavioural standpoint (Attié and Meyer-Waarden, 2022; Sun, Wang and Shen, 2021). Here, research puts a focus on using the theory to investigate the factors that deter or motivate consumers (Fernandes and Pereira, 2021). Studies have also adapted the privacy calculus theory, as this study does, to account for additional constructs to build theoretical grounding and reach their research objectives.

Relative to the context of Loyalty Programs, this theory has been used mainly in the hotel industry, however, there are numerous studies that have explored an extended privacy calculus with loyalty as a construct, i.e., with customer and brand loyalty being most prevalent (Ameen, Hosany, and Paul, 2022; Johansson and Rystadius, 2022; Kim, Wang and Roh, 2021). This study, however, looks to explore the theory in the context of Loyalty Programs, but not with a focus on brand elements such as loyalty and equity building. There is also a clear indication for the theme of exploring the theory to assist marketers in better targeting consumers and maximising the trade-off for boosted engagement (Knijnenburg, 2017). Interestingly, the results for privacy concerns varies depending on the study; as some studies (Dhagarra, Goswami and Kumar, 2020; Dienlin and Trepte, 2015; Jai and King, 2016; Rajaobelina, Prom

Tep, Arcand and Ricard, 2021) find privacy concerns to strongly influence behaviour to the point where consumers will present actions to protect their privacy, such as having decreased loyalty, purchases or choosing not to enable their data-sharing; whilst other studies (Ioannou, Tussyadiah and Lu, 2020; Lutz and Tamó-Larrieux, 2020; Ozturk, Nusair, Okumus and Singh, 2017; Shin and Kang, 2016) find consumers to have an insignificant correlation between concerns and behaviour, and others to have concerns but not do anything about them. Furthermore, existing studies have found personalisation, enjoyment, monetary rewards, social, and efficiency to be major drivers of information disclosure online (Gutierrez et al., 2019; Jozani, Ayaburi, Ko and Choo, 2020; Smith et al., 2011; Wahab, Zahari, Al Momani, and Nor, 2011). Based on the analysis of literature, a significant relationship between privacy concerns and online self-disclosure is evident, as is the significance of exploring the theory as a whole instead of solely exploring the 'privacy paradox'.

3.2.2.4 PCT relevance in this study

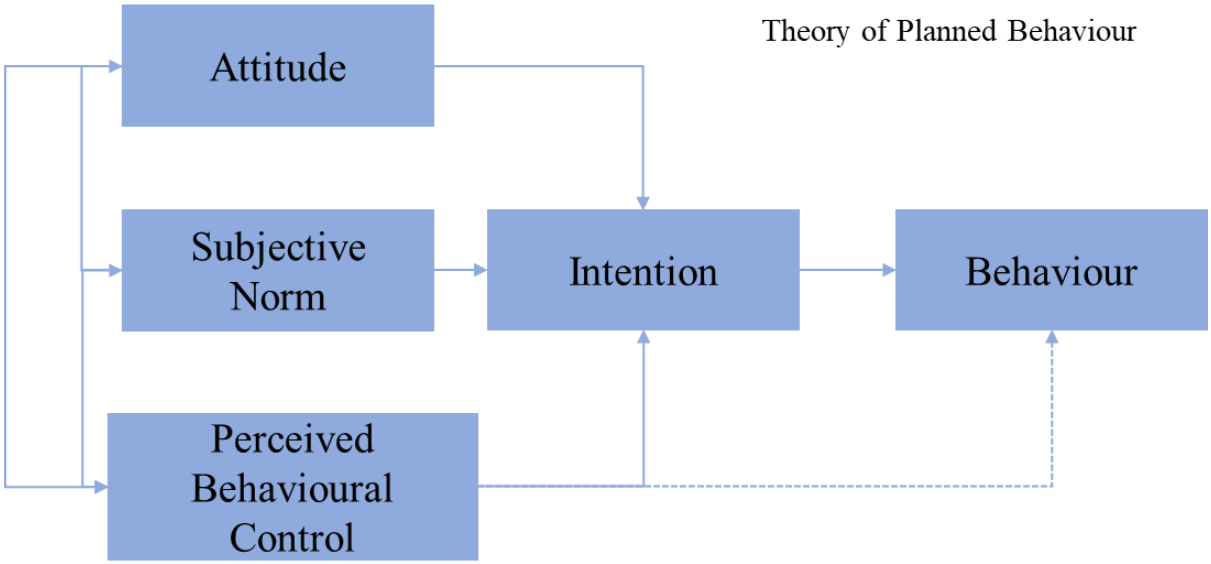
This study integrates the PCT to propose paths surrounding privacy concerns and, thereafter, intention, to understand consumer perspectives and behaviour. The PCT forms part of the theoretical basis of this study, as the viewpoint underlines the influence of consumer behaviour towards privacy, such that an understanding can be developed (Dinev et al., 2006). This is helpful in understanding consumer decisions regarding information disclosure. Furthermore, existing literature within the South African and retail Loyalty Program sector appears to be somewhat embryonic, allowing room for this study to contribute to the body of knowledge on the topic. The knowledge around the PCT and additional theories utiliseutilised in this study also provide for a sound focus on understanding and investigating privacy and privacy-related behaviour, as well as providing insight into the findings surrounding the relationships thereafter.

3.2.3 The Theory of Planned Behaviour

As mentioned, this study will also make use of the popular Theory of Planned Behaviour (TPB). The TPB examines consumer behaviour and refers to the exploration of subjective norms, attitude, beliefs and behavioural control that would influence their respective intentions (Cho, Ko and Lee, 2018). For example, in the topic of data-privacy, this theory could refer to a consumer considering the consequences of their intention to participate in a Loyalty Program based on the opinions of those around them, their personal attitude towards data-usage or any

constraints they may have in their intention to participate. The theory was first presented by Ajzen (1985) as an extension of the Theory of Reasoned Action (TRA); and has since become prevalent, being frequently cited by scholars and utiliseutilised in influential models in order to predict human behaviour (Ajzen, 2020; Kumar, 2019; Shalender and Sharma, 2021). The basis of the theory surrounds behavioural determinants being centred around intention (Hardeman, 2002). This can be further visualised in figure 5. below, presenting the general TPB model constructs and relationships.

Figure 5. Theory of planned behaviour (Orzanna, 2015)



Moreover, extant literature has utilised the TPB in conjunction with the PCT, as they observe similar constructs and interpretations, i.e., exploring behaviour in correlation with intention (Chatterjee, Chaudhuri, Vrontis and Siachou, 2021; Princi and Krämer, 2020). Literature has further described the PCT to work as an extension of the TPB, but without the paradoxical nature (Barth and De Jong, 2017; Fox, van der Werff, Rosati, Takako Endo and Lynn, 2022; Keith, Thompson, Hale, Lowry and Greer, 2013). The utilisation of this theory provides a specific insight into privacy from a control and social norms perspective, from which the foundation of privacy concerns has been said to centre around control. A study by Brandimarte et al. (2013) touched on this through their findings that consumers will disclose their private information when they feel in control. This further extends into studies observing control and the vulnerability felt; with a decrease in concern towards data being used, when perceived control was higher (Cho, Lee and Chung, 2010; Guo, Wang and Wang, 202). The TPB also postulates a correlation between the behaviour intended and the actual behaviour conducted

(Ajzen, 2020). Furthermore, alongside this study's aim, the TPB elements and association with the PCT allow for an adapted model to be generated; to combine multiple constructs within the theories to determine and assess the attitude and intention constructs, based on the foundation proposed within the theory.

Furthermore, the psychological nature of the TPB is something utiliseutilised in this study to allow for an investigation into the attitude of South African consumers towards privacy concerns, of which this attitude exploration then provides for a deeper understanding into the perspectives and behaviour of South African consumers, something this study looks to achieve. These fundamentals are further discussed below. Moreover, as mentioned, the TAM is a widely popular model that can be used instead of the TPB; however, this model is inadequate for the study.

The commonly used TAM provides a similar overview in literature as an alternative to the TPB, by observing usage through acceptance and intention from a technological point of view (Dutot, Bhatiasevi and Bellallahom, 2019). Although the TAM has been widely used in literature, it has, however, been criticised due to its lack of depth in investigating behaviour, the need for additional constructs to strengthen the theory, and the constant need to adapt the theory as technology develops and it is explored in different contexts (Dutot, Bhatiasevi and Bellallahom, 2019; Malatji, Eck, and Zuva, 2020). This, along with the specific investigation in use rather than perspective, makes the TAM inadequate for this study.

3.2.3.1 Criticisms of the TPB

Although the TPB is one of the most prominent theories in social science literature, there are still various criticisms and complaints from scholars regarding the theory. Firstly, some scholars have argued the inadequacy of the theory to be able to explain behaviour through consciousness and that a more implicit viewpoint is needed (Armitage and Conner, 2001; Sniehotta, Presseau and Araújo-Soares, 2014; Ulker-Demirel and Ciftci, 2020). Moreover, critics have mentioned the insufficient nature of the theory, as studies reflect a lower value in excess for reliability and correlation of variables (Armitage and Conner, 2001). This, however, is more a critique of the consistency of the variables, and the theory can and has presented good data analysis in past studies (Mehdy, Ekstrand, Knijnenburg and Mehrpouyan, 2021; Princi and Krämer, 2020; Shalender and Sharma, 2021). Moreover, the theory has been used in

numerous behavioural studies exploring privacy and provides opportunities within this study to understand consumer perspective and behaviour.

Findings in existing literature

Of the studies that have explored the theory of planned behaviour, several account for the relationship between attitude and privacy concerns. Furthermore, as information disclosure has become more prevalent, studies using the theory or extensions of it have focused on its predictive ability (D'Souza, Apaolaza, Hartmann, Brouwer and Nguyen, 2021; Heirman, Walrave and Ponnet, 2013; Mehdy, Ekstrand Knijnenburg and Mehrpouyan, 2021; Nuhil Mehdy, Ekstrand, Knijnenburg and Mehrpouyan, 2021; Saeri, Ogilvie, La Macchia, Smith and Louis, 2014). Moreover, existing literature has warranted that behaviour can be determined when observing the corresponding behaviour intentions (Mehdy, Ekstrand, Knijnenburg and Mehrpouyan, 2021; Redda, 2018; Zarrad and Debabi, 2012). Therefore, as this study looks to explore the intention to use Loyalty Programs, the corresponding behaviour can be seen as probable. Furthermore, extant literature has observed the successful application of the TPB on information disclosure and information privacy (Han, Shen, Zhou, Xu, Miao and Qi, 2019; Li, 2012; Mehdy, Ekstrand, Knijnenburg, and Mehrpouyan, 2021; Mehdy, and Mehrpouyan, 2021). There are existing studies that focus on the social influence aspect as most important when investigating the TPB and privacy; however, there are also additional studies that mention perceived control as most important.

3.2.3.2 TPB relevance in this study

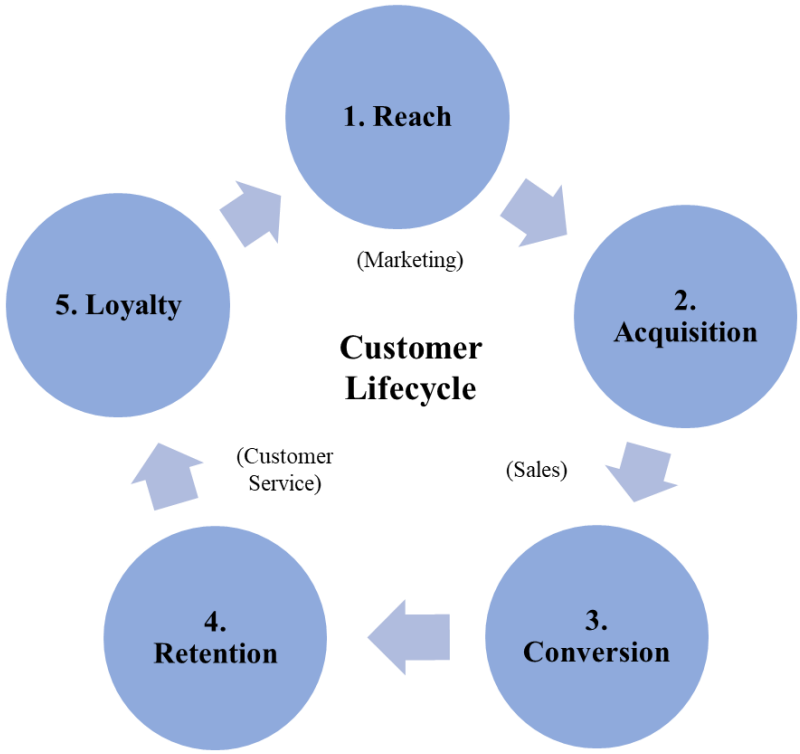
As the TPB is founded on understanding consumer behaviour and has been utiliseutilised in numerous studies exploring privacy, privacy behaviour and privacy concerns; it is suitable to be utiliseutilised in this study (Alraja, 2022; Burkhardt, Boy, Doneddu and Hajli, 2022; Gómez-Barroso, Feijóo and Palacios, 2019; Kuika Watat and Jonathan, 2020; Merhi, Hone and Tarhini, 2019). Moreover, the TPB is a profound and well-recognised model that will allow this study's research question and objectives to be answered, to understand whether these concerns exist and, thereafter, the perception of them based on the consumers attitude and intention responses (Al-Mamary and Alraja, 2022; Ha, 2020; Mehdy, Ekstrand, Knijnenburg and Mehrpouyan, 2021). The adaption of elements of the Theory of Planned Behaviour and Trust in this study provides an expansion on current research and theoretical contributions

while also evaluating the attitude towards data-usage specifically from a privacy perspective (Awad and Krishnan, 2006; Dienlin and Trepte, 2015; Lutz, Hoffmann, Bucher, and Fieseler, 2018).

3.2.4 Discussion of Customer Relationship Management Theory

The CRM Theory observes how innovative technology can be used by businesses to maintainand fuel long-term relationships with customers in order to improve satisfaction, loyalty and business profitability (Baashar, Alhussian, Patel, Alkawsi, Alzahrani, Alfarraj and Hayder, 2020; Debnath, Datta and Mukhopadhyay, 2016). By using CRM strategies, businesses are able to create mutually beneficial relationships with customers that put a focus on retention (Cavaliere, Khan, Rajest, Sundram, Jainani, Bagale, Chakravarthi and Regin, 2021). The theory observes the relationship between the consumer and business, where different customers are identified and strategically targeted, e.g., putting a strategic focus on building loyalty through interactions with profitable customers (Kumar and Reinartz, 2018). Here, brands are able to provide tailored resolutions for consumers based on the combination of CRM processes and obtained information data (Malandrino, Petta, Scarano, Serra Spinelli and Krishnamurthy, 2013; Schlögl, 2021). Acquisition, penetration, personalisation, and recommendations have also been highlighted as some key elements in CRM to manage these relationships (Ameen, Hosany, and Paul, 2022; Debnath, Datta and Mukhopadhyay, 2016; Jackson, 2007). This study then presents an overlap with the theories used and the CRM, by exploring personalization and the intention to use loyalty programs. Moreover, a need for a focus on culture, trust, privacy, and security alongside CRM has been presented, which is achieved within this study (Baashar et al., 2020). In the context of online information, the CRM puts a focus on analysing and using consumer and marketing databases to determine consumer behaviour; and, thereafter, methods to better target and maximise consumer value for the business (Kumar and Reinartz, 2018). Here, practical approaches to acquire value for the customer and from the customer are highlighted from the theory (Kumar and Reinartz, 2018). Furthermore, adding the intention aspect from the Theory of Planned Behaviour can provide variations in results that explore the privacy paradox alongside the privacy calculus theory, which is explored in this study context (Sundaram and Shetty, 2022), while also integrating the CRM. The broad outline of elements within the CRM is highlighted in figure 6. below.

Figure 6. Customer Relationship Management Lifecycle (Coffman, 2022)



3.2.4.1 Fundamental principles of the CRM

One of the critical fundamental focuses of the CRM theory is the customer, specifically customer value, and businesses trying to understand their customers to incorporate tailored strategies for improved customer lifetime, loyalty and business profitability (Kumar and Reinartz, 2018). This customer value includes referrals from customers, e.g., word of mouth; knowledge sharing through feedback and communication with the company; as well as customer-to-customer influence, e.g., online reviews and comments (Ramadonna, Nasf and Aziz, 2019; Wang, Lo, Chi and Yang, 2004). This customer value is, therefore, something that can be influenced by external and internal elements, of which privacy concerns are included. Other noteworthy elements and focuses within the CRM theory include Acquisition, Conversion and Retention (Kumar and Reinartz, 2018).

As shown in Figure 6 above, the CRM process involves obtaining and then keeping consumers to build customer relationships and loyalty; as the theory is named, the focus is on customer relationship management. Moreover, during those acquisition, conversion, and retention stages, the business can utiliseutilise consumer data to provide benefits for the consumer, engage with them, personalise their experience, and make decisions to meet their individual and group needs (Anshari, Almunawar, Lim and Al-Mudimigh, 2019; Libai, Bart, Gensler,

Hofacker, Kaplan, Kötterheinrich and Kroll, 2020; Nilsson and Pierce, 2020). Acquisition is the gaining of consumers, e.g., through word of mouth or marketing efforts that make the consumer aware of the brand (Dyche and O'Brien, 2002; Kumar and Reinartz, 2018). Conversion is the conversion of customers from one company to another, this is often done through brands that offer similar, alternative, or improved products or services. In the case of a Loyalty Program, this could be through better rewards or service offerings (Dyche and O'Brien, 2002; Kumar and Reinartz, 2018). Lastly, retention is the focus on processes and strategies to keep valuable customers within the business, e.g., through personalised services, thank-you messages, or rewards based on repeated spending behaviour (Dyche and O'Brien, 2002; Kumar and Reinartz, 2018). Through the usage of CRM principles, a business can utiliseutilise customer data and target consumers and issues through methods such as: product and service innovation, improved expectations, diversification and globalisation, privacy concerns and adjustments to emerging technology (Kumar and Reinartz, 2018; Lin, Chen and Chiu, 2010; Steel, Dubelaar and Ewing, 2013; Winer, 2020).

3.2.4.2 Criticisms of the CRM

Issues with utilising CRM have arisen in recent years with the practical side of the theory. Here, businesses are seeing a surge in the effective utilisation of the CRM viewpoint, as customer segmentation can lead to distrust and annoyance as some customers feel excluded or unsatisfied (Foss, Stone and Ekinci, 2008; Nguyen, 2011; Thomas and Kureshi, 2020). Furthermore, the approach to CRM in application has been noted as an issue, as brands will often focus on specifically the acquisition part of the theory rather than the retention part. This can be visualised as an issue in the case where the brand has a high acquisition rate but a low retention rate and, therefore, is not effectively building brand value and loyalty. Additionally, for a brand to effectively utiliseutilise the knowledge of the CRM, they should effectively contextualise and target consumers based on their needs, to build a profitable and valuable relationship; even if this means losing some consumers in the process (Hill, 2021; Kumar and Reinartz, 2018; Rygielski, Wang and Yen, 2002).

3.2.4.3 Findings in existing literature

Existing literature on the theory puts a large focus on how methods and CRM processes can improve engagement with the customer online, i.e., through investigations into customer satisfaction (Kumar and Mokha, 2021; Long, Khalafinezhad, Ismail and Abd Rasid, 2013),

customer communication (Harrigan, Ramsey and Ibbotson, 2012), customer service, personalisation and customization effects on behaviour as well as investigations into sustainability (Anshari et al., 2019; Juanamasta, Wati, Hendrawati, Wahyuni, Pramudianti, Wisnujati, Setiawati, Susetyorini, Elan, Rusdiyanto and Astanto, 2019). Moreover, in the context of this study, research observing privacy concerns through the CRM is relatively limited; however, an existing study by Tabrizchi and Rafsanjani (2020), noted the importance of a 'client-centric' solutions towards issues that may arise due to losses in data; as these have subsequent effects on the CRM within the business. For example, issues with privacy breach leading to concerns, thereafter, leading to decreased acquisition and retention rates. Therefore, an avenue that cannot be ignored for businesses, and so will be brought in for this study. Extant literature focusing on the theory is such that it surrounds practical application in business and understanding consumer behaviour (Guerola-Navarro, Gil-Gomez, Oltra-Badenes and Sendra-García, 2021). Therefore, most of the literature on the topic follows observing ways in which businesses can achieve an improved CRM, analyse their current CRM and effective CRM strategies based on the fundamentals.

3.2.4.4 CRM relevance in this study

As mentioned, the existence of privacy concerns has the potential for adverse effects that reflect on the CRM within the business. Therefore, this study integrates CRM elements, and theoretical understanding and a foundation to analyse the study's findings and attempt to make subsequent recommendations to businesses surrounding customer relationships. Here, the integration of this theory is also provided by the utilisation of the TPB and PCT, through elements of personalisation and intention. Moreover, it's important to note the awareness of consumers as an internal driver of privacy concerns affecting the CRM, through transparency and information collecting; to recognize consumers' understanding of the conditions surrounding their data usage and subsequent concerns (Kumar and Reinartz, 2018).

In the context of this study and privacy specifically, the CRM makes use of privacy through the personal information management of consumers, as brands manage relationships through data usage and protection (Almajali, Maali and Almajali, 2022; Fernando, Chidambaram and Wahyuni-TD, 2018; Romano and Fjermestad, 2007). Moreover, as information and usage evolve over time, marketers and businesses need to ensure they are aware of how consumers feel about their data being used, as any concern could lead to reluctance from the consumer to disclose their private information (Cochran, 2004; Nguyen, 2011; Rashwan, Mansi and Hassan,

2019). This is especially significant in CRM as consumers' purchasing patterns and requirements change over time, which can be tracked easily and effectively through the data usage provided. Kumar and Reinartz (2018) furthered this by commenting on the CRM reliance on the mutual exchange that exists between information sharing and the business, which will, therefore, be affected by privacy concerns arising. Thus, it is important for businesses to understand these concerns, as well as consumer awareness of privacy practices; to effectively manage customer relationships and connections. This understanding of consumer perspectives aligns with the objectives of this study and will be achieved through the use of this theory. As noted within the criticisms of not applying the theory correctly in practice, it's important for businesses to achieve a balance in their application of CRM and their chosen strategies for acquisition, retention, and conversion with respect to consumer privacy perspectives and concerns.

3.2.5 The Integrated model

Investigating privacy concerns, attitude and intention provides a way for researchers to investigate and understand how consumers feel about their data being used (Gerber, Gerber and Volkamer, 2020; Kokolakis, 2017; von Kalckreuth and Feufel, 2021). Moreover, by exploring the antecedents of privacy concerns, a deeper analysis can be provided using past experiences and personal consumer characteristics to allow for a more detailed and context-specific observation.

Unlike the other common theories used, the privacy calculus theory provides insight into consumer perspectives specifically while also providing an avenue to explore the privacy paradox (Kokolakis, 2017; Lutz, Hoffmann, Bucher and Fieseler, 2018; Smith, Dinev and Xu, 2011). However, elements of the Theory of Planned Behaviour and Trust can also be adapted for this study to provide an expansion on current research and theoretical contributions while also evaluating the attitude towards data usage specifically from a privacy perspective (Awad and Krishnan, 2006; Dienlin and Trepte, 2015; Lutz, Hoffmann, Bucher and Fieseler, 2018). Existing studies by Schomakers, Lidynia and Ziefle (2020) and Bandara, Fernando and Akter (2020) successfully explored consumers' preferences for privacy and data sharing online using this model. This study will, therefore, use the adapted privacy calculus model presented by Bandara, Fernando and Akter (2020); Gerber, Gerber and Volkamer (2020), and Ioannou, Tussyadiah and Lu (2020) to measure personalisation and the privacy concern antecedents

through: culture, trust, awareness, demographics and thereafter, privacy attitude and the intention to use the Loyalty Program.

All three theories in question can be used to understand an aspect of consumer behaviour: the CRM observes the business and customer relationship aspect to incorporate relationship building into marketing (Baashar et al., 2020); the TPB observes the linkage between beliefs and behaviour (Armitage and Conner, 2001); and, finally, the PCT observes the thoughts and behaviour surrounding a consumer's decision to disclose their information (Dinev and Hart, 2006). By adopting all three theories together using their chosen constructs, a privacy concerns model can be created for marketers to understand the beliefs, behaviour, preferences, and relationships that exist around consumers' privacy concerns within the topic of retail and loyalty programs; and thereafter, use this developed framework to understand the retail sector and consumer preferences better. Moreover, observing existing literature on the integration of these theories provides evidence for future research development. This is due to the limited literature that has explored the theories together. Although some studies have incorporated elements of the TPB and the PCT to understand consumer behaviour (Alkhalifah and Bukar, 2022; Alraja, 2022; Kerr and Franco-Santos, 2023), exploring literature that utilising them alongside the CRM and with the goal of understanding and providing a comprehensive exploration of consumer perspective is somewhat scarce. However, these three theories have each been associated with privacy and privacy perspective in some way over the years. This, therefore, arises as a highlighted research potential and theoretical gap that this study will overcome.

Table 1. Summary of findings within privacy research

References	Theories utilised	Context	Study findings
Gutierrez, O'Leary, Rana, Dwivedi and Calle, (2019)	Privacy calculus	Mobile advertisement	Perceived intrusiveness is a negative predictor of information disclosure, alongside privacy concerns of location-based ad messages. Personalization of the message and monetary rewards is contrarily, found to positively impact the intention for information disclosure.

Lutz and Tamó-Larrieux, (2020)	Privacy calculus and privacy paradox	Intention to use Social Robots	This study found benefits to override the privacy concerns towards social robots. Moreover, institutional privacy is of the most important. This extends into social aspects where malicious concerns were present. No significant effect was found between the concerns present and intention. Concerns were also found to be on a moderate level for respondents.
Lebek, Uffen, Neumann, Hohler Breitner, (2014) and	Theory of planned Behaviour, General Deterrence Theory, Protection Motivation Theory and Technology Acceptance Theory	Information Security Behaviour	This literature review presenting findings across 113 different publications; of which behavioral intention is explained by the dominant four theories in literature. Moreover, it is impossible to observe all aspects of security behaviour due to its sensitive nature. A significant relationship is also found between intention and actual behaviour. The importance of studies in this field is also evident.
Sigmund, (2021)	Theory of Planned Behaviour and Privacy Calculus Theory	Privacy policy statements	Attitude is influenced by privacy risks and benefits. Social change is also found to effect confusion surrounding privacy policies. Trust influences perceived benefits as well as privacy risks. Moreover, the study confirmed the relationship between trust, privacy concerns and disclosure.
Ioannou, Tussyadiah and Lu, (2020)	Privacy calculus and Antecedent Privacy Concern Outcome framework	Biometric travel data disclosure	Study found that privacy concern has positive influence on behavioral information disclosure. Moreover, the privacy paradox was confirmed. The study also revealed no linkage between privacy concerns and information sharing willingness; whilst privacy preference was found to be contextual.

Lwin, Wirtz, and Stanaland, (2016)	CRM, Trust and Regulatory focus theory	Privacy behaviour through promotion and prevention	Reputation and communication quality were found to increase behaviour centred around promotion, of which this was mediated by trust. Moreover, privacy concerns were found to prevention and defensive behaviour. Trust was also found to be an important characteristic and lead to willingness to invest and loyalty.
Jai and King, (2016)	CRM and privacy segment index	Loyalty Programs and privacy	The study found a clear difference in response towards attitude for private information shared with 3rd party advertisers and data brokers. Younger consumers are also found to be more willing to share information. Gender was also reflected as the strongest determinator of private information disclosure. Commitment and enrolment in loyalty programs are also found to be significant predictors of information disclosure. The findings were also divided into three groups, of which similar results were found under different contexts.

Looking at table 1 above, a summary of findings within existing privacy research can be observed relative to the chosen theories within the literature. These studies were chosen based on relevancy in terms of privacy, marketing and consumer behaviour, contextualisation and recency within the literature, relative to this study's focus. More studies can, however, be observed and these are just to provide a brief basis for the theoretical development and usage of privacy and theories in previous years. Here it can be seen that each of the above studies has explored privacy in some aspect and used one or more of the chosen theories in the integrated model. Moreover, all studies present evidence of behavioural impact in some way, reflecting the relevance of such an investigation.

3.3 Construct conceptualization in literature

This study makes use of the aforementioned theoretical framework, adapted to utiliseutilise elements of the PCT, TPB and CRM models; as well as additional constructs, in order to better understand South African consumer perspectives and privacy concerns. The constructs within this model will all be discussed in detail below to provide for a contextual understanding, justification, and adoption in this study.

3.3.1 Trust

When observing literature on privacy concerns and attitudes towards data sharing and data usage from companies, a consistent construct of "Trust" arises in their measurement (Gerber, Gerber and Volkamer, 2020; Lappeman, Marlie, Johnson and Poggenpoel, 2022). Moreover, trust is the underpinning contributor towards consumer loyalty, decision-making, relationship building, and acceptance - something that will then affect the CRM, intentions and privacy perspectives and concerns when engaging in a Loyalty Program (Dhagarra, Goswami and Kumar, 2020). Trust is defined as the disposition for someone to be exposed and vulnerable to the actions of another (Benamati, Ozdemir and Smith, 2017); in this case, for the consumer to willingly open themselves up for a business to use their data. This study will make use of this understanding and definition in its exploration of privacy perspective as it can relate to and be applied specifically to privacy concerns and perspectives towards data usage that a consumer can hold. Trust was also defined by Rousseau, Sitkin, Burt and Camerer (1998) as: "the psychological state characterised by the willingness to tolerate vulnerability based on positive expectancies of another's intentions or actions in the face of risk and reliance". Moreover, trust relates to the confidence that consumers have as they make transactions and the degree to which their expectations are met (Chen, Sun and Liu, 2022). Here, similarities in the definitions of trust over the years are evident, surrounding the vulnerability and willingness of consumers. Additionally, more and more businesses are trying to find different ways to build trust with consumers as data-usage and privacy become more prevalent, i.e., privacy policies and showing consumers how they are keeping their data safe and secure (Wu, Huang, Yen and Popova, 2012). This study, therefore, applies trust to Loyalty Programs and privacy.

3.3.2 Culture

There is a significant body of research on the relevance of the cultural context to privacy-related behaviour (Mutambik, Lee, Almuqrin, Halboob, Omar and Floos, 2022). Culture has been defined in numerous research contexts over time; however, cultural understanding has also adapted and progressed (Beugelsdijk, Kostova and Roth, 2017). Moreover, culture is commonly observed in literature from a psychological perspective (Shavitt and Barnes, 2020). This study specifically makes use of the definition proposed by Shwarts (2014) that culture is the set of values and views that a given group shares and is distinguished by. Other definitions observe culture similarly, as the beliefs, contexts, or categories for a particular group (Giorgi, Lockwood and Glynn, 2015); the "software of the mind" (Hofstede, Hofstede and Minkov, 2005); and the collection of meanings shared by individuals in a given location and period

(Triandis 2012). Moreover, Shavitt and Barnes, (2020) noted the collective understanding from scholars that culture has an influence on the beliefs of individuals, their perception, goals, and reasoning about their environment; reflecting the importance of understanding culture to understand perception. Moreover, the influence of culture on consumer privacy concerns has been noted in existing literature (Akour, Alnazzawi, Alshurideh, Almaiah, Al Kurdi, Alfaisal and Salloum, 2022).

Privacy concerns can differ depending on location due to the various micro and macro environmental factors, of which culture has been acknowledged as a macro contributor to this concern and the legislative and regulatory action that follows it (Cockcroft and Rekker, 2016). This is further demonstrated through the cross-cultural analysis of culture and privacy concerns depending on location (Bankole and Cloete, 2011; Bellman, Johnson, Kobrin and Lohse, 2004; Li and Borah, 2018; Zhong, Sun, Zhou and Xie, 2022). Moreover, privacy needs have been shown to vary depending on the consumer's culture, and even such that cultural preferences have been recognised as an antecedent to privacy concerns (D'Acunto, Volo and Filieri, 2021; Ioannou, Tussyadiah and Miller, 2020; Tussyadiah, Li and Miller, 2019). This study then explores this construct specifically to see the relationship between culture and privacy concerns. Moreover, culture can be examined using multidimensional approaches, of which Hofstede's model is one of the most well-known and influential approaches within literature (Dinev, Bellotto, Hart, Russo, Serra and Colautti, 2006).

3.3.2.1 Hofstede's framework

Hofstede's model makes use of six dimensions to quantitatively measure culture, in particular national culture (Hofstede, 2003). These being "Individualism, Uncertainty Avoidance, Power Distance, Masculinity", and, within recent years, the "Indulgence and Long-term Orientation" dimensions (Hofstede, 2011). Researchers have used the original four dimensions to reflect that privacy concerns can be influenced by culture (Cho, Rivera-Sánchez and Lim, 2009). More recently, Hofstede presented 'Long term Orientation' and 'Indulgence' as two complementary dimensions that can be added to the model (Novotny, Szeberin, Kovács and Máté, 2022). There are fewer studies exploring the 6-dimensional model in the research context; however, research has highlighted the limitations that previous literature has by only exploring 4 or 5 of the dimensions in their exploration (Heydari, Laroche, Paulin and Richard, 2021; Gallego-Álvarez and Pucheta-Martínez, 2021). Through the exploration of all 6 dimensions, new insights can be provided for culture in the retail context (Heydari et al., 2021). In the measurement of these

dimensions, Hofstede developed the Values Survey Module (VSM) to measure and compare culture across countries (Hofstede and Minkov, 2013). Additionally, each culture index can be analysed separately and then analysed to be high or low based on the average scores for the items in each dimension; which is based on a scale from 0-100 (Hofstede, Hofstede, Minkov, 2010; Tsoukatos, 2007). This study follows this same method to provide comparable results. Additionally, a bipolar scale could also be used depending on participant responses, where 'agree' indicates one aspect of the dimension (e.g., Male), and 'disagree' indicates the other perspective (e.g., Female) (Stull and Von Till, 1995). However, along with being comparable with Hofstede's established measurement, a unipolar likert scale is regarded as 'more accurate' (Alwin, Baumgartner, and Beattie, 2018; Leon, Koscheyev, and Stone, 2008). Research can also make use of existing Hofstede insights as a "country compass", to guide understanding of the different cultural dimensions (HofstedeInsights, 2013; Nauta, 2019).

Hofstede's model allows for a national analysis of consumer culture, to understand their perspective and corresponding behaviour (Hofstede, 2003). When observing the dimensions within Hofstede's model, Individualism and Uncertainty Avoidance arise as the most common that have been used to quantitatively measure culture and data-usage (Broeder, 2020). In Hofstede's exploration of South African culture an estimated Individualistic discovery was found (HofstedeInsights, 2013). Moreover, individualistic cultures have been shown to have a higher privacy concern; as these individuals feel they have a right to preserve privacy (Cecere, Le Guel and Soulié, 2015). However, some research has classed South Africa as collectivist, with the focus on the African culture in the country holding more family bounds and a sense of community (Eringa, Caudron, Rieck, Xie and Gerhardt, 2015; Krafft, A.M., Guse and Slezackova, 2023; Terblanché-Greeff and Nel, 2022). Here African philosophies such as "Ubuntu" echo this, with a collectivist outlook and "being self through others" (Terblanché-Greeff and Nel, 2022). Hofstede's exploration also reflected low Power Distance, high Masculinity, low Uncertainty Avoidance, low Long-Term Orientation and high Indulgence in South Africa (HofstedeInsights, 2013). However, in the investigation of culture, Hofstede involved a largely white South African base, where 81% of the country is made up of black Africans (Oppong, 2013; Statista, 2022). Additionally, these findings are somewhat outdated and so provide room for new discoveries of how cultures may have shifted in that time alongside technological developments and potential privacy concerns in South Africa (Flores-Lucas, Martínez-Sinovas, López-Benítez and Guse, 2023). Moreover, it cannot be assumed that South African consumers will react the same as consumers from more developed environments towards privacy and their data being used, due to the different macro- and micro-

environmental differences that set these consumers apart (Gielens and Gijsbrechts, 2018). Therefore, this construct is explored in this study.

3.3.3 Awareness

Privacy awareness has been defined by Correia and Compeau (2017) as the understanding of technological aspects relevant to information privacy, the environment, and its implications in the future. Moreover, privacy awareness has been explored as the perception of who is tracking data, when it was collected, what information is received from this (i.e., the storage, collection, and usage of the data), and how this is then used to create user-tailored profiles for consumers (Malandrino, Petta, Scarano, Serra Spinelli and Krishnamurthy, 2013). Here, observations into how aware consumers are of privacy policies, their data being used, and general privacy when engaging with Loyalty Programs can be made. It's important to understand how aware consumers are with regards to their privacy and data usage for privacy policies and regulations to be effective and for consumers to make better and more informed decisions regarding their privacy (Malandrino et al., 2013). Furthermore, having a state where consumers are unaware of their privacy status and usage of personal data can lead to issues surrounding privacy in the future (Pötzsch, 2009). Moreover, research has reflected that a lack of awareness can lead to a lack of engagement from consumers (Volkamer et al., 2015). Exploring privacy awareness in research can reflect how comfortable and confident a consumer feels with regards to information disclosure, providing valuable insight into understanding privacy perspectives and concerns (Lau, Zimmerman and Schaub, 2018).

3.3.4 Intention to use Loyalty Program

Intention to use has been defined to observe intentions for individuals relative to a specific context, which will then influence a behaviour (Teo, 2011). Furthermore, Ajzen (1991) described intention to use as the disposition of consumers to perform a behaviour, and one of the most influential constructs to measure it. Similarly, the construct has also been defined as the willingness to use; in this case, the willingness to use South African Loyalty Programs (Davis, Bagozzi and Warshaw, 1989). This is then also influenced by previous constructs that alter such willingness or intention, such as risks and benefits. The intention to participate in the Loyalty programs can be looked at as the intention to disclose information, as consumers actively intend to provide businesses with access to their data when they engage with the

program. By understanding intention to use, marketers can better understand consumer decision-making and make decisions to control these factors (Jackson, Chow and Leitch, 1997). Moreover, in the exploration of intention, literature has largely observed the construct relative to understanding acceptance and adoption, e.g., acceptance of using online services (Mariani, Styven and Teulon, 2021). This construct has also been explored in numerous contexts and models to understand consumer behaviour, such as the TAM and TPB (Ajzen, 1991; Davis, Bagozzi and Warshaw, 1989). Furthermore, in the postCOVID19 pandemic age, there is a shift towards more consumers using and intending to use online areas that utilise their data (Harborth and Pape, 2020). Moreover, as mentioned earlier, intention to use has been observed in literature to strongly correlate with actual behaviour; this, however, is something that could be further studied in South Africa alongside this study but still provides for interesting assumptions of how consumers will behave based on any existing privacy concerns and, therefore, furthers the importance of exploring the construct.

Here, the privacy paradox is also explored within the South African consumer, to see if they show evidence of a positive relationship existing between privacy concerns and intention to use the loyalty program. For example, in the case where privacy concerns have a positive relationship with intention, this indicates the existence of the privacy paradox as consumers are shown to have concerns but still intend to engage with the programs.

3.3.5 Attitude

A consumer's attitude towards privacy is the overall tendency of the consumer to be worried about potential issues surrounding data protection and security (von Kalckreuth and Feufel, 2021). Crano and Prislin (2006) defined attitude as an evaluation of the consumers' cognition and experiences towards a particular object or context, of which a positive or negative attitude is possible. Attitude can also be defined as the affective response overall, such as a positive or negative feeling towards Loyalty Programs utilising consumer data (Arpaci, Kilicer and Bardakci, 2015). Privacy attitude specifically has been found to be significantly formed through the consumer's past experiences (Gerber, Gerber and Volkamer, 2020). For example, a consumer may have a negative attitude towards their data being used leading to an increased privacy concern; if they had a previous experience where they felt their data was misused by a company (Gerber, Gerber and Volkamer, 2020). Moreover, the linkage of attitude and privacy concerns has been noted in literature; however, privacy concerns present a common singular

feeling in a particular context, and attitude has the option for positive or negative, e.g., privacy concerns having a negative connotation (Dienlin and Trepte, 2015).

By observing attitude, concerns and intention as constructs, the privacy behaviour of consumers can be effectively found (von Kalckreuth and Feufel, 2021). As mentioned with the evaluation of the TPB, attitude also allows this study to understand consumer perspectives and any existing privacy concerns, emphasising the construct's usage towards the goal of this study.

3.3.6 Personalization

Personalisation has been defined as the extent to which a person receives "the right content at the right time" (Korper and Ellis, 2001). Moreover, Postma and Brokke (2002) define personalisation as a divided kind of communication in which distinct individuals and groups get user-made messages adapted to their specific interests. Using a combined understanding of these definitions, this study observes personalisation in the context of marketing within Loyalty Programs through the collection of consumer data. Personalisation was originally done in the form of personalised letters; however, marketers have taken personalisation as opportunities for direct marketing to reward customers through offers, messages or a transformation from a generalized approach to a personalised one (Mihaylova, 2021). This then allows marketers to meet the consumer's needs, based on consumer data they've collected, e.g., product characterization, targeted emails, recommendations, social media marketing etc (Mihaylova, 2021). Furthermore, these marketing efforts that utilise personalisation allow brands to improve their loyalty, trust and CRM; however, literature has also argued that some consumers can feel as though they are being manipulated by the personalisation strategies and become concerned for their privacy (Chen, Sun and Liu, 2022). The risks associated with data privacy for consumers have also been evident through the personalisation associated with it. Companies will often use data to personalise an experience with the consumer through tools like profile-based tracking, social tracking, location tracking, emotion tracking and facial recognition (Martin, Borah and Palmatier, 2017). From a marketing perspective, this personalisation can provide a way to better understand consumers and create an improved personal experience and relationship with the brand. Customers have, however, found this feature to be invasive of their privacy and choice, in some cases even describing it as creepy (Martin, Kim, Palmatier, Steinhoff, Stewart, Walker, Wang and Weaven, 2020). Within the CRM theory, personalisation and recommendations have been reflected as key features for

managing relationships with consumers online (Wang, Cavusoglu and Deng, 2016), of which this study will then be able to explore further from a data privacy perspective.

3.3.7 Perceived Risk

When testing the privacy calculus theory, a risk relative to privacy and data usage can be explored (Cho, Ko and Lee, 2018). Perceived risk has been defined as a negative outcome or the level of uncertainty that can surround a loss or consequence; in this case, the perception of financial loss, privacy violation or personal information being exploited (Lee and Chen, 2022). This is the definition focused on within this study; however, perceived risk in the modern and online environment can also be defined as consumers' opinions about the likelihood of gains or losses based on their online purchases and behaviour (Van Slyke, Shim, Johnson and Jiang, 2006). Risk itself has further been described as a circumstance in which the individual is aware of the consequences of an occurrence and the likelihood of it happening - something that aligns with these understandings (Dowling, 1986). Moreover, perceived risk plays a critical role in influencing consumer decision-making and intention, making it a key element for behavioural studies (Lee and Chen, 2022).

Consumers in the modern day are presented with numerous risks as they explore the online environment and provide access to their data, leading to potential resistance from consumers to engage (Nepomuceno, Laroche and Richard, 2014). Moreover, it has been said that, even with these perceptions of risk, for customers to actively engage in programs or online, they must disclose their data and expose themselves to such potential dangers (Palen and Dourish, 2003). Perceived risk can also vary as some consumers may be more risk averse than others, and so this will need to be further investigated in the South African context (Weber and Hsee, 1998). Moreover, developing countries like South Africa have a weaker antivirus and cyber legislative framework, which can lead to an increase in privacy risk (Eksteen and Humbani, 2021).

3.3.8 Data Breach

Alongside privacy concerns, consumers can feel concerned about organisations using their data due to privacy failure elements such as data breaches or leakages (Johansson and Rystadius, 2022). A data breach can be defined as the exposure of personal and confidential information, either by accident or intentionally, to parties that are unauthorized to access such information (Cheng, Liu and Yao, 2017). A data breach occurs when sensitive information is deliberately or accidentally revealed to unauthorised individuals (Cheng, Liu and Yao, 2017). Consumers can, therefore, be wary of disclosing their personal information and have privacy concerns due to the potential threat of a data breach (Srivastava, Kumar and Bisht, 2019). Moreover, data breaches are a common occurrence in modern times, with events such as the current Microsoft Data breach, where the company faced the threat of being a target of hacking in early 2022; as well as several recent South African data breaches, such as the leakage of Experian South Africa, where approximately 24 million South Africans private information was leaked in 2021; the SterKinekor data breach in 2017; Transnet breach in 2021 where the company faced a cyber-attack; and in 2021 when the South African Department of Justice and Constitutional Development also faced a breach of private information (iSite, 2021; Sveinsson, 2022). Here, these breaches ranged from accessing email information, phone numbers to password leakage and sharing; however, this breach could also extend to sensitive medical and financial information.

Moreover, as consumers commonly make use of limited varieties of passwords, the leakage of this information poses concerns for other areas and platforms where subsequent breaches can then occur (Barton and Cecily Raiborn, 2019). By understanding concerns based around a breach, marketers could take necessary action to educate and inform consumers on the possibilities and actions that they are taking, as well as those that the consumer can take and still enjoy the perks of engaging with the program, i.e., informing consumers they can regularly change their passwords or use a unique password for differentiation and security.

3.4. Hypothesis development

Looking at the existing literature on the topics and theoretical constructs discussed above, certain hypotheses can be formed surrounding relationships and, ultimately, privacy concerns behaviour and perspectives. Here, the construct and theoretical relationships will be discussed

to present the findings from existing literature and justify the proposed hypothesis utilised in this study.

3.4.1 Trust and Privacy Concerns

Existing literature within recent years has observed the relationship between trust and privacy concerns; however, there are limited studies within the context of Loyalty Programs. Some studies have found that relative to privacy concerns, an increase in trust can lead to a decrease in privacy concerns, as the consumer feels that the business is competent in protecting their data and, essentially, they have nothing to worry about (Gerber, Gerber and Volkamer, 2020; Ioannou, Tussyadiah and Lu, 2020; Shomakers, Lidynia and Ziefle, 2020). This was further noted in the study conducted by Ayaburi and Treku, (2020) as an inverse relationship between privacy concerns and trust should be expected, where an increase in trust correlates to a decrease in privacy concerns. Moreover, Sanny, Arina, Maulidya and Pertiwi (2020) emphasise that trust plays a significant role in consumers purchasing decisions; something that would have adverse effects for consumers who have expressed privacy concerns.

Moreover, in the South African context a study by Matemba and Li (2018) observed trust in relation to perceived privacy concerns as well as intention, but in the context of technology and peer-to-peer transactions. Here, the study hypothesised a high trust to lower concerns for the consumer, yet, interestingly, the study results found the hypothesis to be insignificant with a p-value above 0,005. This, however, was in the context of technology adoption and so differences in trust with Loyalty Programs could be possible and should still be explored. Moreover, as the importance of the trust construct through loyalty and intention has been emphasised in numerous studies, contextualising the construct within South African Loyalty Programs can and should be observed (Gerber, Gerber and Volkamer, 2020; Lappeman, Marlie, Johnson, and Poggenpoel, 2022). Additionally, a study by Kumar, Kumar and Bhasker (2018) found opposing results, where trust was found to have a significant and important role for privacy concerns. Furthermore, when a consumer displays trust in a certain brand or program, they are more likely to repeat purchases, therefore portraying the impact and importance that trust can have for businesses incorporating Loyalty programs (Matemba and Li, 2018). Therefore, this study explores the relationship between Trust and Privacy concerns, from the South African consumers perspective. The construct will be based on the questions developed by McKnight, Choudhury and Kacmar, (2002) and adapted by Ioannou, Tussyadiah

and Lu, (2020). Based on the findings from previous literature, the following hypothesis is formed:

H1: Trust has a negative relationship with Privacy Concerns for South African Loyalty Programs.

3.4.2 Culture and Privacy Concern

Privacy concerns can differ depending on location due to the various micro and macro environmental factors, of which culture has been acknowledged as a macro contributor to this concern and legislative and regulatory action that follows it (Cockcroft and Rekker, 2016). This is further demonstrated through the multiple cross-cultural analyses of culture and privacy concerns depending on location (Bankole and Cloete, 2011; Bellman, Johnson, Kobrin and Lohse, 2004; Li and Borah, 2018; Zhong, Sun, Zhou and Xie, 2022). This study will then explore this construct specifically to see the relationship between culture and privacy concerns. Moreover, privacy needs have been shown to vary depending on the consumer's culture, and even such that cultural preferences have been recognised as an antecedent to privacy concerns (D'Acunto, Volo and Filieri, 2021; Ioannou, Tussyadiah and Miller, 2020; Tussyadiah, Li and Miller, 2019).

When exploring culture in research, existing literature has largely analysed culture through Hofstede's model, which explores 'Power Distance', 'Individualism', 'Masculinity' and 'Uncertainty Avoidance' as key elements making up culture (Beugelsdijk, Kostova and Roth, 2017; Taras, Steel and Kirkman, 2012). As mentioned, these four dimensions have been used to reflect that privacy concerns can be influenced by culture (Cho, Rivera-Sánchez and Lim, 2009). Existing literature has found that, when exploring culture using Hofstede's dimensions and privacy concerns, a clear relationship and linkage was demonstrated (Budak, Rajh and Recher, 2017; Cho, Rivera-Sánchez and Lim, 2009; González-Pizarro, Figueroa, López and Aragon, 2022; Omrani and Soulié, 2017; Wang, Norcie and Cranor, 2017). In the exploration of the relationship between culture and privacy concerns, Hofstede's Individualism, Uncertainty Avoidance, Masculinity and Power Distance have been found in literature to have a positive and significant relationship; where a higher concern was reflected amongst a lower Masculinity and a higher Individualism, Uncertainty avoidance and Power Distance (Cho, Rivera-Sánchez and Lim, 2009; Omrani and Soulié, 2017). In relation to the newer dimensions and privacy concern, a cross-cultural analysis was done by Liyanaarachchi, Thaichon and

Weaven (2019), including the Indulgence and Long-term orientation dimensions, of which a clear linkage was found with privacy concern, where the developing countries portrayed a higher privacy concern with a high Long-term orientation and low Indulgence. Although these studies vary in environment, they provide insight into existing findings on the cultural dimensions and privacy concerns and can then be used to study and compare the South African environment. Based on the knowledge of culture and privacy concerns, and the existing relationships that have been found in previous studies, a clear influence can be seen, and the following hypothesis can be formed:

H2: Culture has a positive relationship with Privacy concern for South African grocer Loyalty Programs, with a high Individualism, Uncertainty Avoidance, Power Distance, Long-term orientation and a low Masculinity and Indulgence

3.4.3 Awareness and Privacy Concern

Numerous existing studies have explored awareness relative to data usage to gauge an understanding of consumer perspectives (Le Roux, 2019; Martin et al., 2020; Wang and Fang, 2022). An existing study by Olaleye, Hamdan and Awwad (2021) found consumers to be somewhat naïve and uninformed about how businesses are using their data. Additionally, the study by Yartey Ajayi, Omojola, Amodu and Ndubueze (2020) reflected the fear of this ignorance and found female consumers to be more aware and more trusting of their data being used, whereas the men showed the opposite. Contrarily, other research has suggested that consumers are aware of their data usage and show concern for their personal information being released (De Wulf, Odekerken-Schröder, de Canniére and Van Oppen, 2013; Knoesen 2017). This awareness can arise from popular media, personal investigations, social influence, or even digital nudges from the company (Ioannou, Tussyadiah and Lu, 2020).

Furthermore, Ismagilova, Hughes, Rana and Dwivedi (2022) emphasised the importance of consumers being properly aware of their privacy and privacy policies, and practitioners should ensure they have proper communication with consumers and have proper training. Moreover, when consumers are more aware of their privacy, they have been found to be more inclined to protect their data through stronger passwords (Mamonov and Benbunan-Fich, 2018). Furthermore, research done by Ioannou, Tussyadiah and Lu (2020) observed a positive relationship between privacy awareness and privacy concern in previous studies. Interestingly, here, the findings towards privacy awareness were shown to vary depending on the platform

being observed, i.e., website privacy awareness was positive whereas e-commerce privacy awareness was negative. This could also link back to the context of these platforms, as consumers sharing more sensitive information such as financial details might be more aware and concerned with issues that could arise surrounding their privacy (Prince and Wallsten, 2022). This study will contribute towards the understanding and observe awareness and concern in the context of Loyalty Programs specifically. Based on the overall previous findings in the literature, the following hypothesis is formed:

H3: Privacy awareness has a positive relationship with privacy concern for South African grocer Loyalty Programs

3.4.4 Intention to use and Privacy Concern

Extant literature has observed the relationship between intention and privacy concerns. A study by Li (2014) and Cho, Ko, and Lee (2018) found privacy concerns to be a moderate predictor of this, regardless of the type of information the consumer intended to provide. Moreover, studies have found that this intention will decrease as privacy concern and risk increase and so a negative relationship is found (Mahrous, 2011). Interestingly, consumers who repeatedly provided their data online were also found to have a decreased privacy concern, which could provide an interesting observation in this study for the results surrounding intention to use the loyalty program, frequency of loyalty programs and privacy concern (Gerber, Gerber and Volkamer, 2020). Klaver, Van de Klundert and Askari, (2021) also found privacy concern to negatively and significantly influence intention to use; however, this was in the context of medical applications, and concern in this setting was observed in an investigation of privacy risk and referred to as ‘legal’ concern. This study also arose from this negative association based on previous literature that had explored privacy concerns as a barrier to technology adoption (Klaver, Van de Klundert and Askari, 2021). Additionally, Dhagarra, Goswami and Kumar (2020) found privacy concern to be a predictor of behavioural intention.

Harborth and Pape (2020) initially observed findings where privacy concerns were expected to contrarily have a positive influence on intention; however, the study’s results found this to be insignificant and rejected. This hypothesis was originally based off of previous studies conducted prior to 2015, and so this change in results could be indicative of adjusted consumer concerns over time, alongside technology and privacy progression.

When analysing the intention to use the loyalty program as an outcome of privacy concerns, based on previous findings, the following hypothesis can, therefore, be formed:

H4: Privacy concerns has a negative relationship with the intention to use Loyalty Programs for South African grocery retailers

3.4.5 Attitude and Privacy Concern

Existing studies have explored attitude alongside intention and concern, specifically to understand the privacy paradox and through the privacy calculus model (Ioannou, Tussyadiah and Lu, 2020; Schomakers, Lidynia and Ziefle, 2020; von Kalckreuth and Feufel, 2021). A study by Mahrous (2011) found a significant relationship between attitude and concerns. Moreover, this study highlighted that if a positive relationship existed between the constructs, it could be due to the potential benefits that exist within the context (Mahrous, 2011). For example, a consumer may be apprehensive of their data privacy online, but the benefits of engagement overcome these apprehensions. Existing literature has also observed concern as a significant predictor variable for attitude; where a negative relationship is found between them (Gerber, Gerber and Volkamer, 2020).

The study by Gerber, Gerber and Volkamer (2020) observed attitude alongside the privacy paradox and consumer behaviour, where existing literature and empirical methods were utilised to develop an understanding of the privacy framework. This study further emphasised attitude to be used in the assessment of privacy concerns, which will in turn influence intention, something this research study also explores (Gerber, Gerber and Volkamer, 2020). This relationship has also been explored in a study conducted by Dienlin and Trepte (2015), where privacy concerns were found to be a predictor of attitude.

Furthermore, through a literature review conducted by Kokolakis (2017), findings reflecting attitudes' clear linkage with privacy concerns have been observed in existing empirical studies, where consumers have been found to be highly concerned with their privacy. These studies are, however, somewhat outdated, having being explored between 2001 and2014, and so presents an opportunity for this study to explore any new findings or changes that may have occurred through present-day observation. Based on the knowledge of attitudes and privacy concern the following hypothesis is, therefore, formed:

H5: Privacy concern has a positive relationship with Privacy attitude

3.4.6 Personalisation and Trust, Attitude and Privacy Concern

A study by Ameen, Hosany and Paul, (2022) observed trust as a precedent to personalisation occurring, as consumers who lack trust in the brand and data usage are more likely to keep their information private. Moreover, concerns about data sharing, data leakage, and the vulnerability of these consumers data by consumers were expressed in a study by Martin et al., (2020). However, when analysing attitude, personalisation has been shown to have a positive effect on consumers attitudes, where consumers have been shown to favour the personalisation that occurred due to data usage (Kozyreva, Lorenz-Spreen, Hertwig, Lewandowsky and Herzog, 2021). This links back to the privacy-paradox, where consumers may show that they are concerned about the data usage but have a positive privacy attitude and intention due to elements such as personalisation (O'Maonaigh and Saxena, 2021). Moreover, Chen, Sun and Liu (2022) highlighted the positives and negatives of personalisation, as it has been observed to provide an improvement in services offered, satisfaction, profit, trust and loyalty, but also to lead to increased privacy concerns. This concern was centred around a study conducted by Martin and Murphy (2017), where personalisation can lead to concerns through feelings of manipulation and reactance from consumers.

Additionally, a cross-cultural analysis conducted by Ameen, Hosany and Paul (2021) found personalisation to have a positive relationship with trust, as well as to note the linkage between personalisation and privacy concerns. Here, the study explored personalisation in the context of shopping malls and the personalisation-privacy paradox, of which the positive relationship between privacy concerns and personalisation was also noted, based on observations and previous studies. Using these existing studies, the following hypotheses can be formed:

H6: Trust has a positive relationship with personalisation

H7: Personalisation has a positive influence on privacy concerns

H8: Personalisation has a positive influence on privacy attitude

3.4.7 Perceived Risk and Intention to use

Existing literature has shown that there are six main types of perceived risk, namely: financial, performance, physical, psychological, time, and social risk (Deng, Hong, Ren, Zhang and Xiang, 2018). However, in the context of privacy online, perceived risk can be explored using privacy protection, security protection and information quality (Kim, Ferrin and Rao, 2008). Moreover, perceived risk has been explored in existing literature to predict users' intentions, such as through privacy and the usage of mobile apps, mobile commerce, and health services, where a significant and negative influence was found (Lăzăroiu, Neguriţă, Grecu, Grecu and Mitran, 2020; Marriott and Williams, 2018; Smith, Dinev and Xu, 2011). Contrarily, literature has observed the diminishing impact of perceived risk on intention to use amongst consumers who frequently engage (Chopdar and Sivakumar, 2019). This makes sense, as consumers become more confident and comfortable with their usage, their risk decreases.

Additionally, Guo, Bao, Stuart and Le-Nguyen (2018) emphasise the importance of perceived risk in social commerce, in which a Loyalty Program is strategically included. Moreover, Hansen, Saridakis and Benson (2018) noted perceived risk as a direct influencer and antecedent to intention. Moreover, studies by Wang, Gu, Wang and Wang (2019) and Park, Amendah, Lee and Hyun, (2019), found perceived risk to negatively influence intention. The study conducted by Kasilingam (2020) explored intention and perceived risk in more detail and presented findings that reflected the perceived risk construct to have an indirect relationship with intention; of which this relationship was only significant for younger participants. Moreover, the study by Wu, Chiu, and Chen, (2020) noted the relationship between perceived risk as an antecedent to intention, however, explored intention as a mediator for their investigation of perceived risk and perceived usefulness. Furthermore, looking at the findings within literature it's clear that there is room for additional studies in the South African and Loyalty Program usage context; however, a hypothesis can be formulated.

Based on these previous findings, the following hypothesis is formed:

H9: Perceived risk has a negative relationship with intention to use Loyalty Programs.

3.4.8 Data Breach and Privacy Concern

Studies have shown that organisations that have experienced a breach encounter reputational damage and financial loss (Chen and Huh, 2022; Jai, 2021; Martin and Murphy, 2017). Moreover, existing literature has shown that consumers who have dealt with a breach in the past feel more vulnerable about their privacy and become wary of sharing their information; this is so much to the extent that consumers will leave or avoid loyalty programs and membership privileges due to the breach (Chen and Jai, 2021; Johansson and Rystadius, 2022; Wong and Kim, 2019), therefore increasing their privacy concern and showing the prevalence of this construct. These concerns are more central in medical and financial data usage; however, consumers in other avenues have been found to fear their information being stolen through advertising and promotions where they feel their information is not private (Johansson and Rystadius, 2022; Vemprala and Dietrich, 2019; Vigurs, Maidment, Fell, and Shipworth, 2021). Extant literature focuses on firm performance due to the breach or changes in consumer behaviour (Afroz, Islam, Santell, Chapin and Greenstadt, 2013); however, due to the results and nature of the privacy failure, it can be seen as a key antecedent to privacy concerns.

Moreover, when examining literature, privacy concerns and breaches are often explored in the context of consumers who have experienced a breach in the past as well as through perceived vulnerability (Ahmad and Mykytyn, 2012). Perceived vulnerability in this case refers to the potential risk that a consumer perceives when their personal information is obtained, and revealed, or misused, therefore aligning with a data breach (Dinev and Hart, 2004). Moreover, when exploring previous literature, a positive relationship was found to exist between this perceived vulnerability and online privacy concerns (Adhikari and Panda, 2018; Bandyopadhyay, 2009; Dinev and Hart, 2004; Mohamed and Ahmad, 2012; Zhang, Liu, Chen, Wang, Gao and Zhu, 2018). Based on the understanding and existing literature that has explored the Data breach through perceived vulnerability, the following can be hypothesised:

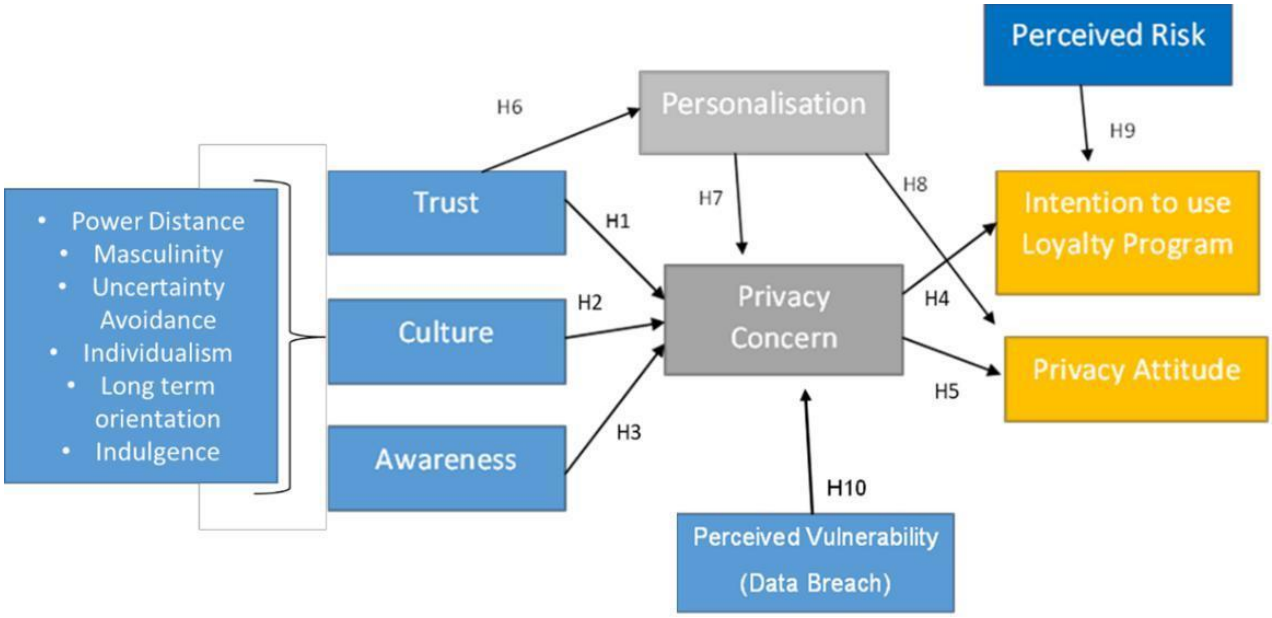
H10: Perceived vulnerability has a positive relationship with Privacy Concern

Additionally, demographics and frequency will be observed in this study in the investigation of privacy concerns. Previous findings have shown that older consumers and women tend to show higher proportions of privacy concern as opposed to younger consumers and men (Dhir, Torsheim, Pallesen and Andreassen, 2017; Graeff and Harmon, 2002; Kokolakis, 2017). Moreover, consumers who are actively engaging and participating in Loyalty Programs have

shown a decrease in privacy concerns (Jai and King 2016). These will both be objectively analysed in the context of South African consumers, in the context of Loyalty Programs. Alongside this, vulnerable and marginalised South African consumers can also be highlighted in their data privacy concerns, as they may be less aware and more unprotected compared to consumers who have actively engaged in data-usage programs before (Albrecht, 2006; Marivate and Moorosi, 2018; Simko, Chang, Jiang, Calo, Roesner and Kohno, 2020). Moreover, lower LSM consumers can often depend financially on the benefits obtained within a loyalty program, so they don't have the option to not engage, even though they may be fearful or uncomfortable with their data being used (Lappeman, Ransome and Louw, 2019; Madden, Gilman, Levy and Marwick, 2017). This, however, would require a selective study focused on these consumers, and this study looks to examine South African consumers in general. Therefore, this aspect will only be explored through a comparison of demographic and privacy concern findings. It does, however, provide an avenue for future research to adopt from this study.

These chosen hypotheses provide theoretical value for the study as they allow for a contextualised understanding of consumer behaviour and perspective relative to privacy for data usage and loyalty programs in South Africa. The addition of the relationships surrounding the personalisation and culture variables has also been reflected as lacking in existing literature; however, they are key influencers of consumer behaviour and perspective, which the study will observe in order to provide new knowledge on the topic alongside and subsequent to the chosen theories (Ioannou, Tussyadiah and Lu, 2020; Volchek, Yu, Neuhofer, Egger and Rainoldi, 2021). Moreover, the presented gaps within the literature for the chosen theories (privacy calculus theory, TPB and CRM) allow for this study to provide a deepening of the theoretical knowledge, i.e., for culture, trust and privacy paradox; while also combining the theories for a multifaceted perspective on privacy for data-usage. The outcomes of the study can, thereafter, be further explained by the theories in the study to reflect on why the relationships found exist and how businesses can utilise this information.

3.4.9 The Conceptual Model



Conclusion

This chapter presented the theoretical grounding for the study in added detail to provide understanding, justification, and importance for the chosen constructs and framework this study follows, as well as to show what is already known in the literature surrounding the study. Moreover, an in-depth investigation into existing literature on the nine different constructs and their respective relationships is reflected, as well as a comprehensive overview of their contextual background. The conceptual model this study makes use of is also presented to give a visual guide to the relationships and hypothesis positionings in the study.

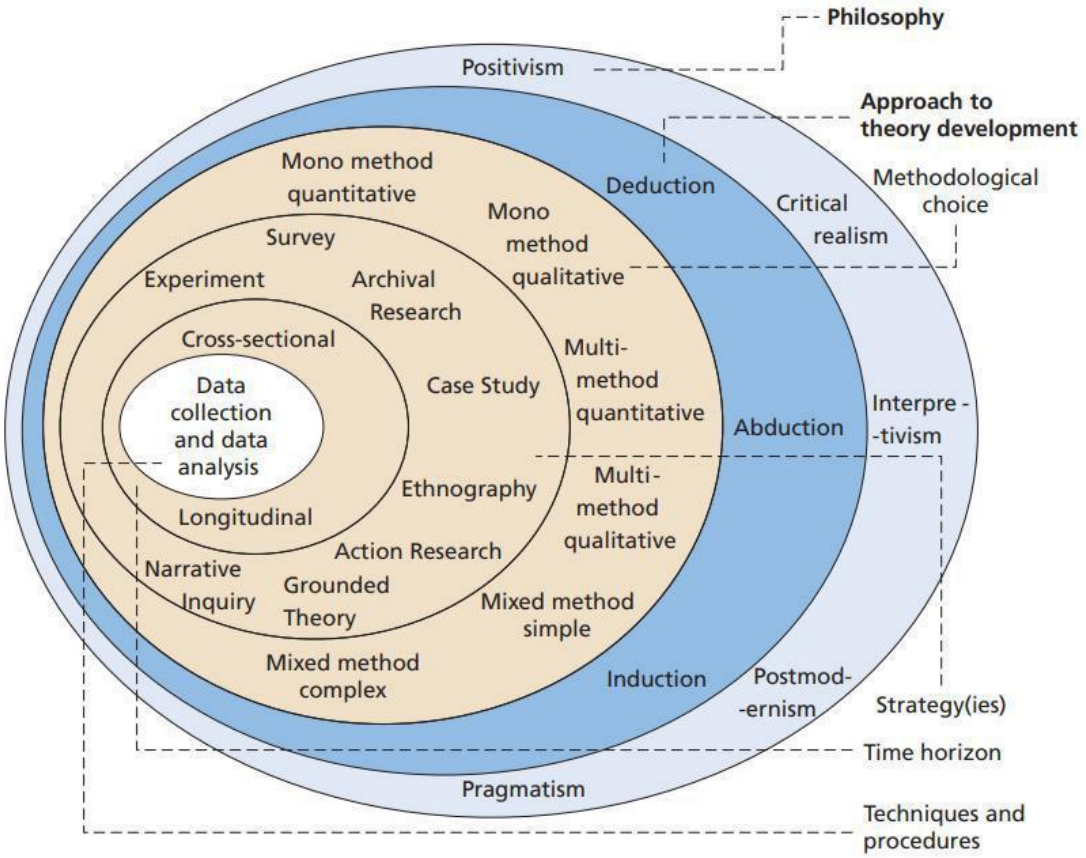
Chapter 4 – Research Methodology

4.1 Introduction

The way in which research is collected, analysed, and formulated plays an important part of the investigation, alongside answering the research questions and reaching the aim of the study (Creswell, 2003; Saunders, Lewis, Thornhill and Bristow, 2019). As mentioned, this study looks to explore the variables surrounding privacy concerns and data usage in Loyalty Programs to understand South African consumers perceptions and perspectives. To achieve this, this study will follow a Quantitative mono-method research process with a descriptive cross-sectional research design, and a positivist approach. These will all be further discussed and elaborated on in this chapter.

This chapter will present and go into detail on the research methodologies utilised in this study to provide an overview, justification, and clear understanding of the research formulation and procedures. Furthermore, this chapter will breakdown the chosen research philosophy, approaches and provide an extensive insight into the various marketing processes adopted in this study. Through the analysis of the research onion presented by Saunders, Lewis, Thornhill and Bristow (2019), each research methodology point has been developed and will be observed. The research onion can be visualised in figure 7 below.

Figure 7. Saunders et al., (2019) proposed Research Onion



4.2 Research Philosophy and Approach

A research philosophy is the collection of beliefs, agreements, and assumptions about the advancement of knowledge in research (Rahi, 2017). It has been argued that each research paradigm, philosophy, and technique is valuable, providing something beneficial for businesses in their own way. Studies choose the best philosophy based on the questions they are trying to answer (Killam, 2013). Moreover, of the philosophies available in research, five key players arise as underpinning research, i.e., pragmatism, positivism, critical realism, interpretivism, and postmodernism (Saunders et al., 2019). The main definitions and differences between these philosophies are highlighted in table 2. below, adapted from studies by the Mackenzie and Knipe, (2006); Kamal, (2019); and Saunders et al., (2019). Here, the ontologies, epistemologies, and research methods for each paradigm are also presented.

Ontology explores social entities and the nature of existence to determine if social reality is truly external or the result of interior consciousness (Kamal, 2019). Epistemology, on the other hand, observes knowledge as something experienced or acquired by individuals (Kamal, 2019). Moreover, in the investigation of these paradigms and understandings, they are often discussed and defined in multiple correct formats (Killam, 2013). Of the five mentioned philosophies this study will also use a positivist research philosophy in the measurement of individual responses.

Table 2. Research philosophies

Paradigm	Ontology	Epistemology	Research methods
Positivism	Reality is objective and perceived; it is constant, external, objective, and independent.	Here, the focus is on causation and creating lawlike generalizations. Moreover, observing visible occurrences that provide credible facts and data	Survey, experiment or quasi experiment where something is measured Very structured, Usually consisting of large samples, quantitative, but can also be qualitative
Interpretivism	Developed through experiences, socially. Based on Intersubjective assumptions	Subjective interpretations. Puts a focus on reality and experiences of details Researcher is involved	Usually consisting of smaller samples, conducted through indepth investigations, such as interviews, qualitative
Pragmatism	Research questions are important. External, different perspectives effectively facilitate addressing the study's questions and concentration.	A focus on occurrences that can be observed or subjective reality. Concentration is on multiple viewpoints aiding in the interpretation	Mixed method, quantitative or qualitative
Critical realism	Objective. Reality exists away from human ideas, beliefs, or awareness of their existence.	Here, the focus is on explaining contexts within one or more settings. Moreover, knowledge and phenomena here are observed through trustworthy information and facts.	Methods fit the subject to then be either quantitative or qualitative

Postmodernism	Realities exist when they are created, spoken or written about. A linguistic approach	A view of science and knowledge. Knowledge can move in multiple directions and periods, fluidity	Experiments, surveys, correlational research
Constructivism	Realities are multiple, subjective meanings. Here, the existence of entities is focused only in the minds of people who are thinking about them.	Several different realities that are constructed.	Case studies, interviews

Sources: adapted from Mackenzie and Knipe, (2006); Kamal, (2019); Saunders et al., (2019)

4.2.1 Positivist research philosophy

A positivist research philosophy puts a focus on 'an observable social reality to produce law-like generalisations' and takes an objective approach to conducting research (Saunders et al., 2019). Furthermore, research that is built upon a positivist viewpoint will usually yield data built upon facts rather than interpretations that involve the researcher (Alharahsheh and Pius, 2020). This makes it ideal for this study. This study makes use of a multifaceted model made up of multiple theories to build hypotheses in order to reach the research objectives and observe causal relationships - something associated with the positivist philosophy, i.e., making use of the privacy calculus theory to investigate the causal relationship between privacy concerns and intention to use Loyalty Programs. Moreover, when examining the positivist philosophy, certain core principles can be observed, which are as follows:

1. The investigation rationale is consistent throughout all sciences
2. The goal of the research should be around explanation and prediction
3. Research should be empirical and utilise hypotheses that are then tested in the study
4. Common sense is unrelated to this type of study and should not be applied, as it is not synonymous with science
5. Judgement is based solely on logic

This study also follows a Quantitative method, one commonly associated with the positivist viewpoint; therefore, further justifying its usage (Jogulu and Pansiri, 2011). Moreover, as the study looks to investigate privacy concerns and national culture, having a neutral and unbiased

standpoint as a researcher is necessary for an accurate understanding of the South African perspective and, thereafter, making use of the theories to explain such behaviour and findings. Based on the researchers' own viewpoint for this study and desire to investigate data from a neutral and unbiased standpoint, the positivist philosophy is also idyllic.

Through the utilisation of this philosophy, the methods and approach to the study have been applied in the form of an online questionnaire adapted from existing theoretical models, further emphasising the lack of influence the researcher had in the process, as the questions remain the same for each participant with no further adjustments and/or interpretations from the researcher.

4.2.1.2 Positivism reasoning

When observing the purpose of this research, a positivist outlook and ideology become apparent. This is due to the study's objective nature through research, the investigation of quantifiable and causal relationships based on theories, and the removal of the researcher, and any subsequent influence or viewpoints, as mentioned previously in the Chapter. Furthermore, the justification of this research philosophy can also be achieved through observing each of the core principles of the positivist approach:

- The study uses logic consistent with other studies and theories, and that which could be applied in future research succeeding the results of the study,
- The study looks to investigate and explain privacy concerns based on causal relationships, and, thereafter, predict this impact on intention to use South African Loyalty Programs;
- This study is empirical in nature, utilizing hypotheses throughout and testing relationships between theoretical constructs
- As the researcher is distanced from the procedures within the study, so is common sense. Here the study is based on facts and grounded knowledge in research, that the found relationships can be attributed to;
- Similarly, any findings then uncovered within the study are based on such logic.

Moreover, from table 2 above, clear distinctions between the different philosophies are shown. Based on the formed understanding of the application of the study, the other potential philosophies are, therefore, reflected as inappropriate for the study. This can be further

demonstrated through an analysis of some of the other most popular philosophies: interpretivism, post-modernism and pragmatism (Saunders and Townsend, 2016).

The interpretivist philosophy is based on in-depth observations in research that use subjective viewpoints to interpret and then explain the information gathered from multiple perspectives (Leitch, Hill and Harrison, 2010; Ryan, 2018). This is inappropriate for this study due to the differing subjective viewpoint and how this study applies a generalisation based on its findings, as opposed to investigating the different social perspectives that exist amongst South African consumers towards privacy concerns and intention, and why this might be. The Post-modernism philosophy puts a focus on the fluidity of research and a focus on reality not being applicable to all cases. This makes it unideal for this research as the study utilises theories and concepts that are well-known and found across numerous studies and contexts in a similar way. Moreover, the findings of this study are such that they could provide benefit or interest to disciplines across literature, based on objective reality. From a pragmatic viewpoint a practical and applied belief is held in the approach to conducting research, whereas this study makes use of existing theories and knowledge to come to its conclusions. For these reasons, the association and appropriateness of this study with the positivist approach become clear, and this philosophy is, therefore, the chosen method for the study.

4.2.2 Research strategy and methodological approach

Subsequent to the philosophy being selected, research can choose between three different approaches to base the study on, these being: Deductive, Inductive and Abductive approaches (Saunders et al., 2019). Moreover, depending on the chosen philosophy and method for research, a certain approach can be more appropriate than another (Killam, 2013). Here, the approach refers to the reasoning behind the study and will change how data is collected within the study, as well as the theory building. These three approaches are discussed in detail below.

The deductive approach is one of the most common and oldest methods of research and makes use of theoretical concentrations and subsequent hypotheses analyses (Gallaire, Minker and Nicolas, 1989). For example, here a theory is highlighted by the researcher and based on the knowledge of this theory and its surrounding studies, hypotheses are developed to add to or take away from what is already known. Moreover, the deductive approach is such that the study could then be applied to the general population. Contrarily, the inductive approach looks to use this knowledge to provide insight into a certain phenomenon (Gallaire, Minker and Nicolas,

1989; Saunders et al., 2019). When further observing these two popular theories, certain commonalities can be found, in which a focus on research provides knowledge to advance theory, close gaps and inquire for enlightenment or progress (Iovino and Tsitsianis, 2020; Saunders et al., 2019). Furthermore, the choice of research approach follows similar propositions to those when choosing a research philosophy, as scholars mention the nature of such research to show similar characteristics of generalisation and theoretical basis for deductive, and philosophy insight and subjective perspectives for inductive. Looking at the Saunders research onion and the research approach falling under philosophy, this alignment of the two is expected (see figure 7 above).

In the case of this study operating the positivist philosophy, the deductive approach is apparent to be utilised. This study makes use of theory development through testing propositions, in this case hypotheses, based on relationships, facts and theories; which aligns with a deductive study and justifies its usage (Devinney, Rose and Nagre, 2018). Moreover, the selected sample for this study is generalised towards South African consumers. This scientific viewpoint, generalisation, hypotheses testing and the study's alignment with the positivist philosophy further justify the use of a deductive approach in this study.

As mentioned, this study will follow a Quantitative strategy. This study looks to better understand and interpret the concerns that consumers experience relative to their data usage, using theories and proposed relationships. Qualitative research is used to understand how people experience the world, while Quantitative research, on the other hand is used to test a theory and make an objective analysis of numerical data (Saunders et al., 2019). Moreover, qualitative takes a look at research in context through observations and progression in understanding the study and questions being answered, as the study develops. Quantitative, however, uses a statistical foundation to explore, describe, explain and predict different phenomena, which can then be applied to other studies or generalised. These differences are further demonstrated in table 3 below. Quantitative research is, therefore, more appropriate for the measurement of these constructs as it allows for the testing of a specific hypothesis, theory and objective analysis of privacy concerns; as opposed to a Qualitative study which would look to understand consumer privacy deeper through perception and interpretation (Rutberg and Bouikidis, 2018; Saunders et. al., 2019).

Table 3. Quantitative and Qualitative, adapted by (Saundeers et. al., 2019; Stockemer, 2019; Trochim, 2006)

Quantitative	Qualitative
• To test theories through hypotheses, by searching for evidence • Based on a rules, policies or generality • Measurement of objective data • Statistical analysis • Structured responses (e.g., through surveys) • Larger sample for generalization • Usually follow a descriptive/ causal design	• Viewing phenomenon through context • Identify themes through observations • Descriptive and subjective • Understanding the "why" and "how" in research • Unstructured responses (e.g., through interviews) Smaller sample • Usually follow an exploratory design

Moreover, previous studies that explored privacy concerns through a Qualitative method had extended time constraints of at least 7 months, which cannot be used for this study (Bandara, Fernando and Akter 2020). Therefore, a quantitative method is best suited for the study and is explored in the form of a quantitative online survey, to investigate the privacy constructs of consumers for their data-usage. Although there are existing studies that make use of both Quantitative and Qualitative research, due to time constraints, this research will follow a singular Quantitative approach. Moreover, the study doesn't look to track changes in behaviour over time or make comparisons that would require multiple collections of data, and so data will be collected at a singular point in time, i.e., cross-sectional data.

4.3 The marketing research process adopted in the study

When following the marketing research process, 5 steps or actions can be observed (Principles of marketing; n/a); these being:

- Identifying the problem
- Developing a research plan to combat it
- Conducting the research
- Reporting and analyzing the findings from the research
- Taking action based on this

Although these research steps have been somewhat highlighted in previous Chapters, the following section will provide a summation while taking the study through the marketing research process and the justifications for it.

4.3.1 Problem definition

The research problem for this study was elaborated on in detail in Chapter 1. However, upon investigation and to summarise the problem being solved in this study is both theoretical and practical. Here, insight into the need to understand consumer perspectives and behaviour is presented to ensure businesses are taking the proper actions to educate and protect their consumers. From this, marketers and practitioners can understand if they're doing enough to combat any existing concerns and the behavioural areas they can focus on. Moreover, the limited research and research gaps on the topic in the South African and Loyalty Program contexts, as well as those exploring the privacy paradox, personalisation and culture can be resolved within this study. The goal of providing a contextualised and comprehensive exploration into privacy concerns and behaviour is then also provided for. This research problem and focus was identified through observing existing studies that had explored the topic, it's relevancy and evolution in recent years, existing studies limitations, and avenues for future research, as well as research observations based on these findings.

4.3.2 Critical literature review

Although a literature review exploring existing studies has been presented in aspects of Chapter 2 and 3, exploring the background, constructs and theories, a critical review on studies surrounding the topic and specifically an observation into South African privacy concerns studies can also be briefly observed. These literature observations are part of the research plan formulated to combat the presented issues identified for the study to solve.

As mentioned previously, studies observing privacy concerns in South Africa in the past decade have been observed in e-government, privacy concerns in general, internet usage, social media, and application usage (Da Veiga, 2022; Harris, Goodman and Traynor, 2012; Manda and Backhouse, 2016; Sutherland, 2017; Tshiani and Tanner, 2018; Veiga and Ophoff, 2020). Yet, relative to Loyalty Programs, the literature is on the scarce side. A study by Akpojivi, (2013) did, however, explore privacy concerns through attitude and information privacy amongst Black South African students to assess their attitude towards their data being used. This study found Black South African students who fell under Generation Y to be concerned

with their data privacy, however, to have a positive perception towards Loyalty cards from how their data was being used. Moreover, Knoesen (2017) noted that the majority of South African consumers are concerned or mistrustful of how their privacy data is used and will engage with Loyalty Programs where they are only required to provide minimal information. These findings were consistent with the study conducted by Le Roux (2019); however, privacy concerns were observed through personal data release.

Furthermore, studies that explore privacy concerns and data-usage in general and around the world vary with methods used, however, a dominant focus on quantitative research is reflected. For example, studies by Alraja, Farooque, and Khashab, (2019); Akpojivi, (2013); Dastjerdi, Kaplan, e Silva, Nielsen and Pereira, (2019); Gerber, Gerber and Volkamer, (2018); Ioannou, Tussyadiah and Lu, 2020; Jai and King, (2016); Plangger and Montecchi, (2020) make use of quantitative research methods, using majority surveys; whilst Bandara, Fernando and Akter, (2020); Emami-Naeini, Dixon, Agarwal and Cranor, (2019); Lau, J., Zimmerman and Schaub, (2018); make use of qualitative research techniques.

4.3.3 Generation of hypotheses

As shown in Chapter 3, observations into existing literature were conducted to see what is currently known about the constructs, the trends in literature, what context the constructs and relationships have been explored in, and, thereafter, how this study can use these findings to formulate our own hypotheses. When generating a hypothesis, it is important to base the proposed relationship or influence on reaching your research question (McCombes, 2022). Therefore, numerous hypotheses may be presented to solve the research goals. Moreover, when proposing the hypothesis, the relationship between the independent and dependent variables is presented (McCombes, 2022). In the case of this study, the majority of the hypothesis are presented to observe the relationships between privacy concerns and intention. These were presented and justified in the previous Chapter. The hypotheses shown in Chapter 3 reflect a majority positive relationship between the constructs and Privacy Concerns. Moreover, it is speculated that this concern will then also have a negative relationship with the intention to use South African Loyalty Programs. These are proven or disproven and discussed further in the following Chapters.

4.4 Research design

4.4.1 The purpose of the study

As mentioned, the purpose of this study is to explore the variables surrounding privacy concerns and data usage in Loyalty programs, to have a better understanding of South African consumers perceptions of data privacy and, thereafter, their intention to engage with the program. From this understanding, a clear direction for marketers and practitioners can be provided to combat any existing privacy concerns or alter strategies and approaches to the topic. Moreover, the understanding the study provides extends knowledge of the South African consumer base to assist researchers and pave the way for South African data and privacy research. This will be achieved through the theoretical model presented, the relationships being observed and the material findings of the study.

4.4.2 Research strategy

The research strategy for this study was based off the paradigm and approaches appropriate, as well as what the study looks to achieve and what previous studies have done. As mentioned earlier, the research will, therefore, follow a Quantitative approach in the form of a mono-method survey and cross-sectional design.

4.4.3 Measurement and measures

This study observed 9 different constructs based on the adapted Likert scales developed by Bearden, Money and Nevins, (2006), Deng, Hong, Ren, Zhang and Xiang, (2018), Dinev and Hart (2004), Heydari, Laroche, Paulin and Richard, (2021), Ioannou, Tussyadiah and Lu, (2020), Kim, Mirusmonov and Lee, (2010), Krahe, Milligan and Reilly, (2019), Ma, Lou, Van Slyke and Clary, (2020), McKnight, Choudhury and Kacmar, (2002), Shomakers, Lidynia and Ziefle, (2020), Woon, Tai and Low, (2005), and Yoo, Donthu and Lenartowicz, (2011). After piloting, a total of 82 items were included in the official questionnaire. As Culture is observed through Hoftede's 6 dimensions, this construct is divided into 6 areas. These constructs, sources and their respective item numbers are further reflected and divided in Table 4, below.

Table 4. Study's Constructs and their respective Scales

Construct	Adapted Scale (number of instruments)	Source	Construct	Adapted Scale (number of instruments)	Source
Trust	7	McKnight, Choudhury and Kacmar, (2002)	Awareness	6	Xu, Dinev, Smith, and Hart, (2011) adapted by Ioannou, Tussyadiah and Lu, (2020)
Culture: Power Distance	5	Yoo, Donthu and Lenartowicz, (2011)	Personalization	4	Huang et al., (2017) adapted by Ioannou, Tussyadiah and Lu, (2020)
Culture: Masculinity	4	Yoo, Donthu and Lenartowicz, (2011)	Privacy concern	13	Smith, Milberg, and Burke, (1996); Xu, Dinev, Smith, and Hart, (2011); Wozniak, Schaffner, Stanoevska-Slabeva, and Lenz-Kesekamp, (2018) adapted by Ioannou, Tussyadiah and Lu, (2020)
Culture: Uncertainty Avoidance	5	Yoo, Donthu and Lenartowicz, (2011)	Perceived Vulnerability	4	Dinev and Hart (2004)
Culture: Individualism	6	Yoo, Donthu and Lenartowicz, (2011)	Perceived Risk	7	
Culture: Long-term Orientation	8	Bearden, Money and Nevins, (2006)	Intention to use Loyalty Program	4	Cho, Ko and Lee, (2018)

Culture: Indulgence	4	Heydari, Laroche, Paulin and Richard, (2021)	Privacy Attitude	5	van den Broek, Ooms, Friedewald, van Lieshout, and Rung (2017)

4.4.4 Development and pre-testing of the questionnaire

The purpose of a pilot test allows researchers to pre-test the research instrument, make adjustments and alterations to issues, or refine the study (Stockemer, 2019). This is important as, if a pilot test were not to be conducted, issues surrounding constructs or relationships could be found later in the official study, causing problems and questioning the aptitude of the study and its findings. The fundamental steps within the pilot can be observed as follows, based on observations made by Stockemeker (2019) and Williams (2003):

1. Inspect the questions within the study to ensure understanding, consistency and readability,
2. Ensure the correct pretesting sample is selected,
3. Analyze the data collected from the pretest and make adjustments and alterations where necessary

This pretesting data analysis allows the researcher to assess the measurement instrument of the study through reliability and validity tests of the data collected; in this case assessing the overall questionnaire and its constructs (Williams, 2003). For this study, the questions were reviewed after compiling the research instrument prior to piloting. Thereafter, the pilot test was conducted to investigate the reliability and validity of the constructs through testing the Cronbach alpha and Kaiser test for sphericity. The Cronbach alpha is one of the most common and straightforward methods in literature to measure reliability and internal consistency; of which a Cronbach alpha found above 0,7 is considered acceptable (Heale and Twycross 2015; Schrepp, 2020). Moreover, investigations into potential item deletions can then be observed, where if the Cronbach alpha is found to be below 0,7, necessary items will be deleted and corrected in the official questionnaire.

The pilot test for this study was conducted with a sample of 26 participants, and the participants were requested to take part in an online survey created on Google Forms made up of the same items planned to be used for the official study. The selected sample for the pilot was based on

convenience and snowball methods, which involved reaching out to the researcher's immediate network online and asked to forward to others. Moreover, this sample was based on similar collection techniques and a similar population to the official study sample, for consistency, i.e., needing to be above 18 and South African. These participants were made aware of the piloting nature of the questionnaire and given an optional open-ended question at the end of the study, to provide any feedback, issues, queries, or suggestions for the researcher based on their form completion. These were then taken into consideration when conducting the official questionnaire.

The results of the study reflected Cronbach alphas above 0,7 for all the constructs except for Long-term orientation and Attitude. Here, even deleting certain items within the LTO construct would've provided no resolution for reliability, and, therefore, the scale was reassessed and discovered to be missing two items, which were then added for the official study in hopes of achieving reliability. Due to a limited timeframe another pilot test couldn't be conducted to retest these additions, and they were later evaluated in the official study. Furthermore, deleting ATT4 presented a low yet adequate Cronbach alpha improvement of 0,643 for Attitude (Pallant 2001). This was, however, left for review in the official study and so no changes to the Attitude construct were made. As the Cronbach alphas for the other constructs were above 0,7, no other alterations were made. Any additional analyses, such as an Exploratory Factor Analysis (EFA) for validity would've provided minimal useful information from the pilot study, as a higher sample is usually recommended, with a minimum of 50 responses to analyse (Kyriazos, 2018; de Winter, Dodou and Wieringa, 2009). Feedback revolving around issues with the phrasing of one of the masculinity questions was also found in the open-ended responses, as well as two respondents not understanding the correlation between the study and the culture questions. Changes were thereafter applied where the masculinity question was rephrased, and clarity was provided on the culture questions prior to them being asked. These changes as well as the Cronbach alpha analysis results for the pilot can be found in Appendix C.

4.4.5 Sampling design

When creating the sampling design, several things need to be observed within research, such as: the target population, determining the sampling frame, the sampling technique, the sample size and, finally, the sampling process/ method for the study (Kabir, 2016; Lohr, 2021).

Moreover, Malhotra et al. (2017) proposed the following 6 steps to approaching the sample design, which this study will utilise:

1. Target population
2. Sampling Frame
3. Sampling Technique
4. Sample size
5. Sampling method
6. Sample validation

4.4.5.1 Target population

The target population is the total collection of persons to be studied and is argued to be the most important aspect of the sample design; as it will affect the overall statistics of the study (Lohr, 2021). The target population for this study consists of South African retail shoppers above the age of 18. As this study is focusing on South African Loyalty Programs, South African consumers will be approached. The South African population is estimated to be made up of over 39 million people over the age of 18 (World Population Review, 2022). Moreover, the study will not look at a particular location within South Africa and so individuals across the country will be engaged through the online survey. Furthermore, when looking to explore consumers' concerns and perspectives towards data privacy, either shoppers who are or are not members of a loyalty program can assist in the study. Shoppers who are not members may have some disapproval and avoidance of the program due to privacy reasons, therefore, they cannot be excluded and the study will focus on consumers in general and not just Loyalty card members. To ensure the appropriate participants took part in the study, a timeframe of customers who had made purchases in the last 3 months were targeted. This is on the basis that they would then be recent customers and knowledgeable for the purpose of this study. Future research could, however, extend this time beyond 3 months. Furthermore, research that investigates respondents below the age of 18 will not be included in this study, as researchers need to ensure that parental consent is obtained and are trained to work with minors, as this age group is considered vulnerable (Naidoo, 2012; Wits Ethics SOP, 2023).

4.4.5.2 Sample frame

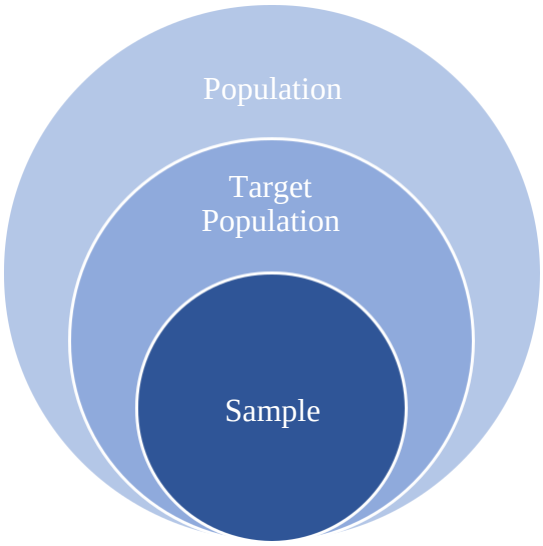
A sample frame is a specification unit from which a set sample can be selected, such as a list or record (Lohr, 2021). This study, therefore, makes use of no sample frame. This is due to the fact that the study observes South Africans over 18 in general, and so no sample frame can be accessed for this study. If the study were to utilise a specific company or department to monitor

employee behaviour, for example, then a set list of participants could potentially be provided, of which the sample frame could then be approximated; however, as the study uses the general South African population no such list is able to be provided and accessible for use in this study.

4.4.5.3 Sample size

Determining the sample size for the study is one of the most important steps in research, in order to effectively reach the proper conclusions from the study, i.e., not wanting the sample size to be too big or small (Singh and Masuku, 2014). The sample size refers to the number of respondents that are contained within the sample for the study (Omnicovert, 2023). Selecting the sample size can depend on numerous aspects, such as the target population, confidence interval levels and the type of data being investigated (Saunders et al., 2019). See figure 8 below for a visual of the difference between the population, target population and sample.

Figure 8. Sample, Population and Target Population derived from Saunders et al., (2019)



The study also utilises Structural Equation Modelling (SEM) in the data analysis, of which the sample size then needs to be considerate. Boomsma, (1985) proposed a sample of 100-200 responses as the minimum for SEM analyses, while Hair et al., (2006) observed a needed larger sample size of around 250-350 to present significant factor loadings results. More specifically, the SEM approaches can be divided into Covariance based approach and the Component based approach; where Covariance is described as more accurate but more demanding while Component is less demanding and has fewer limitations for researchers (Qureshi and Compeau, 2009; Reinartz, Haenlein and Henseler, 2009). Moreover, using the Covariance based approach

requires researchers to ensure they collect a sample that correlates with the number of items in their questionnaire. Hair, Ringle and Sarstedt, (2011) refer to a ratio of 10 data responses for every item; whilst Osborne and Costello, (2004) proposed an item-to-sample ratio of 5:1, with 5 responses for every item, to analyse data using the different Covariance based software's, e.g., Amos. For this study, with a total of 82 questionnaire items, that would indicate a sample of at least 780 responses or 410 responses, depending on the ratio followed. This larger sample usually provides for improved goodness-of-fit index results and, therefore, the lower sample isn't recommended when using the Covariance approach (Hair et al., 2006; Qureshi and Compeau, 2009). The Component's based approach is, however, less demanding in the fact that it needs fewer responses and can be accomplished through programs such as Smart- PLS. Kyriazos (2018) further observed the different sample sizes for utilising SEM as follows:

- 50 responses – weak
- 200 responses – average/ moderate
- 300 responses - good
- 500 responses - excellent, and
- 1000 responses – exceptional

This does, however, vary depending on the study. This study aimed for a sample size of 400 responses in order to make use of the Covariance method for accuracy and value for the study; however, due to limitations in resources and a low response rate from participants, a sample size of 283 was achieved. This was further narrowed down to 277 usable responses when accounting for participants that didn't meet the criteria of being South African and having bought from a South African retailer in the last 3 months. Therefore, the study uses the Component's based approach, as the recommended sample size for Covariance approach wasn't achieved, however, the sample is still regarded as moderate-good and should be adequate to provide for significant factor loadings (Hair et al., 2006; Kyriazos, 2018).

4.4.5.4 Sampling technique

It has been recognised in literature that the sampling techniques in research can be divided into probability and non-probability sampling techniques (Saunders et. al., 2019). Probability sampling refers to the systematic process of drawing conclusions from a set sample, where every individual from the identified target population has the probability of being selected for the study (Saunders et. al., 2019; Zikmund and Babin, 2016). A non-probability sampling

technique, however, reflects an unknown probability for each individual in the population participating in the study; and usually provides a larger sample based on accessibility (Zikmund and Babin, 2016). Moreover, upon observing existing literature on the two techniques, a common difference is highlighted between the chosen methods revolving around the generalisation of the results to the population; of which only the probability sampling accommodates (Berndt, 2020; Saunders et. al., 2019; Stratton, 2021; Zikmund and Babin, 2016). Table 5 below further reflects the differences and characteristics of each of the techniques.

Here, a probability sampling technique reflects the usage of a sample frame and, therefore, will not be applied to the study. Although generalising the study to the entire South African population could provide some benefits, having no sample frame makes this unfeasible. Moreover, this study doesn't look to have the results be representative of the South African population as a whole. With the focus on non-probability sampling, therefore, being utilised in the study, several different methods can be observed. The non-probability sampling techniques are made up of the convenience, purposive, volunteer, quota and snowball sampling techniques, of which the snowball and convenience sampling were selected for this study and are discussed below.

Table 5. Probability and non-probability sampling technique

Probability sampling technique	Non-probability sampling technique
• Uses sample frame • Simple, Systematic, Stratified random and Cluster sampling • Study is focused on making observations based on specific sample • Can be generalized to the larger population due to statistical probability	• Doesn't use sample frame • Convenience, Purposive, Volunteer/ Snowball, Quota sampling • One of the more common research methods in terms of acquiring online response rate • Focus of research guides sample

The snowball sampling method puts a focus on an exponential or chain-type method of data distribution, where networking and recommendations from other respondents allow the survey to be passed on to others (Parker, Scott and Geddes, 2019). Moreover, this method has been utilised as a common research method for both quantitative and qualitative studies (Cohen and Arieli, 2011; Parker, Scott and Geddes, 2019). This method is particularly useful in studies looking to observe a hidden or hard to reach population, in which the data measure can be

distributed by initial interactions within the population to spread and reach acceptable response levels (Etikan, Alkassim and Abubakar, 2016). Moreover, the snowball sampling method is particularly useful for data collection through social media; something this study does (Roberts, 2014). The convenience sampling method provides similar benefits through its 'self-selective' nature, in which respondents are made aware of the study and then decide whether they would like to participate (Stratton, 2021). Moreover, motivation bias becomes potentially apparent when observing the convenience sampling method, where respondents answer the questionnaire based on their motivation to participate, such as through having their opinions heard (Stratton, 2021).

The snowball sampling method proposes benefits for scholars as it provides for lower resource management and necessities, i.e., saving costs and labour (Roberts, 2014). Convenience sampling provides similar benefits for this level of study, as the researcher can save on costs and implement the method efficiently within a limited time frame. Moreover, these methods are beneficial and appropriate for this study as they provide for accessibility for respondents. Utilising other methods such as purposive sampling is inappropriate for the study, as it makes use of subjective judgement to target potential respondents (Saunders et. Al., 2019). This approach would be more appropriate if a particular culture or gender were being focused for the study; however, this isn't the case. Moreover, the Quota sampling method follows a similar approach to probability sampling, in that the population is segmented and then targeted for a specific response rate; however, as the study doesn't have a specific sample frame and the population isn't being divided into different groups, this method is also inappropriate (Saunders et. Al., 2019). Therefore, this study will follow a non-probability sampling technique, through the convenience and snowball sampling method, for optimal responses.

4.4.5.5 Sample validation

As part of the sampling design, the validation of the sample is also assessed (Malhotra, Nunan and Birks, 2017). The validation of the sample can be the initial validation step for the study which allows for some quality assessment prior to and during data collection (Bodnar, Namieśnik and Konieczka, 2013). This study ensured that screening questions were in place prior to questionnaire completion, to provide some validation on the incoming responses' relevance to the study and the focused target population. Here, questions were presented to respondents to say yes or no to being South African, above the age of 18, and having bought

from a South African retailer in the past 3 months. Responses that answered no to any of these questions were then removed from the study.

4.4.6 Data collection process

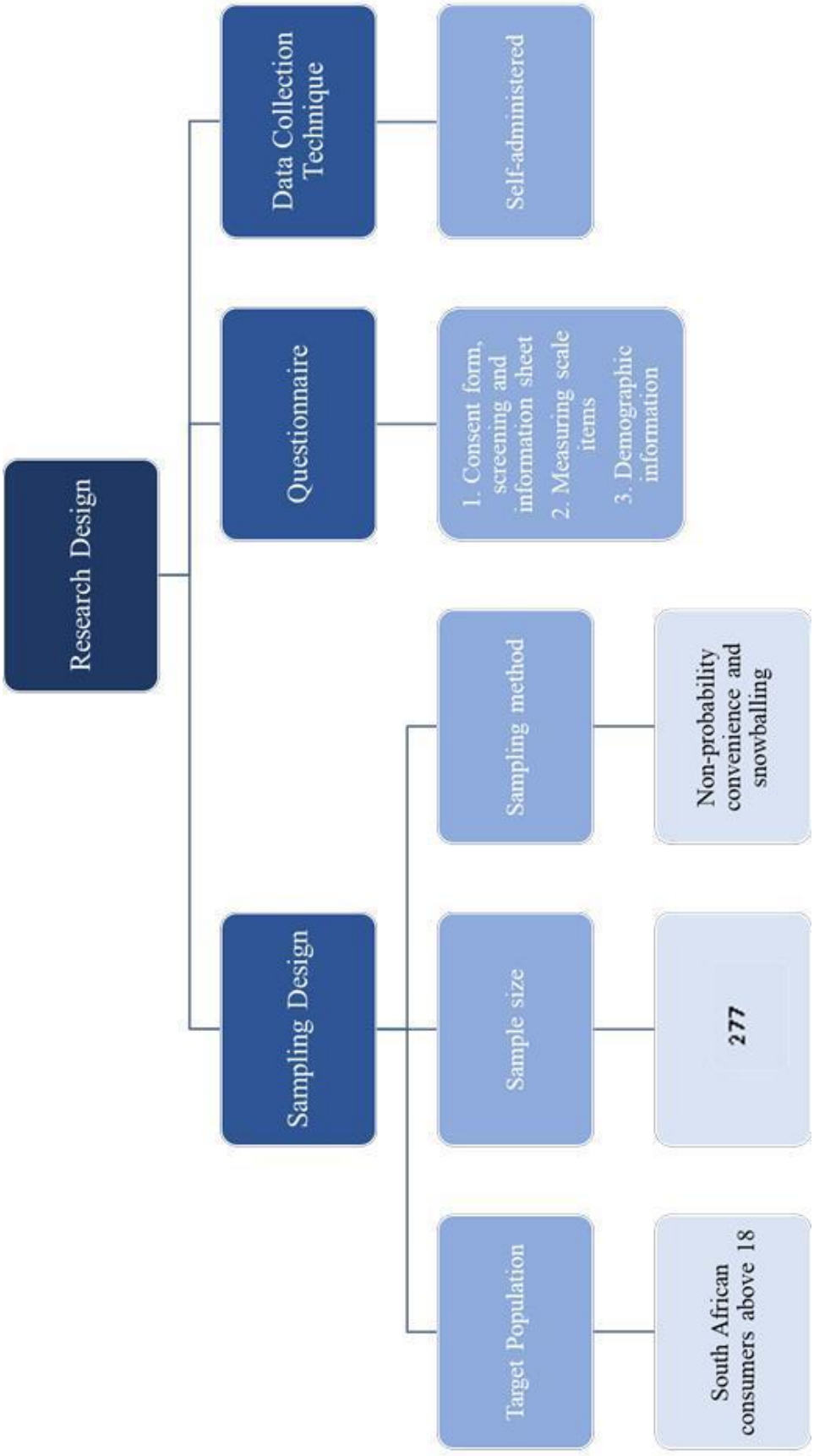
Quantitative data collection in research refers to the processes conducted within the study in order to answer the study's highlighted research questions and hypotheses (Totten, Simon, Jalili and Sawe, 2020). Furthermore, data collection is a crucial aspect of the research design in order to ensure the integrity of the research and quality assurance and control are maintained (Knatterud, Rockhold, George, Barton, Davis, Fairweather, Honohan, Mowery, O'Neill, 1998). This study makes use of the survey data collection method, through a 12-page structured online questionnaire to elicit an understanding of privacy concerns and perspectives towards data-usage. Here, the questionnaire separated each of the privacy-related constructs into 11 different questions. Moreover, a 5-point adapted Likert scale is used to measure the constructs (from 1-strongly disagree to 5-strongly agree), adapted from scales used in existing studies by: Bearden, Money and Nevins, (2006), Deng, Hong, Ren, Zhang and Xiang, (2018), Dinev and Hart (2004), Heydari, Laroche, Paulin and Richard, (2021), Ioannou, Tussyadiah and Lu, (2020), Kim, Mirusmonov and Lee, (2010), Krahe, Milligan, and Reilly, (2019), Ma, Lou, Van Slyke and Clary, (2020), McKnight, Choudhury and Kacmar, (2002), Shomakers, Lidynia and Ziefle, (2020), Woon, Tai and Low, (2005), and Yoo, Donthu and Lenartowicz, (2011); which can be found in Appendix A.

Items within the questionnaire were all in English and were adjusted to the context of the study, surrounding privacy, privacy concerns and Loyalty Programs. Looking at the literature, some studies have made use of a 7-point and even 6-point Likert scale; however, for consistency across the constructs, a 5-point scale is applied. The questionnaire was created online through Google Forms, with which the researcher had previous experience. These questionnaires were then distributed online through various social media platforms multiple times (i.e., on Facebook, Instagram, LinkedIn, Discord, Reddit, WhatsApp, Email and through 3 different targeted Instagram ads), as well as through the University of Witwatersrand official email database. This was done through an invitation to participate in the study, the provided link, as well as the request to forward the study to additional people for completion. Visual marketing techniques were also utilised to encourage engagement, through two different gifs that were shared on the different focus areas, along with the link and short messages. The Instagram

adverts targeted participants based on the target population for the study, setting parameters for the ad to be sent specifically to South Africans over the age of 18.

Prior to the completion of the survey, the respondents were made aware of the survey being voluntary and the confidentiality and anonymity of taking part in the survey. Here, the information sheet and consent form also accompanied the survey and were presented to the participant to make them aware of the study's focus and what was expected of them should they wish to participate. Moreover, as mentioned, the consent form consisted of screening questions to ensure that consumers who participated in the study met the targeted population (i.e., South Africans over 18). In the case where consumers did not meet the requirements, they were sent to the end of the survey to be thanked for their participation; however, their responses were removed as they could not apply to the findings of this study. Prior to respondents completing the questionnaire, they were also presented with images of popular South African grocery Loyalty Programs, to assist in visualising and positioning the context of the study. An optional open-ended area was also included at the end of the study to understand whether consumers think anything can be improved for the privacy of their data and if the consumer has experienced a data breach in the past. Moreover, the study will be collected at one point in time, so a cross-sectional design will be used. The study is not looking to observe changes in behaviour and relationships through repeated measures, and so a single data collection will be subsequent (Saunders et al., 2019). A summary of the different research design processes discussed in the Chapter can be found in Figure 9 below.

Figure 9. Research Design process (researchers own design)



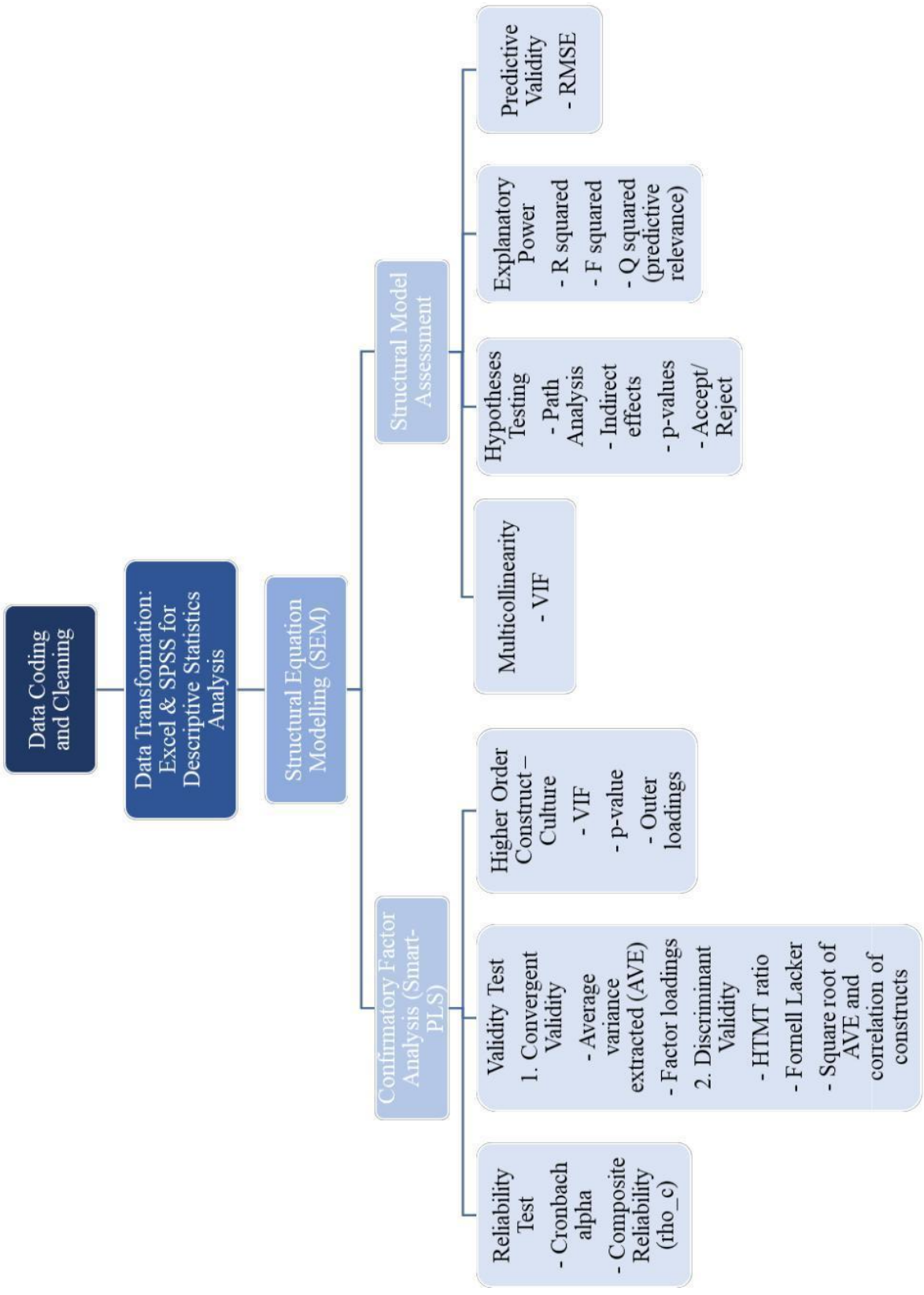
4.4.7 Data cleaning

After the data has been collected, the study prepared the data for analysis through cleaning and coding methods. Firstly, the data from the Google Form was extracted into excel where it was cleaned and coded based on the Likert Scales used (where it ranges from 1- strongly disagree to 5 – strongly agree). When creating the questionnaire, certain responses and items were given shorter or abbreviated versions of themselves for the coding process. The codebook for these abbreviated codes can be found in Appendix C. At this stage any errors, blank responses and incomplete responses were to be noted and removed from the dataset. However, as the survey was created on Google Forms, requirements for each question to be completed were incorporated and so this cleaning was focused specifically on cleaning responses that didn't meet the screening requirements. A total of 4 responses were removed at this point. Thereafter, the data was taken to the software program SPSS to perform the descriptive statistics analysis through statistical analyses.

4.4.8 Data analysis

After the collection of the data through the questionnaire, the data analysis process can begin. This is the final stage to the research onion presented at the beginning of the Chapter, alongside data collection. Quantitative data analysis is the process by which analysis software is incorporated to analyse and give meaning to the data collected for the study (in this case the survey responses); to statistically examine and present the data to make deductions and investigate the hypotheses for the study (Saunders et. al., 2019). For example, utilising software programs like Excel, SPSS, IBM SPSS AMOS and Smart-PLS to make such observations and interpretations of the data. This study, therefore, made use of Excel, SPSS and Smart-PLS in the analysis. Saunders et. al., (2019) highlight the first step in the data analysis process being to define the data type, of which this study makes use of categorical data for demographics and interval data for the measurement scales. The main steps for this study's data analysis can be found in Figure 10 below, presenting the hierarchical diagram for the different data analysis processes and focuses utilised in the study. These steps are each discussed accordingly.

Figure 10. Data analysis (researchers own design)



These data analysis choices are also reflective of choices made in existing studies. As mentioned earlier in the Chapter there are numerous studies that have explored data-usage and privacy concerns using Quantitative data analysis methods. Additionally, studies by Merhi, Hone and Tarhini, (2019), Ioannou, Tussyadiah and Lu, (2020), Akour, Alnazzawi, Alshurideh, Almaiah, Al Kurdi, Alfaisal and Salloum, (2022), Merhi, Hone and Tarhini, (2019) and Zhu, Wu, Huang, Zheng, Young, Yan and Yuan, (2021), also made use of Structural equation modeling (SEM) using AMOS and a confirmatory factor analysis to verify validity and reliability in their analysis. Moreover, a study by Eid, (2011) also made use of SEM through reliability, measurement model, CFA, goodness-of-fit, predictive validity, and hypothesis testing techniques such as this study; where various hypotheses were supported and not supported. In relation to this study, Eid, (2011) found the hypothesis for Privacy Perceptions and Trust to be supported; highlighting the use of these techniques in this study. Similarly, through their analysis, the study by Zhu et al. (2021) was successful in proving their hypothesis that Privacy concerns have a negative impact on intention. Additionally, the study by Merhi, Hone. and Tarhini, (2019) observed a cross-cultural analysis where they also used similar SEM techniques to this study, and had supporting hypotheses for privacy and intention to use. Moreover, the usage of SEM Higher Order Constructs techniques when measuring Culture has also been seen across literature (Kim, Yim, Sugumaran and Rao, 2016; Pratikno, Purba, Bernarto,, Sudibjo and Pramono, 2021; Tehseen, Sajilan, Gadar and Ramayah, 2017). These techniques are further discussed and justified below.

4.4.8.1 Descriptive statistics

Here, the demographic profile of the respondents was analysed through frequencies and percentages, which are noted and discussed in the following Chapter. This way, the study observes how the different averages for gender, age, and earnings differ with their respective responses. Moreover, as the study looks at South Africans above 18 in general, it will be interesting to see if any specific age group is dominant in their privacy concerns and perspectives. As the data was collected largely through social media channels, it can be expected that a younger age group will be dominating the survey responses, which is later observed and discussed in Chapter 5 and 6. Subsequently, the central tendency measures are observed for all of the constructs, to highlight any existing trends that might occur with the respondents' answers, specifically noting the privacy concerns, personalisation and their data-usage. Within SPSS an Exploratory Factor Analysis can also be conducted prior to testing the measurement model, however, that was unnecessary for this study and only the Confirmatory Factor analysis (CFA) was conducted in the following measurement model processes.

Thereafter, the data is imported from SPSS into Smart-PLS, where the model and proposed relationships are then created before conducting the Measurement Model Analyses.

4.4.8.2 Reliability and validity

Examining the reliability and validity of the study provides an indication of the dependability of the research results (Roberts and Priest, 2006). Although this study made use of already existing scales utilised in previous studies, reliability can also be ensured through observing the internal consistency and convergence of the research constructs, i.e., through observing the coefficient alpha/ Cronbach alpha (Zikmund and Babin, 2016). Here, the constructs of the study are tested for reliability, where a Cronbach alpha and Composite Reliability (rho_c) above the threshold of 0,7 is required; to determine if any of the items should be deleted (Sharma, 2016). Numerous existing studies have emphasised a score above 0,7- 0,8 presenting good reliability and being aimed for research (Bougie and Sekaran, 2016; Sharma, 2016; Schrepp, 2020; Zikmund and Babin, 2016). Although having a higher Cronbach alpha is, therefore, reflected as better, one that is too high can also be an indication of some issues in the data.

Additionally, a Confirmatory Factor analysis is conducted to check the theoretical model proposed and the model fit for the study (Alavi, Visentin, Thapa, Hunt, Watson and Cleary, 2020). This study initially observes the factor loadings to check that the respective items loaded well, i.e., above 0,7. Thereafter, a validity test is conducted by observing the AVE for convergent validity, of which an AVE above 0,5 is necessary for convergent validity to be established (Hair, Risher, Sarstedt and Ringle, 2019). This convergent validity explains the variance of a construct arrangement and how these converge together (Hair, Howard and Nitzl, 2020). Moreover, based on these results the study can then determine if any item deletions will assist with the improvement of the Composite Reliability (rho_c) and Average Variance Explained (AVE).

Finally, the discriminant validity is tested in order to measure the relations between constructs (Ab Hamid, Sami and Sidek, 2017). This can be done by observing the correlation matrix through the heterotrait-monotrait (HTMT) ratio, where a correlation below 0,8 is requested between the constructs (Ab Hamid, Sami and Sidek, 2017; Hair, Howard and Nitzl, 2020). The Fornell Larcker (1971) measure can also be examined for discriminant validity, where the

square root of the AVE is needed to be greater than the correlation between constructs (Ab Hamid, Sami and Sidek, 2017). However, Hair, Howard and Nitzl, (2020) highlighted the inadequacy of using Fornell Larcker criteria to measure discriminant validity and that the HTMT is preferable when measuring the distinctions between constructs. As a pilot study was conducted, the continuous evaluation of items within the questionnaire should assist in the validity being acceptable within the study.

4.4.8.3 Structural Equation Modelling (SEM)

Alongside the reliability and validity tests, the constructs are being analysed through inferential statistics using Structural Equation Modelling (SEM). SEM is the technique used to measure multifaceted relationships in a predictive manor (Ullman and Bentler, 2012). This is done through a factor and multiple regression analysis and makes use of the proposed model, of which 10 different relationships are being explored (Ullman and Bentler, 2012). Moreover, using the SEM technique is more powerful than regression, allowing for an examination of the relationship between multiple dependent variables and independent variables in correlation with the hypotheses; therefore, it is appropriate for this study (Beran and Violato, 2010; Eksteen and Humbani, 2021). Within this study, a total of 4 Dependent variables (Privacy Concern, Personalisation, Intention to use Loyalty Program and Privacy Attitude) and 7 Independent variables (Trust, Culture, Awareness, Privacy Concern, Personalisation, perceived vulnerability, and perceived risk) can effectively be explored using SEM techniques. Here the remaining measurement model and structural model is observed based on fit or performance indices to observe, validate and improve the model.

4.4.8.4.1 Model Fit

When conducting the data analysis, the model fit indices are also usually explored. These vary depending on whether a covariance-based SEM or components-based SEM (partial least squares) approach is taken (Tenenhaus, 2008). In the case of covariance-based SEM certain popular indicators of model fit can be observed for both the measurement and structural, which are summarised in table 6 below:

Table 6. Model fit Indices, taken from Cho, Hwang, Sarstedt and Ringle, (2020) and Yakubu and Dasuki, (2018).

Covariance-based Fit Index	Recommended value cut-off
Chi-square/ DF	< 3
Comparative Fit Index (CFI)	> 0.95
Goodness of Fit Index (GFI)	> 0.95
Adjusted Goodness of Fit Index (AGFI)	> 0.8
Tucker-Lewis Index (TLI)	> 0.9
Random Measurement of Standard Error Approximation (RMSEA)	< 0.05

However, as this study does not follow a Covariance-based SEM but used partial least square (Smart-PLS), a non-parametric approach for the SEM analysis, the usage of the GFI has been recommended to not be used; as the model isn't built on covariance matrices (Hair, 2020; Henseler and Sarstedt, 2013). However, certain model indices can be observed in the analysis of model fit in Smart-PLS, these are as follows: SRMR, d_ULS, d_G, NFI (Bentler and Bonnet Index) and; of which the SRMR and NFI are focused in the model fit analysis (SmartPLS Model Fit, 2023). Moreover, the usage of these indices is somewhat embryonic in literature and should be observed with caution (Hair, Hult, Ringle and Sarstedt, 2022). The thresholds for the indices that will be used are highlighted in Table 7 below.

Table 7. Model fit Indices, taken from (SmartPLS Model Fit, 2023)

Components-based Fit Index	Recommended value cut-off
Standardized Root Mean Square Residual	< 0.1 (or < 0.08)
(SRMR)	
Squared Euclidean distance (d_ULS)	Confidence interval and original value comparison of which a discrepancy of p > 0.05 is needed
Geodesic distance (d_G)	Confidence interval and original value comparison of which a discrepancy of p > 0.05 is needed
Normed Fit Index (NFI)	> 0.9

Based on these results, the researcher can then assess if there are any issues with variables that aren't loading properly, make necessary adjustments or deletions, and put together observations on the model.

4.4.8.4.2 Higher Order Constructs

As part of the usage of SEM techniques to measure the model for the study, Higher order constructs (HOC) can also be created to predict relationships (Sarstedt, Hair Jr, Cheah, Becker and Ringle, 2019). SEM through partial least squares regression (PLS) can adjust the model to account for complexity through lower-order components (LOC) and higher order constructs (HOC) (Sarstedt, Hair Jr, Cheah, Becker and Ringle, 2019; Wong, 2016). Here, the HOC refers to an unobservable component that is made up of different dimensions or subdimensions (Hooi, Abu and Rahim, 2018). Furthermore, these can be classed as either formative-formative components, reflective-formative components, formative-reflective components, or reflective-reflective components, of which the difference lies in the relationship between the variables (Hair et al., 2018). For reflective-reflective components, the variable is affected by the indicators, however, are not defined by them and will not change if one or more of them are removed (Coltman, Devinney, Midgley and Venaik, 2008). Whereas, with reflective-formative components, the variable is defined and created by the indicators (Coltman, Devinney, Midgley and Venaik, 2008).

Within this study, Culture presents itself as a potential HOC, where 6 different dimensions come together to form one construct that then forms a hypothesised relationship in the model. Moreover, Hofstede's model is founded on the 6 culture dimensions of contributory affiliation and, therefore, is classed as a reflective-formative component. This is visualised in Figure 11 and 12 below. Numerous studies have explored Culture through Hofstede's model from both a Higher Order Construct position and by looking at each individual dimension's relationship with other constructs in the conceptual model (Ghazali, Abdul-Rashid, Dawal, Aoyama, Tontowi and Sakundarini, 2017; Tehseen, Sajilan, Gadar and Ramayah, 2017; Thien, Thurasamy and Abd Razak, 2014). This study, therefore, investigates Culture as an HOC to test the overall relationship between Culture and Privacy Concerns, as well as investigates each dimension for added depth and insight into the topic.

Figure 11. Different types of HOC's (taken from Sarstedt, Hair Jr, Cheah, Becker and Ringle, 2019)

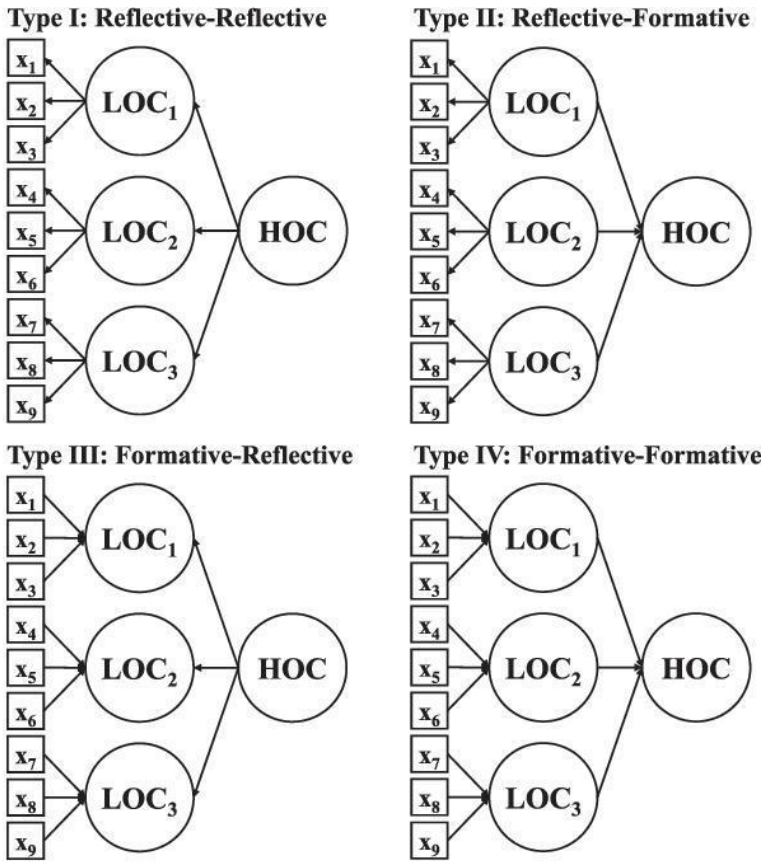
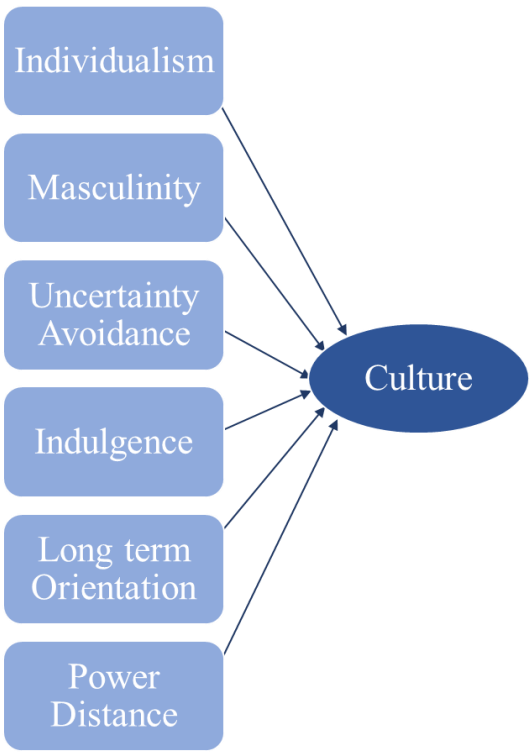


Figure 12. Culture as a Higher Order Construct (researchers own design)



From a statistical perspective, this is explored over the significance of the higher order construct, through observations of the Outer Weights and Outer Loadings, to see which dimensions are/aren't significant (Wong, 2019).

4.4.8.5 Multicollinearity

Alongside these analyses, a test for multicollinearity is performed to assess the correlations for each independent variable in the study (Shrestha, 2020). Multicollinearity is defined as the strong correlation of variable relationships within the model and is, therefore, detrimental to research results (Kim, 2019; Shrestha, 2020). This is examined through observing the Model VIF, and thereafter, items are deleted to prevent multicollinearity issues. The equation for VIF proposed by Senaviratna and Cooray (2019) is calculated as follows:

VIF = 1/(Tolerance*)

* 1 – R-square

Here Senaviratna and Cooray (2019) mentioned a threshold of 10 for the VIF in testing multicollinearity, however, Shrestha, (2020) proposed a threshold of 1< VIF < 5; as a VIF above 10 presents potential issues with multicollinearity of the model predictors. Therefore, a threshold of 5 is followed in this study.

4.4.8.7 Structural Model Analysis

After the model has been adjusted and examined to be adequate, the hypothesis testing, mediation analysis, explanatory power, predictive validity, and predictive relevance of the structural model can be observed.

4.4.8.7.1 Explanatory power, Predictive relevance and Predictive Validity

As part of the Structural model investigation using Smart-PLS, the R-square, Q-square and F-square can be observed in the inner and outer model (Wong, 2019). Here, the R-square reflects the explanatory power and strength of the different dependent variables in the model. The strength of the variables can be divided into substantial (0,75), moderate (0,50) or weak (0,025) (Hair et al., 2013). This does, however, vary depending on the author, where Cohen (1988) accepted a lower threshold for strength and Falk and Miller (1992) referred only to the need for the R-square to be above 0,1. The F-square observes the impact of the variables in the

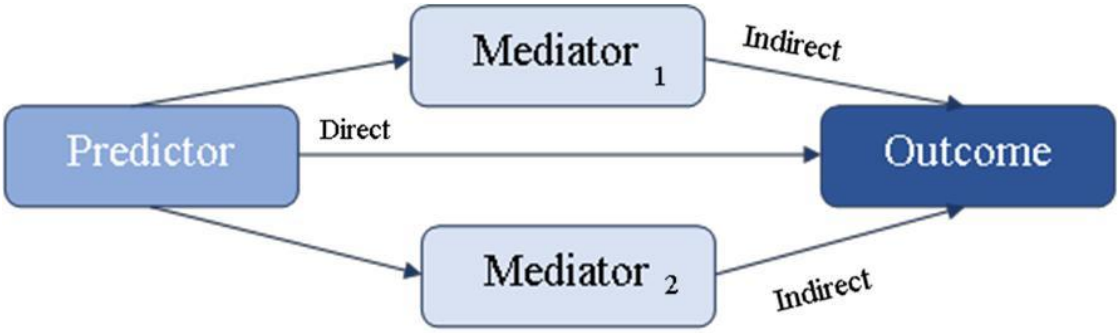
model, through observing the influence they would have on the ^{2} if removed from the study (Singkheeprapha, Jumani and Sukhabot, 2022; Wong, 2019). Here, the larger the value represents how large the influence the removal on other variables (Cohen, 1988). Finally, the Q-square refers to the predictive relevance of the dependent variables in the study, where a Q-square predict above 0 is necessary to provide predictive relevance (Wong, 2019).

Alongside investigations into the Q-square, the predictive validity can also be examined. Predictive validity refers to the predictive power of the model, and whether the findings of the study can be generalized over a population (Shmueli et al., 2019). This observes the predictive errors in the model and is calculated in Smart-PLS through item comparisons of the PLS-SEM_RMSE and LM_RMSE, or the PLS-SEM_MAE and the LM_MAE. Here, the decision on RMSE over MAE is based on the skewness of the model.

4.4.8.7.2 Testing Mediation – Indirect Effects

When analysing a more complex conceptual model, predictor, mediator and outcome variables can be found. This is demonstrated in figure 13 below.

Figure 13. Predictor, Mediator and Outcome variables (researchers own design)



Here, the predictor variables refer to those independent variables that 'predict' the dependent variables (Maulud and Abdulazeez, 2020). The mediators, which are also usually dependent and independent variables, mediate the relationship between the predictor and outcome variable; and can typically be identified through an incoming and outgoing relationship arrow (Sarstedt, Hair Jr, Nitzl, Ringle and Howard, 2020). As shown in Figure 13 above, two different mediators could potentially affect the relationship between the predictor and outcome variables. In statistics, this is observed by analysing the indirect and direct effects within the model, and comparing them for a mediation analysis (Rijnhart, Twisk, Eekhout and Heymans, 2019). This study, however, presents only potential indirect mediation effects surrounding

Privacy Concerns and Personalisation being the mediators. Moreover, no direct relationship can be compared in this study to these indirect mediation effects; however, some interesting deductions can still be observed through the indirect analysis. Furthermore, no mediation hypotheses are included in the study, so these will just be for an in-depth view of the model. Direct and Indirect Mediation is done in Smart-PLS through observing the significance of the mediation relationships (p-value), of which below 0,05 is significant (Rijnhart, Twisk, Eekhout and Heymans, 2019). Moreover, the results can be further divided into competitive (negative path coefficient) and complementary (positive path coefficient) mediation (Hair Jr et al., 2021).

4.4.8.7.3 Moderation analysis

As part of the data analysis, testing moderating variables can also be conducted in research, where a third variable is incorporated into the study to observe its moderating effects (strength and direction) alongside other causal relationship investigations (Memon, Cheah, Ramayah, Ting, Chuah and Cham, 2019). However, this study doesn't make use of any moderator variables or hypotheses, and so this will not be conducted.

4.4.8.7.4 Hypothesis Testing

The accumulation of the study comes to the Hypothesis Testing, where the proposed hypotheses are found to be either accepted or rejected. Here, an investigation into the relationships between the multiple independent and dependent variables is conducted. From a statistical point of view, hypothesis testing involves running a Bootstrapping analysis on Smart-PLS, where the significance of relationships is then observed (p-value < 0,05) (Wong, 2019).

Conclusion

This Chapter observed the Methodological approaches used in research as well as those that this study incorporates. Here, a detailed understanding of the methods and approaches this study utilised is provided, as well as their subsequent justifications. This was done through the exploration of the different layers within the research onion presented by Saunders et al., (2019), the analysis of each of the marketing research processes and the research design choices and procedures incorporated in the study. This study, therefore, paves the way for Chapter 5, to provide the results of the study and observations through data analysis, set on the foundations highlighted in this Chapter.

Chapter 5 – Presentation of Results

5.1 Introduction

This chapter provides the results for the data analysis for this study. These are based on the analyses conducted in the software programs IBM SPSS Statistics and Smart-PLS 4. Furthermore, the chapter presents the results of the data collected, of which 277 usable responses were acquired out of a total of 282. Firstly, the chapter presents the results for the descriptive statistics and central tendency measures for the study. Thereafter, the Measurement Model is thoroughly explored through investigations into the CFA, model indices, and HOC as well as the different reliability and validity tests. Finally, the structural model is presented, showing the results of the hypotheses tests and the predictive nature of the model.

5.2 Descriptive Statistics

This section presents the descriptive statistics for the demographic information in the study. Here, the variables frequency and valid percentages are examined for all 277 participants to deduce an understanding of the respondents and target population that took part in the study. These results are based on the responses received in the questionnaire distributed online, through various social media platforms, and through the official Wits email. Furthermore, no missing values were found in the study. Moreover, the results are those that were obtained within a 2-month period in the data collection procedure. In hopes of gathering interest from respondents, the questionnaire was additionally advertised during Loadshedding peak power outage times of stages 4-6 over the course of 3 weeks, in hopes of encouraging consumers who were looking for something to do during this time. The insights for this presented high reach with social media accounts; however, the ratio of reach to engagement was somewhat limited, only engaging with around 86-100 accounts. A summary of the demographic profile of the respondents can be found in Table 8 below.

5.2.1 Demographic profile of respondents

All respondents that took part in the survey were required to have purchased from a South African retailer in the past 3 months. Of these 277 respondents, 80 voluntarily mentioned that they were currently using a Loyalty Program, and 77 of them mentioned that they had

experienced a data breach in the past. Within this section these demographics are further explored through the participants Gender, Age, Racial group, Household Income level, Highest Education level and Marital Status. Graphs for each of these can also be found in Appendix D.

5.2.1.1 Gender

Observing the results in Table 8 below it can be seen that 196 of the respondents were majority female with 70,8%, and only 21,1% male. Moreover, 2 respondents identified as non-binary and 4 preferred not to give their gender.

5.2.1.2 Age

The age of the respondents that took part in the survey are on the young side, with majority between the ages of 25 and 34 (n =110; % = 39,7). The other highest participating age groups were the 18-24 (n = 51; % = 18,4) and the 55-64 (n = 39; % = 14,1) ranges; with the 45-54 group being close behind (n = 30; % = 10,8).

5.2.1.3 Highest Education Level

The Highest Education Level for the respondents is more condensed, with 115 respondents having a Postgraduate degree of some kind (% = 41,5). Furthermore, this combined with the second highest, i.e., Degree level education (n = 66; % = 23,8), presented a collective result of 181 (% = 64, 87) respondents receiving higher education.

5.2.1.4 Race

Of the racial groups that participated in the survey, as shown in Table 8 below, 151 respondents were white (% = 54,5) and 68 respondents were black (% = 24,5). The other different racial groups (including participants that preferred not to say their race) made up a collective of 58 respondents (20,8 %); i.e., Indian, Coloured, Asian, Other and prefer not to say racial categories.

5.2.1.5 Marital Status

The Marital Status of the respondents is made up of majority “Married or living with a partner” individuals (n = 109; % = 39,4). Single (living alone) came second to this with a close 88 respondents (% = 31,8).

5.2.1.6 Household income level

Lastly, the Household income level for the respondents was majority above R60 000 (% = 25,3). The other respondents presented more scattered income levels with the second highest group being 52 respondents preferring not to say their Household Income level (% = 18,8%).

Table 8. Demographic profile of respondents

Variable	Sub-Variable	Frequency	Percentage (%)
Gender	Male	75	27,1
	Female	196	70,8
	Non-binary	2	0,7
	Prefer not to say	4	1,4
Age	18-24	51	18,4
	25-34	110	39,7
	35-44	24	8,7
	45-54	30	10,8
	55-64	39	14,1
	65+	18	6,5
	Prefer not to say	5	1,8
Highest Education Level	None	0	0
	Primary school	0	0
	High school	47	17,0
	Diploma	41	14,8
	Degree	66	23,8
	Postgraduate (Honours, Masters, Doctorate)	115	41,5
	Prefer not to say	8	2,9
Race	Black	68	24,5
	White	151	54,5
	Coloured	15	5,4
	Indian	22	7,9
	Asian	1	0,4
	Other	2	0,7
	Prefer not to say	18	6,5
Marital status	Single (living alone)	88	31,8
	Married or living with partner	109	39,4

	Living with parents	52	18,8
	Divorced or separated	18	6,5
	Prefer not to say	10	3,6
Household income	Less than R10 000	31	11,2
	R10 001- R25 000	37	13,4
	R25 001 - R40 000	41	14,8
	R40 001 – R55 000	31	11,2
	R55 001 – R60 000	15	5,4
	Above R60 000	70	25,3
	Prefer not to say	52	18,8

5.2.2. Construct central tendency measures

The overall Mean (μ), Standard Deviation (σ), Median and Mode can be found in Table 9 below; of which each construct is subsequently presented for a deeper analysis and investigation for the different central tendency measures.

Table 9. Summary of construct central tendency measures.

Constructs	Mean (μ)	Standard Deviation (σ)	Median	Mode
Awareness (AWA)	3,970	0,589	4	4
Trust (TRU)	3,239	0,736	3,29	4
Intention (INT)	4,057	0,756	4	4
Perceived Risk (PERCR)	2,954	0,787	2,86	2
Data Breach (DB)	3,514	0,771	3,5	4
Privacy Concerns (PC)	3,909	0,661	4	4
Personalisation (PERS)	3,310	0,850	3,5	4
Attitude (ATT)	4,143	0,657	4,2	5

Masculinity (MASC)	2,950	0,915	3	4
Individualism (INDIV)	2,782	0,770	2,83	3
Power Distance (PD)	1,650	0,587	1,6	1
Uncertainty Avoidance (UA)	4,048	0,604	4	4
Long term Orientation (LTO)	3,835	0,603	3,88	4
Indulgence (INDUL)	3,152	0,732	3	3

Awareness

Table 10. Awareness Central Tendency Measures

			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (μ)	Standard Deviation (σ)	Median
Awareness	AWA1	Frequency (n)	8	30	39	126	74	3,823	1,036	4
		Valid Percentage (%)	2,9	10,8	14,1	45,5	26,7			
	AWA2	Frequency (n)	19	52	75	98	33	3,267	1,107	3
		Valid Percentage (%)	6,9	18,8	27,1	35,4	11,9			
	AWA3	Frequency (n)	17	69	83	81	27	3,116	1,081	3
		Valid Percentage (%)	6,1	24,9	30,0	29,2	9,7			
	AWA4	Frequency (n)	0	2	6	99	170	4,578	0,576	5
		Valid Percentage (%)	0	0,7	2,2	35,7	61,4			

	AWA5	Frequency (n)	0	1	5	103	168	4,581	0,550	5
		Valid Percentage (%)	0	0,4	1,8	37,2	60,6			
	AWA6	Frequency (n)	1	4	16	103	153	4,455	0,704	5
		Valid Percentage (%)	0,4	1,4	5,8	37,2	55,2			
Overall mean (μ) = 3,97 / Overall median = 4 / Std. Deviation (σ) = 0,589										

The results for the 'Awareness' construct, shown in Table 10 above, were examined for the central tendency measures. Here, the overall mean of 3,97 and standard deviation of 0,589 reflect that respondents tended to answer towards "Agree". Moreover, looking at the individual construct items AWA1 reflects high responses towards Agree (n = 126; % = 45,5) and Strongly Agree (n = 74; % = 26,7). The spread of the results being high across two different response focuses is consistent with the other items within the Awareness construct. Here, AWA2 showed most respondents to answer Agree (n = 98; % = 35,4) and Neutral (n = 75; % = 27.1). Moreover, for AWA3 respondents tended towards both Neutral (n = 83; % = 30) and Agree (n = 81; % = 29,2). For AWA4 a higher percentage of responses tended towards Strongly Agree (n = 170; % = 61,4); with Agree coming in as second highest (n = 99; % = 35,7). AWA5 and AWA6 presented similar results, with AWA5 having a tendency for Strongly Agree (n = 168; % = 60,6) and Agree (n = 103; % 37,2); and AWA6 also having a tendency for Strongly Agree (n = 153; % = 55,2) and Agree (n = 103; % = 37,2). Interestingly, for AWA4 and AWA5 no respondents Strongly disagreed with the statements and Disagreed with the statements. AWA6 also presented very low responses for Disagree (n = 4; % = 1,4) and Strongly Disagree (n =1; % = 0,4). By looking at the item frequency and percentage, a clearer image is, therefore, provided for how the respondents answered each statement for the Awareness construct.

Trust

Table 11. Trust Central Tendency Measures

			Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**	**Mean (μ)**	**Standard Deviation (σ)**	**Median**

Trust	TRU 1	Frequency (n)	11	43	110	102	11	3,213	0,894	3
		Valid Percentage (%)	4,0	15,5	39,7	36,8	4			
	TRU 2	Frequency (n)	13	39	51	131	43	3,549	1,061	4
		Valid Percentage (%)	4,7	14,1	18,4	47,3	15,5			
	TRU 3	Frequency (n)	7	38	93	129	10	3,350	0,853	4
		Valid Percentage (%)	2,5	13,7	33,6	46,6	3,6			
	TRU 4	Frequency (n)	15	53	90	90	29	3,235	1,049	3
		Valid Percentage (%)	5,4	19,1	32,5	32,5	10,5			
	TRU 5	Frequency (n)	11	46	84	111	25	3,336	0,989	3
		Valid Percentage (%)	4,0	16,6	30,3	40,1	9,0			
	TRU6	Frequency (n)	8	50	97	108	14	3,253	0,910	3
		Valid Percentage (%)	2,9	18,1	35	39	5,1			
	TRU7	Frequency (n)	27	83	112	45	10	2,740	0,966	3
		Valid Percentage (%)	9,7	30	40,4	16,2	3,6			
Overall mean (μ) = 3,24 / Overall median = 3,29 / Std. Deviation (σ) = 0,736										

The central tendency measures were looked at in relation to the findings for the 'Trust' construct, which are displayed in Table 11 above. The overall mean of 3,24 and the standard deviation of 0,739 indicate that respondents preferred to answer "Neutral," , i.e., they felt they neither agreed nor disagreed with the statements. Moreover, TRU1 shows strong answers to the individual construct item for Neutral (n = 110;% = 39,7) and Agree (n = 102;% = 36,8). Moreover, TRU2 revealed that a large majority of respondents (n = 131;% = 47,5) answered in towards Agree,

accounting for nearly half of responses for the statement. Also, for TRU3, respondents tended to respond mostly with Agree (n = 129;% = 46,6) and a Neutral (n = 93;% = 33,6) response. Interestingly, for TRU4 the percentage of responses were the same for Neutral (n = 90; % = 32,5) and Agree (n = 90; % = 32,5). TRU5 presented results of a tendency for mostly Agreeing with the statement (n = 111; % = 40,1) and being Neutral (n = 84; % 30,3), as second highest. For the item TRU6, responses had a tendency for both Agree (n = 108; % = 39) and Neutral (n = 97; % = 35). Finally, for TRU7 the results presented a change, where a tendency towards Neutral (n = 112; % = 40,4) and Disagree (n = 83; %= 30) were reflected. By looking at the item frequency and percentage, a clearer image is, therefore, provided for how the respondents answered each statement for the Trust construct.

Intention

Table 12. Intention to use Loyalty Programs Central Tendency Measures

			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (μ)	Standard Deviation (σ)	Median
Intention	INT1	Frequency (n)	3	12	31	163	68	4,014	0,794	4
		Valid Percentage (%)	1,1	4,3	11,2	58,8	24,5			
	INT2	Frequency (n)	4	12	38	154	69	3,982	0,832	4
		Valid Percentage (%)	1,4	4,3	13,7	55,6	24,9			
	INT3	Frequency (n)	3	12	23	168	71	4,054	0,781	4
		Valid Percentage (%)	1,1	4,3	8,3	60,6	25,6			
	INT4	Frequency (n)	7	16	7	138	109	4,177	0,921	4
		Valid Percentage (%)	2,5	5,8	2,5	49,8	39,4			
Overall mean (μ) = 4,06 / Overall median = 4 / Std. Deviation (σ) = 0,756										

Table 12 above reflects the central tendency measures for the 'Intention' construct. The total mean of 4,06 and standard deviation of 0,756 is found, showing that respondents tended to answer towards "Agree" in their responses. Here, INT1 reflects dominant responses towards respondents Agreeing with the statement (n = 163; % = 58,8). Similarly, INT2 showed most respondents to also answer Agree (n = 154; % = 55,6) to the statement. Moreover, for INT3 respondents tended towards largely Agreeing (n = 168; % = 60,6). Finally, INT4 presented a higher percentage of responses towards Agree (n = 138; % = 49,8) and Strongly Agree (n = 109; % = 39,4). This collectively represents a large percentage of 89,2% of the responses for this item. By looking at the item frequency and percentage, a clearer image is, therefore, provided for how the respondents answered each statement for the Intention to use Loyalty Programs construct.

Perceived Risk

Table 13. Perceived Risk Central tendency Measures

			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (μ)	Standard Deviation (σ)	Median
Perceived Risk	PERCR1	Frequency (n)	17	112	87	50	11	2,733	0,960	3
		Valid Percentage (%)	6,1	40,4	31,4	18,1	4,0			
	PERCR2	Frequency (n)	22	114	83	49	9	2,671	0,965	3
		Valid Percentage (%)	7,9	41,2	30,0	17,7	3,2			
	PERCR3	Frequency (n)	7	59	95	95	21	3,231	0,954	3
		Valid Percentage (%)	2,5	21,3	34,3	34,3	7,6			
	PERC4	Frequency (n)	24	122	58	58	15	2,704	1,063	2
		Valid Percentage (%)	8,7	44	20,9	20,9	5,4			
	PERC5	Frequency (n)	7	72	55	116	27	3,303	1,040	4
		Valid								

		Percentage (%)	2,5	26	19,9	41,9	9,7			
	PERC6	Frequency (n)	12	83	60	91	31	3,166	1,107	3
		Valid Percentage (%)	4,3	30	21,7	32,9	11,2			
	PERC7	Frequency (n)	26	104	58	58	31	2,870	1,182	3
		Valid Percentage (%)	9,4	37,5	20,9	20,9	11,2			
Overall mean (μ) = 2,96 / Overall median = 2,86 / Std. Deviation (σ) = 0,787										

The central tendency measures were looked at in relation to the findings for the 'Perceived Risk' construct, which are displayed in Table 13 above. The overall mean of 2,96 and the standard deviation of 0,787 indicate that respondents preferred to answer "Neutral". Observing the individual item statements presents a deeper analysis on the construct. Here, PERCR1 shows responses tended towards Disagree (n = 112;% = 40,4) and Disagree (n = 87;% = 31,4). PERCR2 revealed that a large majority of respondents Disagreed with the statement (n = 114;% = 41,2) and being Neutral (n= 83; % =30). For PERCR3, respondents similarly responded with being Neutral (n = 95;% = 34,3) and Agreeing (n = 95;% = 34,3); a collective 190 responses. PERCR4 majority responses tended to Disagree (n = 122; % = 44). Moreover, observing PERCR5 presented results of a tendency for mostly Agreeing with the statement (n = 116; % = 41,9). Similarly, the item PERCR6 also had responses with a majority Agree (n = 91; % = 32,9). In contrast, for PERCR7 the results presented a tendency towards Disagree (n = 104; % = 37,5). Here, the other responses for PERCR7 were spread across Neutral (n = 58; % = 20,9) and Agree (n = 58; % = 20,9). By looking at the item frequency and percentage, a clearer image is, therefore, provided for how the respondents answered each statement for the Perceived Risk construct.

Data Breach

Table 14. Perceived Vulnerability (Data Breach) Central tendency measures

			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (μ)	Standard Deviation (σ)	Median
Data Breach	DB1	Frequency	16	74	63	98	26	3,159	1,098	3
		Valid Percentage	5,8	26,7	22,7	35,4	9,4			
	DB2	Frequency	5	40	48	139	45	3,646	0,977	4
		Valid Percentage	1,8	14,4	17,3	50,2	16,2			
	DB3	Frequency	7	49	54	123	44	3,534	1,037	4
		Valid Percentage	2,5	17,7	19,5	44,4	15,9			
	DB4	Frequency	5	25	55	151	41	3,715	0,890	4
		Valid Percentage	1,8	9,0	19,9	54,5	14,8			
Overall mean (μ) = 3,51 / Overall median = 3,5 / Std. Deviation (σ) = 0,771										

The results for the 'Data Breach' construct, shown in Table 14 above, were examined for the central tendency measures. Here, the overall mean of 3,51 and standard deviation of 0,771 reflect that respondents tended to answer towards the side of "Agree". However, looking at the individual construct items, DB1 reflects high responses towards both Agree (n = 98; % = 35,4) and Disagree (n = 74; % = 26,7). A high number of responses were also reflected thirdly to tend towards Neutral (n = 63; % = 22,7). and Strongly Agree (n = 74; % = 26,7). DB2 in comparison showed high responses mainly for Agree (n = 139; % = 50,4). Moreover, for DB3 respondents tended towards both Agree (n = 123; % = 44,4). Lastly, the item DB4 reflected a higher percentage of responses also tending towards Agree (n = 151; % = 54,5). Interestingly, DB3, DB4 and DB5 had very low respondents for Strongly Disagree, where responses were found. Therefore, how the respondents responded to each statement for the Data Breach construct is clearly presented by looking at the item frequency and percentage.

Privacy Concern

Table 15. Privacy Concerns Central tendency Measures

			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (μ)	Standard Deviation (σ)	Median
	PC1	Frequency	6	40	58	132	41	3,585	0,980	4
		Valid Percentage	2,2	14,4	20,9	47,7	14,8			
	PC2	Frequency	8	67	45	117	40	3,412	1,092	4

Privacy Concern		Valid Percentage	2,9	24,2	16,2	42,2	14,4			
	PC3	Frequency	6	47	55	129	40	3,542	1,005	4
		Valid Percentage	2,2	17	19,9	46,6	14,4			
	PC4	Frequency	7	34	43	148	45	3,686	0,970	4
		Valid Percentage	2,5	12,3	15,5	53,4	16,2			
	PC5	Frequency	6	22	43	135	71	3,877	0,955	4
		Valid Percentage	2,2	7,9	15,5	48,7	25,6			
	PC6	Frequency	7	43	55	116	56	3,617	1,052	4
		Valid Percentage	2,5	15,5	19,9	41,9	20,2			
	PC7	Frequency	4	26	31	131	85	3,964	0,962	4
		Valid Percentage	1,4	9,4	11,2	47,3	30,7			
	PC8	Frequency	7	54	57	104	55	3,527	1,092	4
		Valid Percentage	2,5	19,5	20,6	37,5	19,9			
	PC9	Frequency	5	35	28	91	118	4,018	1,095	4
		Valid Percentage	1,8	12,6	10,1	32,9	42,6			
	PC10	Frequency	6	30	52	125	64	3,762	0,997	4
		Valid Percentage	2,2	10,8	18,8	45,1	23,1			
	PC11	Frequency	6	4	12	56	199	4,581	0,824	5
		Valid Percentage	2,2	1,4	4,3	20,2	71,8			
	PC12	Frequency	0	1	16	79	181	4,588	0,617	5
		Valid Percentage	0	0,4	5,8	28,5	65,3			
	PC13	Frequency	0	1	11	68	197	4,664	0,570	5
		Valid Percentage	0	0,4	4	24,5	71,1			
Overall mean (μ) = 3,91 / Overall median = 4 / Std. Deviation (σ) = 0,661										

The central tendency measures for the main dependent variable in the study (Privacy Concerns) can be observed, through the mean, median and standard deviation; as shown in Table 15 above. Here, a mean of 3,91 and standard deviation of 0,661 reflect that participants mainly answered 'Agree' for the construct overall. Observing each item central tendency measures provides more insight to this; where most items had a majority of agreement with how responses answered the statements. For PC1 a majority agree was reflected, receiving a total

of 132 responses (% = 47,7). Here, the other responses were spread across being Neutral (n = 58; % = 20,9), Strongly Agreeing (n = 41; % = 14,8) and Disagreeing (n = 40; % = 14,4); and hardly any responses for Strongly Disagree (n = 6; % = 2,2). PC2 similarly had a majority responses towards Agree (n = 117; % = 42,2), with Disagree being the second highest (n = 67; % = 24,2). PC3 also presented a majority responses towards Agree (n = 129; % = 46,6), and the others being spread across tending towards Neutral (n = 55; % = 19,9), Disagree (n = 47; % = 17) and Strongly Agree (n = 40; % = 14,4). For PC4 over half of the responses tended towards Agree (n = 148; % = 53,4). PC5 also reflected high responses towards Agree (n = 135; % = 48,7) and Strongly Agree being the second highest response focus (n = 71; % = 25,6). A high number of responses were also reflected for PC6 to tend towards Agree (n = 116; % = 41,9). Moreover, PC7 showed high responses mainly for Agree (n = 131; % = 47,3) and Strongly Agree (n = 85; % = 30,7). For PC8 respondents tended towards Agree (n = 104; % = 37,5), with the other responses, interestingly, being spread across Neutral (n= 57; % = 20,6), Strongly Agree (n = 55; % = 19,9) and Disagree (n = 54; % = 19,5). The item PC9 item responses reflected a higher percentage tending towards Strongly Agree (n = 118; % = 42,6) and Agree (n = 91, % = 32,9). PC10 revealed a majority response rate towards Agree (n = 125; % = 45,1) and Strongly Agree being second highest (n = 64, % = 23,1). This is a collective percentage of 68,2 (%) responses either Agreeing or Strongly Agreeing with this statement. The final items for the construct all coincided with their clear majority tendency to Strongly Agree, which are reflected as follows: PC11 n = 199, % = 71,8; PC12 n = 181, % = 65,3; and PC13 n = 197, % 71,1. Observing these focused central tendency measures reflects how the respondents tended to respond to each statement for the Privacy Concerns construct, by looking at the individual item frequency and percentage.

Personalisation

Table 16. Personalisation Central tendency Measures

			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (μ)	Standard Deviation (σ)	Median
Personalisation	PERS1	Frequency	9	32	71	128	37	3,549	0,972	4
		Valid Percentage	3,2	11,6	25,6	46,2	13,4			
	PERS2	Frequency	9	38	81	120	29	3,440	0,964	4
		Valid Percentage	3,2	13,7	29,2	43,3	10,5			

	PERS3	Frequency	18	57	97	91	14	3,094	0,996	3
		Valid Percentage	6,5	20,6	35	32,9	5,1			
	PERS4	Frequency	23	59	72	98	25	3,155	1,114	3
		Valid Percentage	8,3	21,3	26	35,4	9,0			
Overall mean (μ) = 3,3 / Overall median = 3,5 / Std. Deviation (σ) = 0,85										

The results for the 'Personalisation' construct, shown in Table 16 above, were examined for the central tendency measures. Here, the overall mean of 3,3 and standard deviation of 0,85 reflect that respondents tended to answer towards the side of "Neutral". Looking at the individual construct items, PERS1 reflects high responses towards mainly Agree (n = 128; % = 46,2), with Neutral responses being second highest (n = 71; % = 25,6). PERS2, similarly, showed high responses for Agree (n = 120; % = 43,3), and for Neutral responses (n = 81; % = 29,2). Moreover, PERS3 respondents tended towards closely towards majority both Neutral (n = 97; % = 35) and Agree (n = 91; % = 32,9). Lastly, PERS4 reflected a higher percentage of responses tending towards Agree (n = 98; % = 35,4) and Neutral (n = 72; % = 26); which, collectively, made up 61,4%. Therefore, how the respondents responded to each statement for the Personalisation construct is clearly presented by looking at the item frequency and percentage.

Attitude

Table 17. Attitude Central tendency Measures

			Not at all important	**Low Importance**	**Neutral**	**Important**	**Essential**	**Mean (μ)**	**Standard Deviation (σ)**	**Median**
Attitude	ATT 1	Frequency	1	15	23	112	126	4,253	0,852	4
		Valid Percentage	0,4	5,4	8,3	40,4	45,5			
	ATT 2	Frequency	1	6	14	110	146	4,422	0,721	5
		Valid Percentage	0,4	2,2	5,1	39,7	52,7			
	ATT 3	Frequency	4	17	55	109	92	3,968	0,953	4
		Valid Percentage	1,4	6,1	19,9	39,4	33,2			
		Frequency	2	18	52	110	95		0,927	4

	ATT 4	Valid Percentage	0,7	6,5	18,8	39,7	34,3	4,004		
	ATT 5	Frequency	1	19	48	101	108	4,069	0,932	4
		Valid Percentage	0,4	6,9	17,3	36,5	39			
Overall mean (μ) = 4,14 / Overall median = 4,2 / Std. Deviation (σ) = 0,657										

The central tendency measures were looked at in relation to the findings for the 'Attitude' construct, which are displayed in Table 17 above. In contrast to the other constructs, Attitude observed a scale from ‘not at all important’ to ‘essential’. The overall mean of 4,14 and the standard deviation of 0,657 indicate that respondents preferred to answer "Important". Observing the individual item statements presents a deeper analysis on the construct, of which commonalities for the statements being regarded as both Important and Essential is seen across all the items. Here, ATT1 shows responses tended towards the statement being Essential (n = 126;% = 45,5) and Important (n = 112;% = 40,4). ATT2 revealed that a similar majority of respondents finding the statement Essential (n = 146;% = 52,7) and being Important (n= 110; % =39,7). For ATT3, responses tended towards majority Important (n = 109;% = 39,4) and Essential (n = 92;% = 33,2). ATT4 majority responses were closely aligned with Important (n = 110; % = 39,7) and Essential (n = 95; % = 34,3). Similarly, observing ATT5 presented results of a tendency for Essential (n = 108; % = 39) and Important (n = 101; % = 36,5).

As Culture was investigated through Hofstede’s model it was divided into 6 measurable dimensions, that were each investigated in the data collection process. Each of the dimension central tendency measures can, therefore, also be explored; as shown below.

Masculinity

Table 18. Masculinity Central tendency Measures

			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (μ)	Standard Deviation (σ)	Median
Masculinity	MASC1	Frequency	60	76	54	66	21	2,682	1,260	3
		Valid Percentage	21,7	27,4	19,5	23,8	7,6			
	MASC2	Frequency	55	74	50	78	20	2,762	1,257	3

		Valid Percentage	19,9	26,7	18,1	28,2	7,2			
	MASC3	Frequency	34	80	53	88	22	2,942	1,190	3
		Valid Percentage	12,3	28,9	19,1	31,8	7,9			
	MASC4	Frequency	31	39	38	122	47	3,415	1,241	4
		Valid Percentage	11,2	14,1	13,7	44	17			
Overall mean (μ) = 2,95 / Overall median = 3 / Std. Deviation (σ) = 0,915										

Table 18 above reflects the central tendency measures for the findings of the 'Masculinity' construct. A mean total of 2,95 and the standard deviation of 0,915 are presented; reflecting an overall response tending towards 'Neutral'. Observing the construct more in-depth reflects a split between the responses. Here, MASC1 shows this split with 76 responses tending towards Disagree (% = 27,4), 66 responses tending towards Agree (% = 23,8) and 60 responses tending towards Strongly Disagree (% = 21,7). MASC2 similarly revealed a close majority between the Agree (n = 78; % = 28,2) and Disagree (n = 74; % = 26,7) responses. Moreover, MASC3 results revealed the responses being high for Agree (n = 88; % = 31,8) and Disagree (n = 80; % = 28,9), MASC4, however, reflected more skewed results towards majority Agree responses (n = 122; % = 44). The other responses for reach of the items were divided somewhat similarly, with Strongly Agree presenting the weakest response rate for MASC1 (n = 21; % = 7,6), MASC2 (n = 20; % = 7,2) and MASC3 (n = 22; % = 7,9).

Individualism

Table 19. Individualism Central tendency Measures

			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (μ)	Standard Deviation (σ)	Median
Individualism	INDIV1	Frequency	24	70	96	68	19	2,957	1,059	3
		Valid Percentage	8,7	25,3	34,7	24,5	6,9			
	INDIV2	Frequency	26	81	76	76	18	2,924	1,096	3
		Valid Percentage	9,4	29,2	27,4	27,4	6,5			
	INDIV3	Frequency	32	83	90	63	9	2,762	1,033	3
		Valid Percentage	11,6	30	32,5	22,7	3,2			

	INDIV4	Frequency	27	77	78	83	12	2,913	1,066	3
		Valid Percentage	9,7	27,8	28,2	30	4,3			
	INDIV5	Frequency	36	83	62	78	18	2,852	1,159	3
		Valid Percentage	13,0	30	22,4	28,2	6,5			
	INDIV6	Frequency	60	121	58	34	4	2,282	0,985	2
		Valid Percentage	21,7	43,7	20,9	12,3	1,4			
Overall mean (μ) = 2,782 / Overall median = 2,83 / Std. Deviation (σ) = 0,77										

The results for the 'Individualism' construct, shown in Table 19 above, were examined for the central tendency measures. Here, the overall mean of 2,78 and standard deviation of 0,77 reflect that respondents tended to answer towards "Neutral". Moreover, looking at the individual construct items INDIV1 reflects this, with a high response towards Neutral (n = 96; % = 43,7); with Disagree (n = 70; % = 25,3) and Agree (n = 68; % = 24,5) following closely behind. INDIV2 showed a similar distribution, with majority responses being Disagree (n = 81; % = 29,2) and Neutral and Agree following with a matching 76 responses (27% each). INDIV3 responses were majority Neutral (n = 90; % = 32,5) and Disagree (n = 83; % = 30). INDIV4 reflected most respondents to answer Agree (n = 83; % = 30), with Neutral (n = 78; % = 28,3) and Disagree (n = 77; % = 27,8) being the second and third highest focus. Moreover, for INDIV5 respondents also tended highly towards Disagree (n = 83; % = 30), Agree (n = 78; % = 28,2) and Neutral (n = 62; % = 22,4). For INDIV6, the results presented a clear majority towards Disagree (n = 121; % = 43,7). Other mentions include a focus for Strongly Disagree (n = 60; % = 21,7) and Neutral (n = 58; % = 20,9). These results reflect a total Disagree and Strongly Disagree percentage of 65,4. By looking at the item frequency and percentage, a clearer image is, therefore, provided for how the respondents answered each statement for the Individualism construct.

Power Distance

Table 20. Power Distance Central tendency Measures

			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (μ)	Standard Deviation (σ)	Median
	PD1	Frequency	100	128	25	21	3	1,913	0,921	2

Power Distance		Valid Percentage	36,1	46,2	9	7,6	1,1			
	PD2	Frequency	144	119	7	7	0	1,556	0,671	1
		Valid Percentage	52	43	2,5	2,5	0			
	PD3	Frequency	178	77	10	11	1	1,484	0,778	1
		Valid Percentage	64,3	27,8	3,6	4	0,4			
	PD4	Frequency	137	115	18	6	1	1,625	0,735	2
		Valid Percentage	49,5	41,5	6,5	2,2	0,4			
	PD5	Frequency	131	118	17	10	1	1,671	0,778	2
		Valid Percentage	47,3	42,6	6,1	3,6	0,4			
Overall mean (μ) = 1,65 / Overall median = 1,6 / Std. Deviation (σ) = 0,587										

Observing the Power Distance central tendency measures, reveals an overall mean of 1,65 and standard deviation of 0,587 for the construct, as shown in Table 20 above. This indicates a tendency for respondents to Disagree with the statements. Looking more in-depth at the individual construct items, a pattern of responses either Strongly Disagreeing or Disagreeing is clearly shown. For PD1, the responses showed such a circumstance where a majority 128 respondents Disagreed with the statement (% = 46,2) and 100 of them Strongly Disagreed (% = 36,1). Moreover, PD2 presented a majority Strongly Disagree response (n = 144; % = 52), with Disagree following second (n = 119; % = 43). For PD3 a significant 178 responses Strongly Disagreed with the statement (% = 64,3) whilst 77 Disagreed (% = 27,8). This reflecting a high 92,1% tending towards both Strongly Disagree and Disagree, as opposed to the 8% that answered Neutral, Agree and Strongly Agree. Furthermore, PD4 indicated a majority of responses for Strongly Disagree (n = 137; % = 49,5) and Disagree (n = 115; % = 41,5). Lastly, PD5 results also indicated a majority Strongly Disagree response (n = 131; % = 47,3) and close Disagree response (n = 118; % = 42,6) focus. These results presented a clear image of respondent answers, based on their frequency and percentage responses for each item and overall construct.

Uncertainty Avoidance

Table 21. Uncertainty Avoidance Central tendency Measures

			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (μ)	Standard Deviation (σ)	Median
Uncertainty Avoidance	UA1	Frequency	4	18	31	135	89	4,036	0,908	4
		Valid Percentage	1,4	6,5	11,2	48,7	32,1			
	UA2	Frequency	3	18	71	130	55	3,780	0,876	4
		Valid Percentage	1,1	6,5	25,6	46,9	19,9			
	UA3	Frequency	2	16	47	154	58	3,903	0,817	4
		Valid Percentage	0,7	5,8	17,0	55,6	20,9			
	UA4	Frequency	1	1	20	163	92	4,242	0,628	4
		Valid Percentage	0,4	0,4	7,2	58,8	33,2			
	UA5	Frequency	0	0	18	163	96	4,282	0,577	4
		Valid Percentage	0	0	6,5	58,8	34,7			
Overall mean (μ) = 4,05 / Overall median = 4 / Std. Deviation (σ) = 0,604										

The results for the 'Uncertainty Avoidance' construct, shown in Table 21 above, were examined for the central tendency measures. Here, the overall mean of 4,05 and standard deviation of 0,604 reflect that respondents tended to answer towards the side of "Agree". Furthermore, looking at the individual construct items, UA1 reflects high responses towards Agree (n = 135; % = 48,7) and Strongly Agree (n = 89; % = 32,1) as second highest. UA2 reflected a majority tendency towards Agree (n = 130; % = 46,9). Furthermore, UA3 showed a similar response focus with 154 respondents tending towards Agree (% = 55,6). UA4 also had a majority response tendency towards agree (n = 163; % = 58,8) with Strongly Agree coming second highest (n = 92; % = 33,2). Finally, UA5 presented consistent results with the construct, with a tendency towards Agree (n = 163; % = 58,8) and Strongly Agree as second highest (n = 96; % = 34,7). Observing the construct items overall, UA4 and UA5 interestingly presented the only items that had extremely low response of 1 or less, for Strongly Disagree. Therefore, how the respondents responded to each statement for the Uncertainty Avoidance construct is clearly presented by looking at the item frequency and percentage.

Long-term Orientation

Table 22. Long-term Orientation Central tendency Measures

			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (μ)	Standard Deviation (σ)	Median
Long term Orientation	LTO1	Frequency	14	35	73	108	47	3,502	1,072	4
		Valid Percentage	5,1	12,6	26,4	39	17			
	LTO2	Frequency	15	32	75	113	42	3,487	1,055	4
		Valid Percentage	5,4	11,6	27,1	40,8	15,2			
	LTO3	Frequency	10	25	71	118	53	3,646	1,006	4
		Valid Percentage	3,6	9,0	25,6	42,6	19,1			
	LTO4	Frequency	0	4	23	119	131	4,361	0,697	4
		Valid Percentage	0	1,4	8,3	43	47,3			
	LTO5	Frequency	3	16	42	133	83	4,000	0,885	4
		Valid Percentage	1,1	5,8	15,2	48	30			
	LTO6	Frequency	9	31	97	99	41	3,477	0,984	4
		Valid Percentage	3,2	11,2	35	35,7	14,8			
	LTO7	Frequency	4	16	55	123	79	3,928	0,918	4
		Valid Percentage	1,4	5,8	19,9	44,4	28,5			
	LTO8	Frequency	0	4	30	128	115	4,278	0,711	4
		Valid Percentage	0	1,4	10,8	46,2	41,5			
Overall mean (μ) = 3,84 / Overall median = 3,88 / Std. Deviation (σ) = 0,603										

The Long-term Orientation construct is one of the longer Culture dimensions. As shown in Table 22 above, an overall mean of 3,84 and standard deviation of 0,603 is found for the construct; indicating a tendency to 'Agree'. Like the other culture dimensions, a pattern of responses is reflected. In this case towards Agree and Strongly Agree. For LTO1, the responses showed a majority towards Agreement (n = 108; % = 39). Moreover, LTO2 presented a similar majority Agree response (n = 113; % = 40,8). For LTO3 a majority of 118 responses showed an Agreement focus with the statement (% =42,6). Furthermore, observing these items, a similarity for Neutral responses to also present high percentages amongst LTO1 (n = 73; % = 26,4), LTO2 (n = 75; % = 27,1) and LTO3 (n = 71; % = 25,6). LTO4 presented a major tendency towards Strongly Agree (n = 131; % = 47,3) and Agree (n = 119; % = 43). Moreover, LTO5 similarly presented results with a majority Agree response (n = 131; % = 47,3) and close

Strongly Agree response (n = 118; % = 42,6) focus. LTO6 also presented multiple tendencies, with 99 responses for Agree (% = 35,7) and 97 (% = 35) for Neutral. LTO7 results presented a tendency towards majority Agree (n = 123; % = 44,4). Finally, LTO8 revealed a majority response towards Agree (n = 128; % = 46,2) with Strongly Agree as a strong second response tendency (n = 115; % = 41,5). These results presented a clear image of respondent answers, based on their frequency and percentage responses for each item and overall Long-term Orientation construct.

Indulgence

Table 23. Indulgence Central tendency Measures

			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (μ)	Standard Deviation (σ)	Median
Indulgence	INDUL1	Frequency	17	103	58	69	30	2,971	1,142	3
		Valid Percentage	6,1	37,2	20,9	24,9	10,8			
	INDUL2	Frequency	1	13	71	157	35	3,765	0,741	4
		Valid Percentage	0,4	4,7	25,6	56,7	12,6			
	INDUL3	Frequency	12	60	83	91	31	3,249	1,053	3
		Valid Percentage	4,3	21,7	30	32,9	11,2			
	INDUL4	Frequency	30	101	100	36	10	2,621	0,965	3
		Valid Percentage	10,8	36,5	36,1	13	3,6			
Overall mean (μ) = 3,15 / Overall median = 3 / Std. Deviation (σ) = 0,732										

Table 23 above reflects the central tendency measures for the 'Indulgence' construct. The total mean of 3,15 and standard deviation of 0,732 is found, showing that respondents tended to answer towards "Neutral" in their responses. Here, INDUL1 reflects a somewhat split responses towards mainly Disagree (n = 103; % = 37,2), with Agree following second (n = 69; 24,9). INDUL2 showed most respondents to answer mainly Agree (n = 157; % = 56,7) and Neutral (n = 71; % = 25,6) to the statement. Moreover, for INDUL3 respondents tended towards Agreeing (n =91; % = 60,6) and a Neutral secondary tendency (n = 83; % = 30). For INDUL4, the results were somewhat similar in majority, with a close focus for Disagreeing (n = 101; % = 36,5) and being Neutral (n = 100; % = 36,1). By looking at the item frequency and

percentage, a clearer image is, therefore, provided for how the respondents answered each statement for the Indulgence construct.

5.2.3 Open-ended Questions

Within the survey, the respondents were asked whether they have experienced a data breach in the past as well as whether they think anything can improved for the privacy of data in Loyalty Programs. The responses that were captured from this are highlighted in Appendix D. The results from these are summarized below.

For participants that thought something could be improved for the privacy of their data in Loyalty Programs, the following common themes were observed:

- Better data tracking/ monitoring of consumer data movements (for 3rd party issues)
- Better usage of consumer data
- Improved security of consumer data
- Simplified terms and conditions for data-usage to improve awareness and readability
- To have data sharing be optional or be allowed to stop data sharing if desired
- Feeling as though their data is being sold to 3rd parties and not trusting the Programs
- The need for transparency
- Improved laws and data privacy enforcement in general, not just a focus for the Loyalty company
- Not feeling that Grocery retailer's data usage can cause harm
- Mentioning the desire for feedback and communication on their data-usage (from a privacy and consumer perspective)
- Not being aware and feeling that grocery retailers put a focus on saving and not data-usage
- The desire for ID information to remain private or not be asked

For participants that were asked if they had received a data-breach in the past, some common themes were mentioned:

- A mix between yes and no to participants having experienced a breach

- For respondents that had a breach, some mentioned it being through social media, email and through their bank.
- Not being aware of whether they have received a breach or not
- Some participants having been hacked in the past
- Common theme of feeling the data has been breached through 3rd party access (e.g., spam, telemarketing,
- SMS's etc.)
- One or two participants mentioning that they had been signed up for programs without permission
- Knowing someone who has had a data breach

5.3 Confirmatory Factor Analysis (CFA)

As mentioned in Chapter 4, this study
makes use of SEM techniques in order to analyse multiple independent and dependent variables and their associative relationships within the study. As part of this, a Confirmatory Factor Analysis is, therefore,conducted; in order to observe and improve the measurement model for the study (Mueller and Hancock, 2019; Schreiber, Nora, Stage, Barlow and King, 2006). This is done through exploring the normality, model fit and finally the reliability and validity for the study model; which are all presented in detail below.

5.3.1 Assessment of normality

The investigation of normality can be conducted through observing the Kurtosis and Skewness threshold of the study; of which the measurement items are recommended to be between [-7;7] Kurtosis and [-2;2] skewness for the normality to be acceptable; of which a skewness between -1 and 1 is considered excellent (George and Mallery, 2010; Hair et al., 2010). Moreover, in terms of Kurtosis, having a value above 7 indicates a peak in the data distribution, while a value below -7 indicates a flatness of the distribution; therefore, a focus towards 0 is best for normality to be confirmed. The results summary for this is presented below and the full Kurtosis and Skewness results can be found in Appendix E.

Observing the measurement items within the study revealed fluctuating values for the skewness and kurtosis analysis. The Kurtosis values reflected a range between -1,387 and 7,021, indicating high Kurtosis. Moreover, the skewness values for the study reflected a range between -2,532 and 1,992; indicating high skewness. Therefore, nonnormality is observed, due

to an outlier within the study. This is highlighted below in Table 24, as well as in the Kurtosis and Skewness table in Appendix E; where PC11 is clearly shown as an outlier in the study. Therefore, this item will be assessed for deletion after observing the reliability and validity analysis for the study. The nonnormality of the study could be an indication of the sample size needing to be larger (Pek, 2018). However, Li (2016) recommends a sample size of 265 for normality, of which this study is above. Furthermore, the deletion of PC11 adjusts the Kurtosis values to be [-1,387; 3,647] and Skewness values to be [-1,59; 1,992]; therefore, confirming a direction towards normality for the study.

Table 24. Nonnormality values

Measurement item	Excess Kurtosis	Skewness
PC11	7,021	-2,532

5.3.2 Reliability and validity of construct results

5.3.2.1 Reliability tests (Cronbach alpha and composite reliability)

Observing the Reliability for the constructs within the study, all of the constructs initially presented a Cronbach alpha (α) above 0,7; however, the composite reliability (rho_c and rho_a) for the Masculinity and Indulgence constructs were reflected to be below 0,7. Therefore, investigations into item deletion for these constructs was conducted. These initial results from the reliability analysis are reflected in Table 25 below. Here, clear items can be seen to be deleted within the Masculinity (MASC1; MASC3) and Indulgence constructs (INDUL1), where a factor loading below 0,7 is presented. In the case where the factor loadings are low but the Cronbach alpha and Composite reliability (rho_c) are above 0,7 for the other constructs, reliability is confirmed and the items do not need to be deleted (Lenny and Kridanto, 2019).
The initial results for Masculinity presented a satisfactory Cronbach alpha (α = 0,722), however, the Composite Reliability (rho_c and rho_a) were both below 0,7. Therefore, reliability was not confirmed and item deletion was necessary. The decision of deleting such items within the model consisted of deleting lowest items sequentially and then re-evaluating any improvements to the model. Upon investigation, deleting Masc1 presented an improvement for composite reliability to 0,687; but the Cronbach alpha decreased to 0,616. This is, however, deemed acceptable and so allowed for reliability confirmation for the construct item (Taber, 2018). Further investigation into potential deletion of Masc3 presented a substantial improvement of the Composite Reliability and AVE (> 0,7); however, a decrease

in the Cronbach alpha below acceptable levels (α = 0,59). Therefore, only Masc1 was deleted. Moreover, having 3 or more indicators is usually recommended in research, for desired reliability (Wang and Rhemtulla, 2021); further justifying this inclusion as deleting both MASC1 and MASC3 would leave the construct with 2 indicators.

Within this analysis on Smart-PLS, the Average variance explained (AVE) results are also presented, which can be observed to examine convergent validity, of which a value above 0,5 is needed.

Table 25. Initial reliability results (taken from Smart-PLS)

Research Constructs		Cronbach alpha	Item-total correlation	Factor loadings	Composite reliability (rho_c)	Average variance explained (AVE)
Awareness	AWA1	0,755	0,503	0,409	0,813	0,428
	AWA2		0,748	0,691		
	AWA3		0,675	0,656		
	AWA4		0,387	0,738		
	AWA5		0,287	0,597		
	AWA6		0,440	0,771		
Trust	TRU1	0,883	0,715	0,812	0,909	0,588
	TRU2		0,604	0,699		
	TRU3		0,598	0,692		
	TRU4		0,717	0,8		
	TRU5		0,743	0,819		
	TRU6		0,642	0,753		
	TRU7		0,672	0,783		
Intention to use	INT1	0,932	0,902	0,959	0,952	0,834
	INT2		0,884	0,954		
	INT3		0,882	0,943		
	INT4		0,687	0,787		
Perceived Risk	PERCR1	0,877	0,690	0,817	0,903	0,572
	PERCR2		0,753	0,862		
	PERCR3		0,569	0,741		
	PERCR4		0,647	0,72		
	PERCR5		0,698	0,812		
	PERCR6		0,599	0,64		
	PERCR7		0,654	0,676		
Data Breach	DB1	0,778	0,438	0,641	0,858	0,607
	DB2		0,660	0,874		
	DB3		0,504	0,676		
	DB4		0,716	0,892		

Privacy Concerns	PC1	0,903	0,729	0,796	0,92	0,486
	PC2		0,705	0,779		
	PC3		0,769	0,83		
	PC4		0,650	0,711		
	PC5		0,671	0,727		
	PC6		0,725	0,79		
	PC7		0,654	0,722		
	PC8		0,779	0,833		
	PC9		0,603	0,66		
	PC10		0,754	0,807		
	PC11		0,401	0,45		
	PC12		0,342	0,378		
	PC13		0,255	0,287		
Personalisation	PERS1	0,862	0,703	0,804	0,905	0,704
	PERS2		0,724	0,819		
	PERS3		0,729	0,884		
	PERS4		0,678	0,846		
Attitude	ATT1	0,805	0,558	0,778	0,865	0,562
	ATT2		0,616	0,803		
	ATT3		0,578	0,698		
	ATT4		0,635	0,764		
	ATT5		0,556	0,698		
Masculinity	MASC1	0,722	0,586	0,098	0,438	0,253
	MASC2		0,565	0,584		
	MASC3		0,397	0,031		
	MASC4		0,506	0,812		
Individualism	INDIV1	0,817	0,528	0,471	0,841	0,48
	INDIV2		0,479	0,677		
	INDIV3		0,702	0,833		
	INDIV4		0,703	0,806		
	INDIV5		0,536	0,481		
	INDIV6		0,540	0,791		
Power Distance	PD1	0,815	0,572	0,549	0,819	0,489
	PD2		0,723	0,665		
	PD3		0,543	0,477		
	PD4		0,621	0,814		
	PD5		0,554	0,899		
Uncertainty Avoidance	UA1	0,853	0,557	0,456	0,856	0,555
	UA2		0,738	0,784		
	UA3		0,687	0,951		
	UA4		0,702	0,777		

	UA5		0,629	0,666		
Long-term Orientation	LTO1	0,808	0,602	0,703	0,845	0,414
	LTO2		0,559	0,677		
	LTO3		0,602	0,81		
	LTO4		0,486	0,526		
	LTO5		0,433	0,568		
	LTO6		0,552	0,773		
	LTO7		0,435	0,491		
	LTO8		0,501	0,51		
Indulgence	INDUL1	0,737	0,447	-0,294	0,384	0,262
	INDUL2		0,485	0,54		
	INDUL3		0,613	0,717		
	INDUL4		0,572	0,394		

5.3.3.2 Convergent validity (Factor loadings from the CFA and average variance extracted)

As reflected in Table 25 above, the AVE can be explored alongside the factor loadings for the construct items. These can be observed in the investigation of convergent validity, of which a value above 0,5 for the AVE is needed. In the case where a Cronbach alpha and Composite Reliability are found to be above 0,7, AVE below 0,5 can be accepted (Zaiţ and Bertea, 2011). However, for soundness of this study, certain items presented low factor loadings that could provide for improvements of AVE, if deleted. These being: AWA1, AWA5, PC12, PC13, MASC1, INDIV1, INDIV5, PD1, PD3, UA1, LTO4, LTO7, LTO8 and INDUL1; as reflected in Table 25 above. These deletions assisted in improvements towards the AVE, as well as keeping the reliability of values above the necessary accepted threshold. Similar to the reliability item deletion, these factor loading deletions were conducted by deleting lowest items sequentially and then re-evaluating any improvements to the model for an improved AVE. Although Masculinity AVE was presented as 0,472 (<0,5), this could not be improved without consequences for the Masculinity Cronbach alpha, and so the value was accepted. Hair Jr, Hult, Ringle, Sarstedt, Danks and Ray, (2021) further mention a value of 0,4 to be adequate with a composite reliability above 0,6, therefore, justifying this. Table 26 below presents these final improvements for constructs and their items. Here, reliability and convergent validity are, therefore, achieved in the study.

Table 26. Final Reliability table

Research Constructs		Cronbach alpha	Item-total correlation	Factor loadings	Composite reliability (rho_c)	Average variance explained (AVE)
Awareness	AWA2	0,728	0,728	0,739	0,823	0,539
	AWA3		0,705	0,716		
	AWA4		0,325	0,692		
	AWA6		0,447	0,787		
Trust	TRU1	0,883	0,715	0,813	0,909	0,588
	TRU2		0,604	0,7		
	TRU3		0,598	0,692		
	TRU4		0,717	0,799		
	TRU5		0,743	0,818		
	TRU6		0,642	0,752		
	TRU7		0,672	0,782		
Intention to use	INT1	0,932	0,902	0,958	0,952	0,834
	INT2		0,884	0,953		
	INT3		0,882	0,942		
	INT4		0,687	0,788		
Perceived Risk	PERCR1	0,877	0,690	0,817	0,903	0,572
	PERCR2		0,753	0,862		
	PERCR3		0,569	0,741		
	PERCR4		0,647	0,72		
	PERCR5		0,698	0,812		
	PERCR6		0,599	0,64		
	PERCR7		0,654	0,676		
Data Breach	DB1	0,778	0,438	0,644	0,858	0,607
	DB2		0,660	0,873		
	DB3		0,504	0,677		
	DB4		0,716	0,89		
Privacy Concerns	PC1	0,926	0,745	0,807	0,932	0,601
	PC2		0,726	0,794		
	PC3		0,777	0,836		
	PC4		0,655	0,716		
	PC5		0,672	0,728		
	PC6		0,744	0,803		
	PC7		0,661	0,727		
	PC8		0,789	0,84		
	PC9		0,603	0,661		
	PC10		0,750	0,804		
Personalisation	PERS1	0,862	0,703	0,804	0,905	0,704
	PERS2		0,724	0,819		
	PERS3		0,729	0,884		
	PERS4		0,678	0,846		

Attitude	ATT1	0,805	0,558	0,778	0,865	0,562
	ATT2		0,616	0,803		
	ATT3		0,578	0,698		
	ATT4		0,635	0,764		
	ATT5		0,556	0,698		
Masculinity	MASC2	0,616	0,491	0,772	0,709	0,489
	MASC3		0,371	0,267		
	MASC4		0,416	0,894		
Individualism	INDIV2	0,791	0,498	0,678	0,86	0,608
	INDIV3		0,741	0,832		
	INDIV4		0,710	0,809		
	INDIV6		0,473	0,79		
Power Distance	PD2	0,756	0,698	0,589	0,799	0,602
	PD4		0,591	0,809		
	PD5		0,548	0,913		
Uncertainty Avoidance	UA2	0,853	0,687	0,8	0,895	0,681
	UA3		0,712	0,908		
	UA4		0,719	0,829		
	UA5		0,651	0,755		
Long-term Orientation	LTO1	0,781	0,644	0,732	0,851	0,542
	LTO2		0,677	0,735		
	LTO3		0,698	0,863		
	LTO5		0,226	0,459		
	LTO6		0,611	0,825		
Indulgence	INDUL2	0,72	0,440	0,804	0,809	0,594
	INDUL3		0,674	0,905		
	INDUL4		0,556	0,562		

5.3.3.3 Discriminant validity (correlation matrix)

After observing convergent validity, discriminant validity can be investigated within the measurement model. As stated in Chapter 4, the Correlation matrix, HTMT and Fornell Lacker ratio can be observed when measuring for discriminant validity and distinguishing the different items from one another. However, of the ratios, the HTMT has been reflected as preferable and so will be the main substantiate for measuring discriminant validity (Hamid, Sami and Sidek, 2017). The analysis and results for this are presented below.

Table 27. Heterotrait-monotrait (HTMT) matrix

	ATT	AWA	DB	INDIV	INDUL	INT	LTO	MASC	PC	PD	PERCR	PERS	TRU	UA
ATT														
AWA	0.495													
DB	0.495	0.355												
INDIV	0.222	0.196	0.148											
INDUL	0.105	0.094	0.087	0.084										
INT	0.196	0.103	0.271	0.104	0.141									
LTO	0.246	0.287	0.225	0.162	0.190	0.204								
MASC	0.103	0.146	0.132	0.153	0.121	0.118	0.385							
PC	0.665	0.486	0.789	0.222	0.114	0.363	0.126	0.105						
PD	0.245	0.117	0.115	0.334	0.201	0.107	0.166	0.244	0.132					
PERCR	0.484	0.403	0.802	0.115	0.109	0.394	0.187	0.088	0.789	0.103				
PERS	0.198	0.068	0.218	0.120	0.244	0.401	0.209	0.132	0.164	0.098	0.101			
TRU	0.285	0.250	0.428	0.221	0.179	0.470	0.348	0.186	0.461	0.136	0.427	0.472		
UA	0.123	0.119	0.123	0.130	0.107	0.144	0.454	0.380	0.090	0.086	0.112	0.141	0.276	

(ATT = Attitude; AWA = Awareness; DB = Data Breach; INDIV = Individualism; INDUL = Indulgence; INT = Intention; LTO = Long-term Orientation; MASC = Masculinity; PC = Privacy Concerns; PD = Power Distance; PERCR = Perceived Risk; PERS = Personalisation; TRU = Trust; UA = Uncertainty Avoidance)

Observing Table 27 above, the correlations between the constructs are found to each be bordering or below the threshold of 0,8. As shown, a higher correlation is evident particularly between Data Breach and Perceived Risk (0,802); however, the value is very close to the threshold. Moreover, in the case where constructs may be conceptually similar, a threshold of 0,9 could be used (Henseler, Ringle and Sarstedt, 2015). This could explain the higher correlation between Perceived Risk and Data Breach (Perceived Vulnerability). Discriminant validity is, therefore, established and there are no issues evident in the study.

Although the HTMT provides sufficient results on the study presenting no issues with discriminant validity. For interest and an in-depth exploration, the Fornell and Lacker ratio can also be explored, as one of the other common discriminant validity tests conducted in Smart-PLS (Hamid, Sami and Sidek, 2017). The results can be found in Appendix E; of which, it is presented that the squared AVE doesn't present itself as larger than the correlation between items. This further investigation provides insight into the correlation between Perceived Risk and Data Breach also presenting no issues using the Fornell and Lacker ratio. Therefore, confirming that there are no issues with discriminant validity, as shown in the HTMT ratio analysis.

5.3.3. Multicollinearity Assessment

When assessing for Multicollinearity in the study, observing the different VIF values is conducted, for a threshold of VIF<5 (or <10) (Fornell and Bookstein, 1982). These results are shown in table 28 below. As can be seen, the VIF for INT1, INT2 and INT3 are noticeably higher than the other VIF values and above the conservative threshold of 5. However, as these are still below the commonly accepted threshold of 10, no multicollinearity issues are present and no items are deleted based on their respective VIF values.

Table 28. Multicollinearity results (VIF)

	VIF		**VIF**
ATT1	2.179	PC3	3.329
ATT2	2.294	PC4	2.257
ATT3	1.582	PC5	2.256
ATT4	1.757	PC6	2.796
ATT5	1.533	PC7	2.250
AWA2	3.051	PC8	2.973
AWA3	3.008	PC9	1.635
AWA4	1.213	PC10	2.509
AWA6	1.322	PD2	1.538
DB1	1.239	PD4	1.530
DB2	2.450	PD5	1.495
DB3	1.372	PERCR1	4.068
DB4	2.664	PERCR2	4.739
INDIV2	1.402	PERCR3	1.747
INDIV3	2.432	PERCR4	1.892
INDIV4	2.282	PERCR5	2.056
INDIV6	1.347	PERCR6	1.712
INDUL2	1.291	PERCR7	2.080

INDUL3	1.840	PERS1	2.423
INDUL4	1.573	PERS2	2.572
INT1	7.326	PERS3	2.348
INT2	7.946	PERS4	2.123
INT3	5.267	TRU1	2.116
INT4	1.975	TRU2	1.604
LTO1	2.313	TRU3	1.658
LTO2	2.485	TRU4	2.183
LTO3	2.078	TRU5	2.401
LTO5	1.113	TRU6	1.743
LTO6	1.735	TRU7	1.943
MASC2	1.321	UA2	2.007
MASC3	1.171	UA3	2.079
MASC4	1.235	UA4	2.369
PC1	2.494	UA5	2.066
PC2	3.026		

(ATT = Attitude; AWA = Awareness; DB = Data Breach; INDIV = Individualism; INDUL = Indulgence; INT = Intention; LTO = Long-term Orientation; MASC = Masculinity; PC = Privacy Concerns; PD = Power Distance; PERCR = Perceived Risk; PERS = Personalisation; TRU = Trust; UA = Uncertainty Avoidance)

5.3.4 Validating Higher Order Construct Measurement Model

Within this study, Culture has also been identified as a potential additional analysis, through the form of a higher order construct (HOC). Within Smart-PLS, this is done through the addition of the Culture latent variable, which is then made up of the 6 identified dimensions (Masculinity, Indulgence, Long-term Orientation, Power Distance, Uncertainty Avoidance and Individualism), and explored. Furthermore, as discussed in Chapter 4, HOC's can form within 4 common models, of which Culture was identified as a reflective-formative construct (as illustrated in Figure 12). Therefore, alongside the measurement model analysis for the different Latent variables, the analysis between the Lower Order Constructs (Hofstede's dimensions) and Higher Order Culture Construct is also conducted. As Culture is a reflective-formative construct, this is done through observing the constructs VIF, outer loadings and outer weights (Hair, 2016). This is shown in Table 29 below.

Here, it can be seen that all values presented an acceptable VIF below 0,5. Moreover, both MASC and PD present an insignificant outer weight (p-value >0,05) and upon investigating their outer loading, it can be seen that they are below 0,5. Furthermore, only the INDIV LOC presented a satisfactory p-value (< 0,05), Outer weights (>0,5) and Outer Loadings (> 0,5) collectively. INDUL and UA presented values bordering the threshold. Lastly, although the

LTO values are reflected as significant with a p-value < 0,05, the outer weights and loadings are significantly low. Therefore, when validating the HOC, only the INDIV value stands to be observed in the investigation of Culture. However, these individual LOC will also be observed in the model against Privacy Concerns for insight into their relationship.

Table 29. HOC validation

HOC	LOC	Outer Weights	T Statistics	P Values	Outer Loadings	VIF
Culture	INDIV	0.551	2.490	0.006	0.639	1.128
	INDUL	0.424	2.059	0.020	0.316	1.038
	LTO	-0.659	2.070	0.019	-0.360	1.204
	MASC	0.263	1.289	0.099	0.204	1.111
	PD	0.290	1.342	0.090	0.434	1.139
	UA	0.371	1.823	0.034	0.259	1.179

INDIV = Individualism; INDUL = Indulgence; LTO = Long-term Orientation; MASC = Masculinity; PD = Power Distance; UA= Uncertainty Avoidance

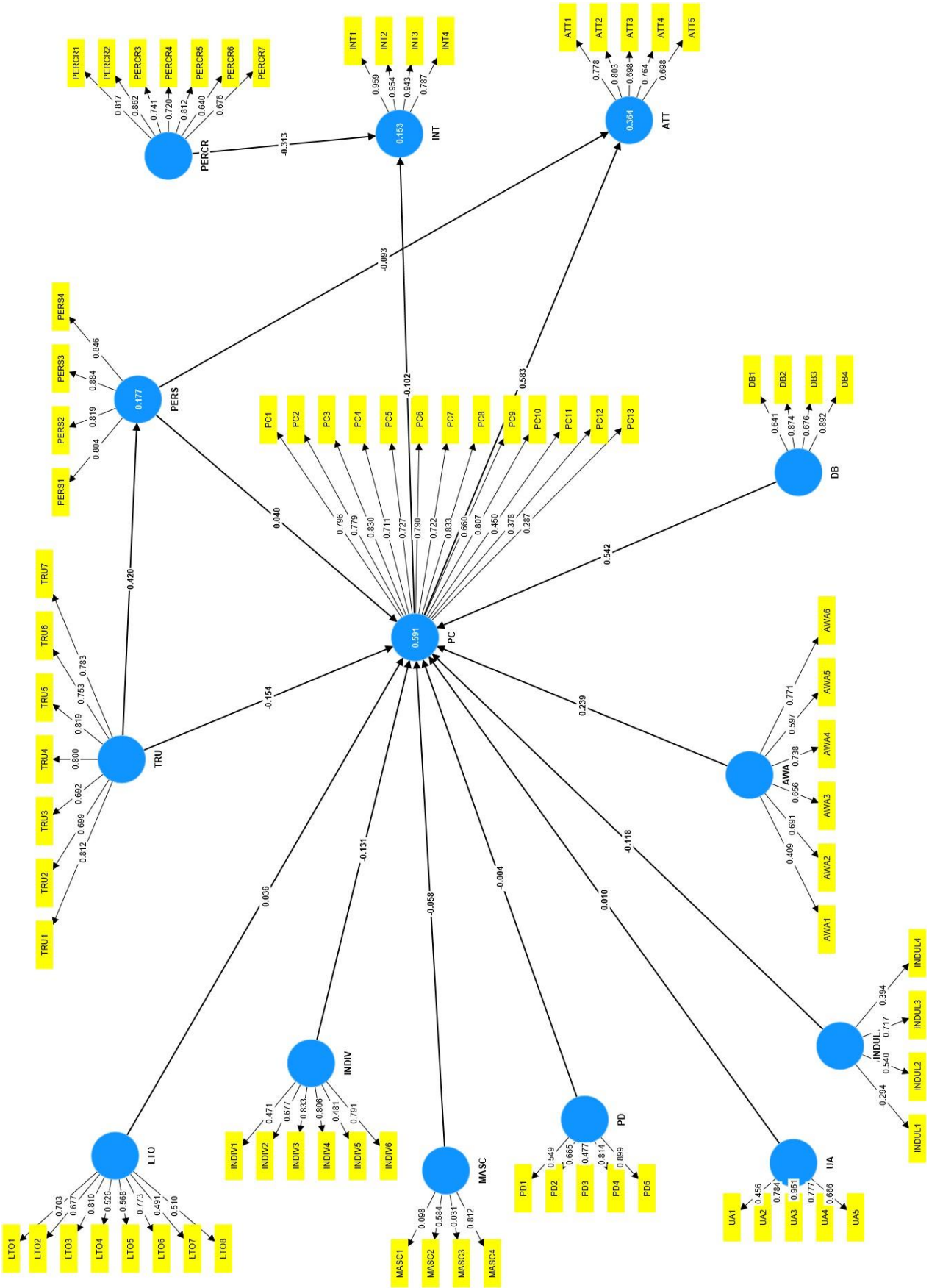
5.3.5 Model fit

As mentioned in Chapter 4, several indices can be observed when using the Components-based approach through Smart-PLS. It has been recommended for researchers using Smart-PLS to use caution in their observation of the goodness model, including the usage of indices such as SRMR and the NFI (Henseler, Dijkstra, Sarstedt, Ringle, Diamantopoulos, Straub, Ketchen, Hair, Hult and Calantone, 2014). However, for the purposes of this research study, these will be presented and explored, as they do somewhat reflect the divergence of the covariance models (Sarstedt, Ringle and Hair, 2021). These are reflected as follows in Table 30.

Table 30. Model fit indices Component-based approach

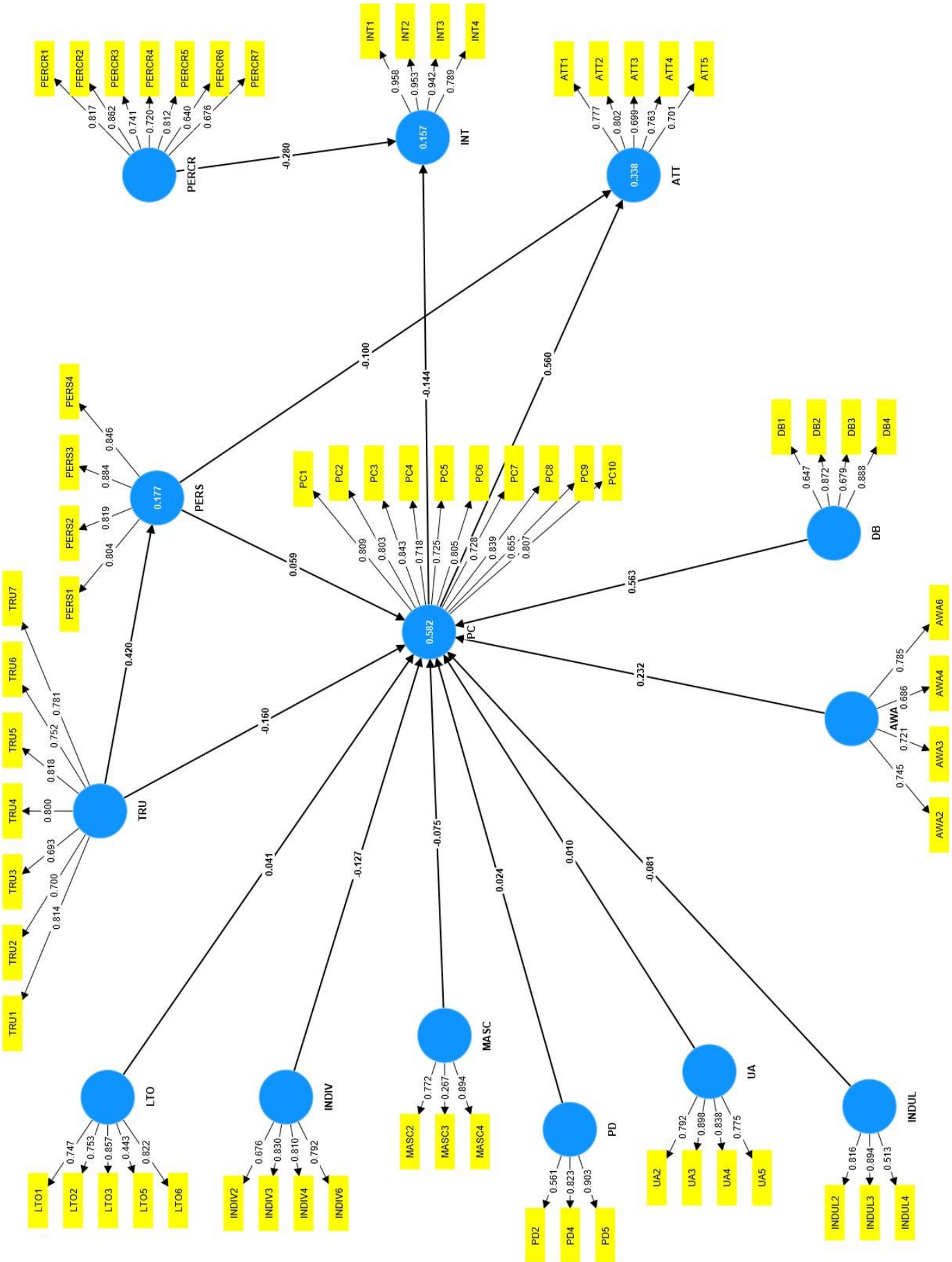
Components-based Fit Index	Results	Threshold
Standardized Root Mean Square Residual (SRMR)	0.082	< 0.1 (or < 0.08)
Normed Fit Index (NFI)	0.603	> 0.9

Figure 14. Original Model (researchers own design)



Therefore, observing these values presents indices above their required threshold, indicating the confirmation of satisfactory model fit within the study. Furthermore, in the analysis of the study's model, an investigation into the factor loadings can be observed and items below 0,5 can be removed. However, in the Convergent validity analysis and in making improvements to the AVE, these lower factor loadings have subsequently been removed, apart from MASC3, due to ensuring an adequate reliability is achieved. The original model versus the adjusted model is presented graphically below in Figure 14 and 15, for a visual comparison on the adjustments that were made to the measurement model.

Figure 15. Adjusted Model (researchers own design)



Structural Model and Hypotheses Testing

Within SEM that uses Smart-PLS, the predictive capabilities of the model can be assessed for fitness, through the different R-square, Q- square and F-square analyses.

5.4.1 Predictive capabilities and relevance

5.4.1.1 R-square

The R-square for the different dependent variables in the study can be observed as part of the explanatory power investigation for the model (Omotosho, 2016). These dependent variables being: Attitude, Intention, Personalisation and Privacy Concern. The results for this analysis can be found in table 31 below:

Table 31. R-square values

	R-square	R-square adjusted
ATT	0.338	0.333
INT	0.157	0.151
PC	0.582	0.566
PERS	0.177	0.174

ATT = Attitude; INT = Intention; PC = Privacy Concens; PERS = Personalisation

Here, it can be seen that Privacy Concern presents a moderate strength for the explanatory power for the model, with a value above 0,5 (Hair et al., 2013). Moreover, the other dependent variables R-squared values are weak.

5.4.1.2 Q- square

The Q- square analysis provides for the predictive relevance for the model used in the study (Bayaga, 2021). Here, the dependent variables are observed to be above the threshold of 0. The results for this are shown in table 32 below. As all values are above 0, predictive relevance is confirmed for the study.

Table 32. Q- square predictive values

	Q^2 predict
ATT	0.224
INT	0.129
PC	0.524
PERS	0.166

ATT = Attitude; INT = Intention; PC = Privacy Concens; PERS = Personalisation

These predictive values can be further analysed through the predictive validity for each construct item, to assess the symmetry of the error graphs and predictive validity of the values.

Predictive validity

When observing the predictive validity of the study, the RMSE and MAE can be observed, depending on the normal distribution of the errors within the study. Furthermore, observing the PLS-SEM error histograms for the study, there are several instances of longer left tails, indicating skews in the different item normal distributions (Khoso, Darazi, Mahesar, Memon and Nawaz, 2022). Therefore, for the predictive validity analysis, the MAE values will be observed, as opposed to the RMSE values. The predictive summary for this analysis can be found in Appendix F. Here, the comparison between PLS-SEM_MAE and LM_MAE presents majority lower values, indicating low prediction errors for the study. The Q- square values for each of these items were also reflected as above the threshold of 0, to be considered good. Therefore, the model for the study has medium predictive power.

5.4.1.3 F-square

Observing the F-square of the different constructs in the study, provides for further analysis on the explanatory power of these constructs within the model, through observing the impact on the model if these constructs were removed (Cohen, 1988). The results for this are presented in Appendix F. From these results, it can be seen that if Privacy Calculus was removed, it would largely affect Data Breach (F-square = 0,576). Moreover, if Attitude was removed, it would also largely affect Privacy Concerns (F-square = 0,465). Lastly, if Personalisation was removed, Trust would be affected on a small scale (F-square = 0,214).

5.4.2 Hypothesis Results (Direct Relationships)

The results for the direct relationships between the latent variables are shown in table 33 below. Here, the results in correspondence with the proposed hypothesis for the study can be observed to be Accepted or Rejected. These are further discussed below.

Table 33. Hypothesis testing and results

	Path Coefficients (β)	Standard deviation	T statistics	P-values	Hypothesis
AWA -> PC	0.212	0.052	4.081	0.000	H3 – Accepted
Culture -> PC	-0.127	0.063	2.027	0.021	H2 – Rejected
DB -> PC	0.549	0.047	11.568	0.000	H10 – Accepted
PC -> ATT	0.560	0.041	13.714	0.000	H5 – Accepted
PC -> INT	-0.143	0.070	2.057	0.020	H4 – Accepted
PERCR -> INT	-0.280	0.078	3.585	0.000	H9 – Accepted
PERS -> ATT	-0.099	0.054	1.853	0.032	H8 – Rejected
PERS -> PC	0.063	0.063	0.990	0.161	H7 – Rejected
TRU -> PC	-0.178	0.057	3.134	0.001	H1 – Accepted
TRU -> PERS	0.420	0.057	7.397	0.000	H6 - Accepted

AWA = Awareness; PC = Privacy Concerns; DB = Data Breach; ATT = Attitude; INT = Intention; PERCR = Perceived Risk; PERS = Personalisation; TRU = Trust

Each of the hypothesis can be observed, in correlation with the results presented in table 33 above.

5.4.2.1 Relationship between Trust and Privacy Concern (H1)

The results from table 33 reflect a significant relationship between Trust and Privacy concerns (β = -0.178; p-value = 0,001). Furthermore, the nature of this relationship was also reflected as negative. Therefore, H1 is supported, where H1 was as follows:

- H1: Trust has a negative relationship with Privacy Concerns for South African Loyalty Programs.

5.4.2.2 Relationship between Culture and Privacy Concern (H2)

Observing the results for the relationship between Culture and Privacy Concerns, reflects a significant negative relationship between the constructs (β = -0.127; p-value = 0.021). This is based on the HOC value being measured for the Culture construct, of which investigations into the individual indices to measure the high/ low relation can also be conducted in the event of a supported relationship. Although the relationship here was reflected as significant, the hypothesis is still rejected due to the nature of the results being negative instead of positive, where H2 was as follows:

- H2: Culture has a positive relationship with Privacy concern for South African grocer Loyalty Programs, with a high Individualism, Uncertainty Avoidance, Power Distance, Long-term orientation and a low Masculinity and Indulgence

5.4.2.3 Relationship between Awareness and Privacy Concern (H3)

The results for the relationship between Awareness and Privacy Concern, reflected a positive and significant relationship, as shown in Table 33 above (β = 0,212; p-value = 0,000). Therefore, H3 is supported, where there H3 was as follows:

- H3: Privacy awareness has a positive relationship with privacy concern for South African grocer Loyalty Programs

5.4.2.4 Relationship between Privacy Concern and Intention to use (H4)

The results from table 33 above reflect a significant and negative relationship between Privacy Concern and Intention to use (β = -0,143; p-value = 0,020). Therefore, H4 is supported, based on the circumstance that H4 was as follows:

- H4: Privacy concerns has a negative relationship with the intention to use Loyalty Programs for South African grocery retailers

5.4.2.5 Relationship between Privacy Concern and Attitude (H5)

Observing the results for the relationship between Privacy Concerns and Attitude, shows a significant and positive relationship between the constructs (β = 0,560; p-value = 0.000). However, H5 proposed a negative relationship between the constructs, therefore, H5 is not supported.

- H5: Privacy concern has a negative relationship with Privacy attitude

5.4.2.6 Relationship between construct Trust and Personalisation (H6)

The relationship between Trust and personalisation was reflected as significant and positive (β = 0,420; p-value = 0.000). Moreover, H6 proposed a positive relationship between the constructs, therefore, H6 is supported.

- H6: Trust has a positive relationship with Personalisation

5.4.2.7 Relationship between construct Personalisation and Privacy Concern (H7)

As shown in table 33 above, the relationship between Personalisation and Privacy Concerns construct was found to be insignificant (β = 0,063; p-value = 0.161). Therefore, H7 is rejected, where H7 was as follows:

- H7: Personalisation has a positive influence on privacy concerns

5.4.2.8 Relationship between construct Personalisation and Attitude (H8)

Observing table 33 above, the significance of the relationship between Personalisation and Attitude are reflected (β = -0,099; p-value = 0,032). However, this relationship is also negative and, therefore, H8 is not supported as a positive relationship was hypothesised. H8 was as follows:

- H8: Personalisation has a positive influence on privacy attitude

5.4.2.9 Relationship between construct Perceived Risk and Intention to use (H9)

The relationship between Perceived Risk and Intention to use was found to be significant and negative, as shown in table 33 above (β = -0,280; p-value = 0.000). H9, furthermore, proposed a negative relationship, as shown below. Therefore, H9 is supported.

- H9: Perceived risk has a negative relationship with intention to use Loyalty Programs.

5.4.2.10 Relationship between construct Data Breach and Privacy Concern (H10)

Lastly, the relationship between Data Breach and Privacy concern can be observed through the presented results in table 33 above. Here, a significant positive relationship was found between the constructs (β = 0,549; p-value = 0,000). Therefore, H10 is supported, as H10 is shown as follows:

- H10: Perceived vulnerability has a positive relationship with Privacy Concern

5.4.3 Mediation analysis

Alongside the investigation into the direct effects and hypothesised relationships between the constructs, observations into indirect effects that may or may not have been considered in the study can also be observed. Alongside the other Structural modelling analyses, the mediation was conducted in Smart-PLS and made use of bootstrapping methods to produce results, with a bootstrapping method of 5000 samples, a 0,05-significance level and a bias-corrected and accelerated (BCa) bootstrap; as proposed by (Steffener, 2021). These reflect the mediating relationships within the model, where one latent variable will mediate the relationship between two other constructs (Sarstedt et al., 2020). These are presented in table 34 below, of which only the significant mediators are shown.

Table 34. Indirect Model Effects

	Path coefficient	Standard deviation	T statistics	P values
AWA -> PC -> INT	-0.033	0.018	1.877	0.030
INDIV -> PC -> INT	0.018	0.011	1.734	0.042

TRU -> PC -> ATT	-0.089	0.032	2.807	0.003
DB -> PC -> ATT	0.315	0.037	8.456	0.000
INDIV -> PC -> ATT	-0.071	0.024	3.019	0.001
AWA -> PC -> ATT	0.130	0.032	4.064	0.000
TRU -> PERS > ATT	-0.042	0.022	1.929	0.027
DB -> PC -> INT	-0.081	0.039	2.081	0.019

AWA = Awareness; PC = Privacy Concerns; DB = Data Breach; ATT = Attitude; INT = Intention; PERS = Personalisation; TRU = Trust; INDIV = Individualism

Observing table 34 above, it can be seen that Privacy Concern and Personalisation arise as potential mediators in the study, with significant p-values below 0,05. Furthermore, this mediation can be divided into competitive and complementary mediation based on the positive/ negative relationship found for the path coefficient (β). These are summarised in table 35 below:

Table 35. Competitive and Complementary mediation relationships

Competitive mediation	Complementary mediation
AWA -> PC -> INT	INDIV -> PC -> INT
TRU -> PC -> ATT	DB -> PC -> ATT
INDIV -> PC -> ATT	AWA -> PC -> ATT
TRU -> PERS -> ATT	
DB -> PC -> INT	

AWA = Awareness; PC = Privacy Concerns; DB = Data Breach; ATT = Attitude; INT = Intention; PERS = Personalisation; TRU = Trust; INDIV = Individualism

Nevertheless, this study doesn't explicitly explore any mediating hypothesis or direct relationships that would provide for a full mediation analysis. In research this is done through the comparison of direct relationships and indirect relationships where mediation was found (Hashmi, Amirah, Yusof and Zaliha, 2021). However, the significance of these mediating effects, presents evidence of such an occurrence that could be explored and/or supported.

Conclusion

This Chapter presented the results for the analysis conducted on the data collected for the study, from a total of 277 responses. Here, the demographic information was analysed from the study's sample prior to the central tendency measures analysis for each of the model constructs. Thereafter, a confirmatory factor analysis (CFA) was conducted, where the reliability and validity test were conducted, alongside a test for normality, multicollinearity, model fit and the development and validation of the Higher order construct. Once the measurement model was analysed and adjusted where necessary, the structural model was presented and analysed. This was done through exploring the predictive capability and validity of the model; namely, the R-square, Q-square and F-square values; as well as hypothesis testing for the direct relationships in the model. Finally, potentially mediation relationships were presented through the indirect relationships found in the study.

Chapter 6 – Discussions of Findings

6.1 Introduction

This final Chapter presents and discusses the findings of the study, based on the results presented in Chapter 5, as well as the overarching objectives of the study. Moreover, how these findings reflect with that of existing literature is also reflected and discussed. Here, the researcher assesses whether the objectives of the study and the research problems have been appropriately addressed; to delve into the meaning and relevance of the research results.

6.2 Objective Achievement and Hypothesis Discussion

6.2.1 Recap of the empirical objectives

The objectives for this study can be revisited based on the results presented in Chapter 5; to assess if they were achieved. These can be discussed relative to the hypothesised model for the study, as well as that of surrounding literature.

6.2.1.1 Objective 1: To assess the influence of trust, culture and privacy awareness as key antecedents for privacy concerns in South African retail Loyalty programs

With regards to the assessment of the influence of the different antecedents on Privacy Concerns, the data indicated an influence of only all 3 constructs, with each of them being significant.

Trust

The data found regarding the relationship between Trust and Privacy concerns, presented a significant negative result, in line with the hypothesis for the study. This, therefore, means that trust would influence privacy concerns negatively, where the trust that a South African consumer has towards the retail Loyalty Program, then decreases this concern. Therefore, this objective was achieved as the influence of each of the key antecedents was assessed in the study.

Observing existing literature on the topic presents similar findings. In relation to the findings for Trust, extant research has reflected a similar inverse relationship between Trust and Privacy Concern; in which the trust that consumers have towards a business then reduces this concern (Ayaburi and Treku, 2020; Baruh, Secinti and Cemalcilar 2017; Guo, Zhang and Sun, 2016; Gerber, Gerber and Volkamer, 2020; Ioannou, Tussyadiah and Lu, 2020; Okazaki, Eisend, Plangger, de Ruyter and Grewal, 2020; Shomakers, Lidynia and Ziefle, 2020). Moreover, these findings are in line with that of research that used a similar adapted Privacy Calculus Model, where trust was then found to decrease online privacy concerns (Ioannou, Tussyadiah and Lu, 2020; Lutz, Hoffmann, Bucher and Fieseler, 2018). The significance and relationship of the construct findings also aligns with Trust being an underpinning contributor to these concerns, which then effects the CRM (Dhagarra, Goswami and Kumar, 2020). Haug, Rössler and Gewald, (2020) presented a similar argument through their qualitative analysis, where respondents mentioned how they could not trust the company and, therefore, their privacy concern increased. However, looking at the literature, the examination of the direct relationship between trust and privacy concerns in Loyalty Programs specifically is somewhat scarce. Therefore, the findings of this study can add to the existing literature exploring the constructs in different contexts, to confirm the relationship within retail Loyalty Programs and amongst South African consumers.

Culture

In terms of the hypothesised relationships, the Culture and Privacy Concern hypothesis was rejected, as a negative relationship was found. However, for the purpose of assessment, this negative influence can still be acknowledged. The study reflected that South African Culture had a significant negative impact on Privacy Concerns, meaning that the beliefs and contextual perspectives of South African consumers don't stimulate this concern. These findings are different from those of existing literature, where Culture was largely found to demonstrate a positive influence on Privacy Concerns (D'Acunto, Volo and Filieri, 2021; Ioannou, Tussyadiah and Miller, 2020; Tussyadiah, Li, and Miller, 2019; Li, and Borah, 2018; Zhong, Sun, Zhou, and Xie, 2022).

The difference this study presents could be due to the different cultural context that South Africa provides, as well as the different micro and macro environmental factors that set South Africa apart from other countries (Cockcroft and Rekker, 2016). Moreover, Gielens and

Gijsbrechts, (2018) presented the observation that consumers in more developed environments may react differently to privacy and have differing concerns about their data usage. Furthermore, Bellman, Johnson, Kobrin and Lohse, (2004) attested that this could be due to differences in Experience and Cultural Values that the country holds. However, this study also reflected that South African consumers are Aware of their data privacy, and that some have been exposed to the negatives of data usage through Data Breach. Therefore, the focus on the difference due to Experience would need to be observed further to make appropriate deductions. Moreover, through Hofstede's dimensions, culture is made up of the beliefs that then guide consumer perspectives and behaviours (Hofstede and Bond, 1984). This knowledge and the results of the study, therefore, reflect that the South African culture, as explored through these dimensions, is such that it does not encourage privacy concerns for data-usage.

Privacy Awareness

In the investigation of Awareness and Privacy concerns, H3 was found to be positive and significant (with a significance of 0,000). This is indicative of consumers being aware of how their data is used and the privacy of such data and, therefore, having increased concern about its usage. Observing the trend for consumers to 'Agree' with the study's Awareness statements, further confirms this Awareness towards data usage in Loyalty Programs.

Existing literature also exploring Privacy Awareness and Privacy Concern, has presented a similar positive relationship (De Wulf, Odekerken-Schröder, de Canniére, and Van Oppen, 2013; Ioannou, Tussyadiah and Lu, 2020; Knoesen 2017). Moreover, as majority of the sample was found to be female, this awareness present parallels with that of Yartey Ajayi, Omojola, Amodu, and Ndubueze (2020), which found female consumers to be more aware of how their data was used. However, in this case, the female consumers were also found to trust their data being used, and so had decreased concern. This study, therefore, adds a different finding in this regard, as a positive relationship was found. Moreover, the study adds to these existing study findings through an investigation from a South African Loyalty Program perspective. Furthermore, the findings of this study provide reassurance that South African consumers are not naïve about their data-usage; however, this increase in privacy concern still reflects the need for policies and practices to be incorporated to soothe these concerns.

6.2.1.2 Objective 2: To investigate the relationship between Privacy Concerns and Privacy Attitude for South African consumers in South African retail Loyalty programs

Within the study, the relationship between Privacy Concerns and Privacy Attitude was investigated empirically. As shown in Objective 1, exploring Attitude and Privacy Concerns allowed for an understanding of consumer perspectives or how South African consumers feel. Moreover, the nature of the relationship can also be explored.

Privacy Attitude

Here, a positive hypothesised relationship was predicted for Attitude and Privacy Concerns, which was later supported by the data results (with a significance of 0,000). This is indicative of South African consumers Attitudes leading to Privacy Concern, e.g., the attitude towards data usage increasing the concern that the consumer then has towards it. Furthermore, the relationship between Privacy Concerns and Attitude was reflected to be that of a mediation, in which Privacy Concerns mediated the relationship between both Trust and Awareness, as shown previously in table 34. Therefore, the relationship between Privacy Concern and Attitude was investigated, achieving the objective. This also aligns with the trend for the responses to the attitude statements to be 'Important', as the South African consumers were shown to value their privacy.

Furthermore, after exploring existing literature on the topic, the findings in this study are consistent with other studies finding a positive and significant relationship between the constructs (Gerber, Gerber and Volkamer, 2020; Kokolakis, 2017, Mahrous, 2011). Moreover, these findings do not challenge the theoretical underpinnings of the study, but rather acknowledge and add to the privacy paradox and privacy calculus theory. This is done through the present-day contextual application of South African Loyalty Programs, as well as the reflected significance and direction of the relationships. Furthermore, these findings and exploration of existing studies reflect that no changes occur when observing the different research settings.

6.2.1.3 Objective 3: To investigate the relationship between Privacy Concerns and the intention to participate in South African retail Loyalty programs

In terms of Objective 3, the findings for this study reflected that the relationship between concerns and intention does exist, and that South African consumers do not intend to use Loyalty Programs due to their Privacy Concerns.

Intention to use Loyalty Programs

Observing the results for Hypothesis 4 reflects the existence of the relationship between Privacy Concerns and Intention to use Loyalty Programs being confirmed as the significant relationship was evident. Furthermore, the relationship was found to be negative, indicating that South African consumers will not plan on engaging in a Loyalty Program, when concerns exist. Therefore, the objective was achieved as the relationship between Privacy Concerns and Intention to use was explored, as well as the nature of such a relationship. Furthermore, the data revealed a potential mediated relationship between Awareness and Intention based on these concerns; where South Africans privacy awareness led to their privacy concerns and, subsequently, their intention not to use Loyalty Programs. This was also evident with Privacy Concerns facilitating the relationship between Perceived Vulnerability (Data Breach) and Intention; where South African consumers, being wary of providing their data due to privacy concerns, would not intend to use Loyalty Programs. Therefore, expanding on the nature of the relationship, and ultimately the objective, with added findings.

Looking at existing literature exploring the relationship between Intention to use and Privacy Concerns, presents similarities in line with the findings, where a negative relationship was also found (Klaver, Van de Klundert and Askari, 2021; Mahrous, 2011). The prediction of Privacy Concerns for this intention was also similarly reflected in existing literature (Dhagarra, Goswami. and Kumar, 2020; Hassandoust, Akhlaghpour and Johnston, 2021; Li, 2014; Cho, Ko, and Lee, 2018). These were, however, largely in the mobile industry. Therefore, this study presents additions to the discovery of the privacy concerns and Intention to use for South African Loyalty Programs. This study also adds to the theoretical knowledge of the TPB and PCT integration, through the construct relationships being shown to be significant and in line with previous studies.

6.2.1.4 Objective 4: To investigate the relationship between Perceived Risk and Intention to participate in South African retail Loyalty Programs

The findings for the current study reveal insight into the relationship between Perceived Risk and Intention, through the empirical investigation of hypothesis H9. The results for this reflected a negative and significant relationship (with a significance of 0,000), therefore, supporting the hypothesis.

Perceived Risk

The data presented in the study suggests that the uncertainty and risk that South Africans feel through data usage can then result in them not intending to use a retail Loyalty program. Moreover, insight into the decision-making process for South African consumers is provided here, of which a perceived risk was predicted. This is consistent with observations in Eksteen and Humbani, (2021), that reflect that consumers feel that their privacy is not being adequately protected. Therefore, this objective is achieved.

Moreover, observing extant literature on the topic provides for similarities in the literature, where perceived risk influences subsequent behavioural intention or the intention to use, either directly or as a mediator (Bashir, Anwar, Awan, Qureshi and Memon, 2018; Han and Kim, 2017; Qalati, Vela, Li, Dakhan, Hong Thuy and Merani, 2021). This is also in line with research by Cho, Ko and Lee (2018) and Lee and Chen (2022), that explored the critical role that this risk holds in intention. The contextualisation of these findings from a South African perspective, therefore, reflects that South African consumers hold perceived risks towards their data usage, to which they then have decreased intention to engage with Loyalty Programs.

6.2.1.5 Objective 5: To investigate the relationship between Personalisation on one hand and Trust, Privacy Attitude and Privacy Concerns on the other hand

This objective focused on the role of Personalisation in the study, through the investigation of the divided relationships (Trust, Privacy Attitude and Privacy Concerns).

Trust

In terms of Trust and Personalisation, the results were found to be statistically significant and positive (with a significance of 0,000), in line with the hypothesis and, therefore, accepted. This shows that the Trust a South African consumer may have in a Loyalty Program will be

positively affected by the Personalisation offered to them, i.e., if the Loyalty program makes use of personalised recommendations or approaches to the consumer, they will be expected to trust them.

These findings are in line with previous research on the topic that noted trust as having an influence on Personalisation (Ameen, Hosany and Paul, 2022; Bleier and Eisenbeiss, 2015; Wu, Khan, Chien and Wen, 2022). Zhang, Jun and Palacios, (2023) also observed the constructs, of which a partial mediating role was found between trust and personalisation in Loyalty Programs. This, therefore, grounds the findings of this study. Moreover, as the study was conducted in South Africa, these findings present contextual consistency across literature, with respect to the relationship between Trust and Personalisation.

Privacy Attitude

A negative association was hypothesised between Privacy Attitude and Personalisation through H8; where the results were approved after being found to be statistically significant (with a significance of 0,032). This demonstrates how a South African consumer's attitude towards privacy would be negatively impacted by the personalisation provided to them. This is based on the understanding that personalisation can provide feelings of ‘invasiveness’ for some consumers, in which feelings of manipulation and reactance can occur (Martin and Murphy, 2017).

Observing the literature on the topic varies, as some studies will reflect a negative relationship between personalisation and attitude (Kozyreva, Lorenz-Spreen, Hertwig, Lewandowsky and Herzog, 2021; Morimoto, 2022). The findings of this study are also in contrast with the finding from Raepsaet, (2019) which acknowledged a positive relationship between attitude and personalisation amongst South African consumers. However, this was an investigation into Loyalty Programs in general, and not specifically observing privacy concerns. The privacy focus of this study provides for the attitude from a privacy perspective, reflecting a shift in opinions for South African consumers. Other existing studies that found a positive relationship include Zhu and Kanjanamekanant, (2021) and Gaber, Wright and Kooli, (2019). These differing results from the findings in this study, could also be attributed to South African consumers then not feeling the personalised effects beyond an invasion of privacy or not being satisfied with how their data is being used. This is consistent with the open-ended responses in

the study as certain participants mentioned a desire for improved feedback and transparency from the data usage.

Privacy Concerns

Finally, for the investigation into Privacy Concerns and Personalisation, a positive relationship was hypothesised with H7. The data for this presented an interesting positive but insignificant relationship (with a significance level of 0,161); meaning that personalisation didn't have an impact on privacy concerns for South African consumers. Although this insignificance was noted, the relationship between the constructs was still investigated. Therefore, the objective was achieved. This insignificance, however, represents the lack of bearing that Personalisation has on Privacy Concerns for South African Loyalty Programs. Furthermore, the results of this study could then challenge the integration of the CRM and PCT models through the use of Personalisation. A study by Morimoto, (2022) similarly found Personalisation to not be a mediator in the exploration of Privacy Concerns and Information control. However, observing other findings in the literature reflects the existence of the relationship, where personalisation then leads to these concerns (Ameen, Hosany and Paul, 2021; Martin and Murphy, 2017). Therefore, providing some justification for the model through personalisation, but not in the context of South African Loyalty Programs.

6.2.1.6 Objective 6: To investigate whether the Privacy Paradox exists within South African consumers, based on the found relationship between Privacy Concerns and their intention to participate in Loyalty Programs.

Based on the data and found relationships within the study, the Privacy Paradox can be explored to exist through exploring the existence of the privacy concerns, in correlation with the intention to use Loyalty Programs. Here, a significant negative relationship was found for H4, between Privacy Concerns and Intention to use.

Privacy Paradox

This, therefore, shows the Privacy Paradox not to exist in South African Loyalty Programs, as South African consumers are indicating that they would not intend to use a Loyalty Program due to these Privacy Concerns. In the event that these concerns existed and consumers chose to still engage with the program, a paradoxical nature exists as consumers attitudes don't align with their behaviour. Although this presents the Privacy Paradox as not existing, the

investigation into the concept was still explored through the hypothesised relationships in the study. Therefore, the objective is achieved.

This paradox has interestingly been explored to exist within literature in the context of Loyalty Programs and retail (Acquisti, Brandimarte and Loewenstein, 2020; Bandara, Fernando and Akter, 2020; Fox, 2020; Liyanaarachchi, 2021; Zhu, Wu, Huang, Zheng, Young Yan and Yuan, 2021). The findings of this study could provide different results due to the focus being on South African consumers. Furthermore, the results reflect consistency in how South African consumers behave, based on their perspectives and respective privacy concerns.

6.3 Sample characteristics and observations

As shown in Chapter 5, the profile for most participants in the study consisted of females between the ages of 25 and 34, with 18-24 being the second highest. Observing this majority demographic profile, the privacy concerns found in the study align with those of previous literature, where women were found to tend to show higher proportions of privacy concerns (Kokolakis, 2017). These demographics further present interesting findings for this study, reflecting the nature of participating younger South African consumers' to hold some privacy concerns. This might be indicative of the knowledge and awareness that a younger consumer may have towards their data usage, due to their experience and increased access (Vogels, 2019). This is consistent with the findings for H3 on the positive relationship that Awareness has with Privacy Concern. Although the majority of the respondents were on the younger side (18-34) the noticeable percentage of respondents up to the age of 64 indicates a rounded consumer base that was observed within the study. An age-segmented study could provide further benefit for understanding privacy concern, whether they differ and why that may be.

Conclusion

Therefore, the findings for the study are further presented and discussed in correlation with the objectives of the study and findings in existing literature. Furthermore, the supporting arguments are also shown to hold within the adapted privacy calculus model that was utilised in this study, alongside the TPB and CRM.

Chapter 7: Conclusions and Recommendation

7.1 Introduction

This chapter presents the conclusions and recommendations of the study. These conclusions are based on the aim of the study, the research objectives, and the results found in Chapters 5 and 6. Furthermore, the implications based on these findings are discussed, as are the recommendations for marketing practitioners and retailers alike. Thereafter, the limitations of the study are presented, along with recommendations for future studies and the study's different theoretical, contextual, empirical, and managerial, or practical, contributions.

7.2 Overview of the study and Key Findings

Based on Chapter 6, each of the objectives within the study were observed to be achieved through the investigation into the different theoretical hypotheses and findings in existing literature. Alongside this, the main aim of the study can be revisited.

The aim of this study was to explore the variables surrounding privacy concerns and data usage in Loyalty programs, to better understand South African consumers perceptions of data privacy and, thereafter, their intention to engage with the program. From this, the study's theoretical model and foundation were formed, evaluated, and studied to create key findings. Here, the existence of Privacy Concerns and their subsequent decreasing effect on Intention to use South African Loyalty Programs were found. The privacy paradox was also then reflected not to exist within the study. Finally, as a way of managing these concerns, highlights of the Awareness, Trust and Data Breach constructs were shown. Moreover, Personalisation was highlighted as a construct that has no bearing on Privacy Concerns. More specifically, the summarised findings for the results are presented as follows:

The study found Awareness and Data Breach to positively influence Privacy Concerns; while Trust was found to negatively influence Privacy Concerns. Moreover, Perceived Risk and Privacy Concerns were found to have a negative relationship with Intention to use Loyalty Programs. In terms of Attitude, Privacy Concerns were found to have a positive relationship, whilst Personalisation was found to have a negative relationship. Trust was also found to have a positive influence on Personalisation, and Culture was found to have a negative relationship with Privacy Concerns. Within the study, Personalisation was also found to not have a significant relationship with Privacy Concerns. Therefore, the study was able to provide a reflection on the South African consumers perspective towards privacy concerns.

Moreover, in the investigation of the key findings in the study, the objectives are reflected to have all been achieved, showing that the intended outcome for the study was completed. Moreover, the acknowledgement of the triangulated theoretical model has been shown through these objectives and hypothesised results, providing value for the model and its understanding, as incorporating the CRM theory through constructs such as trust alongside the PCT elements is shown. Moreover, utilising these theories with the TPB constructs, such as attitude and intention, has provided for South African consumer perspectives to be successfully explored. Therefore, based on the findings and collective achievement of research objectives, it can be confirmed that the main aim of the study was achieved. Here, the variables surrounding Privacy Concerns and data usage were extensively investigated, and an understanding of consumer perspective through data privacy and subsequent intention to engage in Loyalty Programs, was provided. Moreover, the research question for the study can also be revisited below:

- Do South African consumers show privacy concerns for their data-usage in South African retail loyalty programs?

Based on the results of the study, it can be concluded that South African consumers do show privacy concerns about their data-usage in South African retail Loyalty programs. This, specifically, can be observed through the statistical relationships observed in the study's model. Here, privacy concerns for data usage in Loyalty Programs were shown and increased through South African consumers awareness of this data usage and their perceived vulnerability to this data-usage. Moreover, Trust was shown to decrease this concern, and personalisation was shown as a way to not create this concern. Therefore, the study was able to provide a reflection on the South African consumers perspective towards privacy concerns. Here, these concerns and their subsequent withdrawal of South African consumers intention to use Loyalty Programs were shown. Thereby concluding that the research question was achieved, alongside the already presented research objective. Furthermore, the study provides room for researchers, marketers, and retail Loyalty Programs to understand the importance of privacy concerns and the South African consumer perspective to their data-usage.

7.3 Recommendations

Within the study, several research findings can be further observed and investigated relative to recommendations for retailers and Loyalty Programs within South Africa.

7.3.1 Effect of Trust on Privacy Concerns

The relationship between Trust and Privacy Concerns was found to be significant but negative. Therefore, Loyalty Programs should ensure that they establish a strong and transparent relationship with customers to build trust and reduce potential concerns. Establishing clear two-way communication with consumers can also assist with this, as customer loyalty is built and the relationship is moved forward. Observing the individual open-ended responses from participants emphasises this as well, with several individuals wishing they could receive feedback from Loyalty Programs and have a clear, transparent understanding of how their data is being used. Alongside transparency in privacy policies, a brand can also engage in a privacy campaign to address concerns and be up-front with consumers about how their data is used and why they can trust the company. For example, Apple was successful in this regard as they released an advertisement titled: 'Data Auction' as part of their data privacy campaign in 2022; where Ellie's data is being auctioned off. Here, the brand addressed existing concerns around data usage and how Ellie, the main character, is in control of this and can protect her data since she has an iPhone.

7.3.2 Effect of Culture on Privacy Concerns

The relationship between Culture and Privacy Concerns was also found to be significant but negative. Therefore, when assessing methods to combat specifically Privacy Concerns, Loyalty Programs shouldn't focus on the Cultural aspects, e.g., targeting consumers with a Collectivist mindset or 'preference for tradition' as a Long-term Orientated outlook; or using the Masculinity theme of heroism in the brands approach to privacy. It is more likely that utilising other aspects, such as Trust, can be more effective. For example, emphasising the focus of trust as a keyword in campaigns, being vulnerable and sincere in the response to current and future privacy policies.

7.3.3 Effect of Awareness on Privacy Concerns

The relationship between Awareness and Privacy Concerns reflected a positive and significant relationship. Retailers should, therefore, ensure that they are implementing methods to reassure consumers of the policies and practices that they have in place to ensure the safety and privacy of their data. As South African consumers are reflected as being aware of how their data is used, tackling subject areas like third party usage clearly and head-on is important for retailers

to ensure that knowledgeable consumers feel safe and are whiling to participate. Of the responses, several participants made mention of experience with a data breach in the past, which may attribute to their awareness of the topic. Therefore, Loyalty Programs should ensure they provide information on not only what they are doing to prevent such circumstances but also what the consumer can do for data safety, such as two-factor authentication. Moreover, these retailers should re-evaluate their current policies and practices, to enhance their data-protection methods, i.e., allocate costs and resources to the security and protection of Loyalty Programs. Brands can do this through campaigns designed to inform consumers on how their data is used, e.g., in October 2022 Whatsapp made use of a 3D billboard to inform and educate consumers on how their privacy and security features were being updated.

7.3.4 Impact of Privacy Concerns on Intention to use Loyalty Programs

The relationship between Privacy Concerns and the intention to use Loyalty Programs was found to be significant and negative. This is indicative of South African consumers not intending to use a Loyalty Program, due to their privacy concern. Therefore, it is crucial for retailers to ensure that they take active measures to combat these privacy concerns. Retailers should reevaluate their data collection procedures to ensure their consumers are aware of how and when their data is being used, the storage of their data, whether the information they are currently collecting is necessary, and what they're doing to protect and store highly sensitive information. Moreover, ensuring that the proper practices are in place to maximise customer engagement while minimising their data risk provides an effective way to benefit both the customer and retailer. Furthermore, as the privacy paradox was not found within this study, retailers cannot rely on consumers engaging in a program even if they are concerned, and so active methods needed to ensure these concerns are reduced. Some practical ways in which brands can combat such concerns are as follows: conduct regular surveys with consumer to gauge the level of concern they may have and why this may be, to regularly update consumers on any changes to the brands privacy policies, to reiterate to consumers what the brand is doing to ensure the safety of consumers information, and to have an internal analysis to ensure that the appropriate privacy protection strategies are in place, etc. As mentioned earlier, the brand Apple was able to achieve this, through their in-depth advertisement titled, "Data Auction", on how they are addressing multiple current privacy issues while also reassuring the consumer. Additionally, Facebook has started 'rebuilding' how their advertisements work, to address concerns over privacy invasion and to ensure that they are moving towards a more privacy-

conscious future (Heath, 2021). This reflects the brand not only listening to concerns regarding privacy but also taking appropriate steps to combat them.

7.3.5 Effect of Privacy Concerns on Attitude

The relationship between Privacy Concerns and Attitude was significant and positive. Therefore, Loyalty Programs should ensure that they are mindful of the positive or negative feelings that these South African consumers will have towards Loyalty Programs that use their data. Furthermore, this knowledge provides an understanding of how South African consumers feel, which retailers should use to build on, for their targeted consumer understanding and focus. Understanding this consumer perspective and behaviour can then assist the retailer in making better decisions about their products and services. As mentioned, this can be achieved through reassurance and transparency on the privacy of the data collected. Additionally, brands can offer something in return for consumers that choose to provide their data, such as Loyalty discounts on their most purchased items or finding ways in which the data collected can simultaneously benefit the consumer, e.g., recommendations and latest offers. Moreover, taking into consideration that consumer attitudes may change, brands can integrate and opt-out privacy option that is simple, effective and communicated with agreement.

7.3.6 Influence of Personalisation, Trust and Attitude

Personalisation was found to have an insignificant relationship with Privacy Concerns. This indicates that personalisation doesn't have an impact on privacy concerns, and, therefore, Loyalty Programs don't need to use personalisation-focused combating methods to reduce this concern. Trust was found to have a positive and significant relationship with Personalisation. Therefore, retailers should ensure that when conducting Personalisation techniques, building trust with the consumer is considered and evaluated. This way, profiled experiences for customers can be developed while ensuring the trust they've built with the consumer isn't being eroded through overstepping and 'creepiness'. Moreover, this trust can then have a positive impact on the personalisation approach, e.g., consumers reacting to personalised rewards positively due to the brand trust that has been developed. Interestingly, the relationship between Personalisation and Privacy Attitude was found to be significant but negative. Loyalty Programs should, therefore, be cautious in their personalisation approaches, as it could then lead to negative attitudes from consumers. Furthermore, they should assess their personalisation techniques and strengthen the relationship with consumers through reassurance

of data privacy. Some consumers may be averse to receiving personalised recommendations randomly online; however, they prefer to receive them when working within a Loyalty Program app or discounting, for example. Therefore, these techniques and personalisation focuses should be assessed for best engagement and response from South African consumers. Although Netflix is one of the most famous brands making use of personalisation strategies, their privacy policy is lengthy and provides little reassurance on the safety of data provided (Netflix, 20230. However, the brand builds trust through their promise of 'movie enjoyment made easy' as well as through their marketing strategy that incorporates trusted influencers and active, friendly engagement on social media (Urrutia, 2023).

7.3.6 Effect of Data Breach on Privacy Concerns

The relationship between data breach and privacy concerns was found to be positive and accepted. Therefore, Loyalty Programs should ensure that they are taking the proper security measures to protect their consumer data. Moreover, as part of this assessment of their privacy and security techniques, retailers should then have transparency with consumers about these methods and what can be done to prevent a data breach. Furthermore, these retailers should reevaluate the consumer data requested to ensure that highly sensitive information that isn't necessary for the Loyalty Program is excluded and cyberattacks are less tempted. Ensuring that methods are in place to prevent data breaches, as well as combat any concerns that consumers have about this potential breach, will allow for customer ease in then engaging with the Loyalty Program. A practical example on how this can be done, is through the assembly of a breach response team, to not only inspect the information security on a regular basis but also examine competitors in the market and establish ways to protect the public image of the brand in the event of a breach.

7.3.7 Impact of Perceived Risk on Intention to use Loyalty Programs

Finally, the relationship between perceived risk and intention can also be observed. Here, a significant but negative relationship was observed, in which the perceived risk would then prevent consumers from engaging in the Loyalty Program. Here, retailers should practice transparency with consumers on the potential risk their data is facing when being provided. Alongside this, different techniques and practices should be put in place to counter these potential risks and ease consumer worries. Utilising external, trusted, and well-known data protection services may assist in this. Moreover, managing customer expectations for this risk

with the data provided is important. Retailers could also potentially offset this perceived risk with added benefits for the Loyalty program, to promote engagement. Some additional examples of how brands can establish transparency, such as through their websites include: pop-ups alerting consumers of whether their data is being used, if their data is actively safe (such as through a green tick or note) or have a chatbot feature that specifically asks if they have any concerns or are uncertain about the privacy of their data. This chatbot also provides for a light engaging way that consumers can spend a few minutes learning more about how the company uses their data in the Loyalty program and eliminate any risks they may have considered.

7.4 Contributions

7.4.1 Theoretical contributions

From the findings of the study, certain theoretical and academic contributions can be highlighted. First off, the survey helped shed light on South African customer behaviour by identifying any privacy concerns. Moreover, the study contributed to insight into the South African consumer behaviour, through any privacy concerns and identified that a privacy paradox does not exist within the South African context, providing theoretical value for the topic (Akpojivi, 2013; Le Roux, 2019). Additionally, the study provided theoretical contributions through a theoretical triangulation, adding knowledge within the topics of retail, loyalty programs and privacy concerns. Moreover, the study provided theoretical value through the theories used, as the use of the privacy calculus theory, TPB and CRM provide an explanation of individual consumer behaviour and perspectives towards privacy for data usage and loyalty programs, while also supporting the proposed hypotheses in the process. Furthermore, the theoretical value of the study was further emphasised through the proposed understanding of how these collective variables influence consumers' privacy concerns and their intention to use Loyalty Programs, based on the found relationships. Moreover, by exploring personalisation explicitly as a variable, this study contributed to the limited body of knowledge that measured personalisation and privacy concerns together. Existing research has also noted that additional research for consumers in a different cultural context is needed, which this study explored using Hofstede's model (Lavado-Nalvaiz, Lucia-Palacios, and Pérez-López, 2022; Ioannou, Tussyadiah and Lu, 2020; Volchek, Yu, Neuhofer, Egger, and Rainoldi, 2021). Finally, the study provided added knowledge on privacy concerns within

South African Loyalty Programs, allowing the study to contribute to already existing and future studies on the topic.

7.4.2 Empirical contributions

The empirical contributions to the study are noted predominantly through the expansion of South African literature. Here, contextualisation and knowledge on privacy concerns within South Africa and from the South African consumer perspective were added, contributing to research that is somewhat limited (Le Roux, 2019). Moreover, the multifaceted model using the PCT, TPB and CRM contributes to knowledge using the theories together, as well as how the different proposed relationships are developed within the model, and adds to what is already known within the topic of privacy concerns (Bandara, Fernando and Akter, 2020; Belarbi, et al., 2016). Moreover, as few studies have explored South African Loyalty Programs through a consumer perspective focus, this research provides a contribution to the growing knowledge on the topic in existing literature (Bandara, Fernando and Akter 2020; Bevan-Dye, and Akpojivi, 2016; Shomakers, Lidynia and Ziefle, 2020; Vu, Law, and Li, 2018). Moreover, the study contributes to knowledge on the privacy paradox, which businesses and scholars can then see is not found to exist within the investigation of South African consumers' privacy concerns and corresponding behaviour; contributing to limited studies on the topic (Bandara, Fernando and Akter, 2020). This study also provided clarity on what then drives consumers in their decision-making, of which privacy concerns were found to push these South African consumers to not intend to use Loyalty Programs.

7.4.3 Contextual contributions

In terms of the field of research and context of the study, several contextual contributions can be observed. This study provided contributions towards the addition of knowledge within the field of Marketing, and specifically, Marketing communication and Consumer behaviour through an investigation into Privacy Concerns, Loyalty Programs, and Intention. This study also contributed in this regard, as investigating Loyalty Programs and data usage has been reflected as important due to the nature of the data and the benefits it holds for the program (Breugelmans and Liu-Thompkins, 2017; Nobre and Rodrigues, 2018; Lakshman and Faiz, 2021). Moreover, as shown by the Recommendations presented above, solutions for retail marketers to these privacy concerns have been highlighted and discussed. More specifically, the study reflected the need for retail marketers to acknowledge the Privacy Concerns that

South African consumers hold and take appropriate measures to combat them. Moreover, the study contributed through the provided understanding of South African consumers' perspectives, which can then be noted by marketers and scholars within the retail space. As reflected in previous Chapters, there are several benefits to using data within Loyalty Programs to benefit the business and decision-making (Balakrishnan, Chui, Hall and Henke, 2020; Rejeb, Rejeb and Keogh, 2020). Therefore, this study contributes to ways in which businesses can continue to use data but be mindful of privacy concerns and the role they play in this usage. Moreover, in the context of South Africa, this research presents contributions for a growing industry in which data usage will only continue to become more prominent (Statista, 2022; AfricanBusiness, 2020). Moreover, the study also contributes through the provided justification for marketers to then take action through their current privacy policies and make changes where necessary. These specifically being improvements to fuel trust with the consumer and Loyalty Programs and ensuring protective and transparent measures are in place to protect this consumer data from potential breaches.

7.4.4 Practical contributions

The findings of the study also contribute several practical contributions that can be used by retailers, scholars, and marketers alike in their approach to South African consumers' privacy concerns. This research provided a deeper understanding of the South African consumer concerns about data privacy (Belarbi et al.,2016). Moreover, businesses and marketers can be assisted by the study in understanding consumer behaviour towards privacy concerns in Loyalty Programs; as well as being aware of which aspects they should utilise to engage with this behaviour and prevent privacy concerns. Furthermore, this study provided insight specifically into South African consumers within the South African retail sector, which can then provide value for managers. The results indicate that Privacy Concerns are present and have a negative impact on the intention to use Loyalty Programs, thus showing the importance for retailers and marketers to acknowledge and resolve these concerns. Retailers should then focus on building trust with South African consumers, ensuring they have the proper privacy protection practices and policies in place and being transparent with their consumers regarding their privacy. An example of this could be through updating the consumer-data cookie policies; where consumers are plainly shown what they are agreeing to and given the option to adjust this agreement where possible, i.e., manually say yes or no to each of the data usage options. In the scenario where a consumer wants to provide some data to the brand but not third-party

access, this option allows them to cater these choices to their preferences and could give them a sense of control. This will assist with the relationship building that these retailers are already focusing on through the use of these Loyalty Programs (Lakshman, and Faiz, 2021; Sukmaningsih, Meyliana, Prabowo, and Nizar Hidayanto, 2019). The brand Under Armour is a good example of this, providing consumers with control over which data they provide through the separation of "Required, Functional and Advertising website cookies" as well as being easily readable and transparent in each regard, while allowing consumers to "Reject all" should they wish to keep their data private (Greenley-Giudici, 2023; Under Armour, 2023). Alternately, Apple has been able to gain trust through the transparency they provide through their data usage

This transparency is also acknowledged by brands such as Woolworths South Africa through their privacy policies; however, it could be improved. Woolworths goes into detail on the collection of consumer data in the privacy policy, uses bold formatting to somewhat summarise the important points that consumers need to take note of, and even states that "trust is nothing without transparency" (Woolworths, 2023). Pick n Pay provides a similar overview, going into substantial detail on how the data is collected and used for each aspect of being a Pick n Pay customer and different platform engagements (Pick n Pay, 2023). However, for both retailer examples this privacy policy can only be agreed to or ignored on the website, and not adjusted based on consumer preference. Although transparent, consumers need to actively seek out the privacy policy to know what they're agreeing to and then do a considerable amount of reading to fully understand how their consumer data is used.

If these adjustments were already adequately and effectively in place, these South African consumers may have altered their responses, indicating that what South African retailers are currently doing is not enough to prevent such privacy concerns. Therefore, this study reinforces the need for these concerns to be addressed and some areas of focus in doing so. This study can also assist marketers in recognizing the importance of strategizing and planning around these privacy concerns; among their already existing strategies. Moreover, retailers can determine whether adjustments to their current strategy are necessary. Finally, this study highlighted potential areas for policymakers to better address privacy and data awareness for consumers, based on the findings, i.e., seeing that even though certain policies are in place, consumers are still actively concerned about their data usage and, therefore, more may need to be done in the employment of these policies.

7.5 Limitations of the study

The primary limitation that exists within this study is the sample size and subsequent data analysis method. As the sample was smaller compared to the standard response-item ratio (10:1), this provides a limitation and something that future studies can explore. Moreover, this smaller sample presented the usage of the data analysis software AMOS as inappropriate. Although AMOS is usually more demanding in research, it is also more accurate and highly acknowledged in the investigation of theory testing. However, Smart-PLS is another common and well-known SEM software used, particularly for a smaller sample as done in this study, to present adequate results.

Moreover, the sample for this study consisted of general South African consumers above the age of 18. However, South Africa is an incredibly diverse and large country and, therefore, segmenting the population to explore specific regions could provide added benefits and a geographically representative sample. Alongside this, the study presents limitations in the single quantitative data method used, through a nonprobability sampling technique. This is due to the results not being able to be generalized. However, as a sample frame was unattainable, a probability sampling technique wasn't possible for this study.

7.6 Suggestions for Future research

As mentioned, the study made use of Smart-PLS in its SEM analysis; future studies could, therefore, utilise other tools such as AMOS in the data analysis with the use of a larger sample. Moreover, future studies could apply specific representations towards the age of the sample, of which observing a particular generation cohort or a cross-age study of different generations may provide some interesting results on the differences between Privacy Concerns across ages. Moreover, the gender for this study was presented as predominantly female, and so having a representative sample could provide for future research direction.

Moreover, a qualitative or mixed-method investigation could have provided for added knowledge on the drivers and reasonings behind these South African privacy concerns, as well as themes surrounding why certain perspectives towards data usage and privacy could arise. An experimental research design could also be approached to add to this study and actively test whether consumers are aware of the data being used, as opposed to only using the Likert scales. For example, a consumer may think that they are aware, but not recognise third-party access as a form of data breach. Furthermore, future research could explore a specific South African

Loyalty Program for a narrowed-down approach. Some respondents may have more concern for one program over another; for which a specific Loyalty Program analysis would provide clarity and dependability. Moreover, future research could add to the mediation analysis for this study, through an exploration of the direct relationships between Trust and Intention, as well as Awareness and Intention.

Conclusion

As presented earlier in this study, the merge of technology and data usage in modern marketing has arisen as an important and beneficial tool for retailers; however, the existence of these concerns presents the need for them to also be considerably accounted for and consumer privacy to be safeguarded. Within this study, these concerns, and their subsequent withdrawal of South African consumers' intention to use Loyalty Programs were shown. Thereby, allowing the study to make room for researchers, marketers, and retail Loyalty Programs to understand the importance of privacy concerns and the South African consumer perspective towards their data-usage.

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Appendix A

Questionnaire

Note: o = MCQ selection circle provided online

Privacy concerns towards data-usage for South African loyalty programs

Dear Sir / Madam

My name is Alexandra Dearden and I am a MComm student currently studying at the University of Witwatersrand, in the school of Business Sciences. Under the supervision of Dr Melissa Zulu and Prof Thomas Dorson Anning, I am conducting a study that requires me to collect data on privacy concerns and data-usage in Loyalty programs; in order to better understand South African consumers' perception of data privacy and, thereafter, their intention to engage with the program. The study title is "Privacy concerns towards data-usage for South African loyalty programs". The findings will be used for academic reasons as well as to provide marketing researchers with more insight into privacy concerns and data-usage.

I'm inviting you to take part in my study, by completing the survey below to share your experiences and perspectives. The survey consists of three choice-based sections: two mandatory sections and a non-mandatory section, which will only be used to categorize the findings. The survey will take approximately 15 minutes of your time to complete. In order to participate in the survey, respondents need to be above 18, South African and to have purchased from a South African retailer in the past 3 months.

This is a fully voluntary, private and confidential survey, with no direct benefits and no known risks. The survey is anonymous and so you will not need to provide your name. You may withdraw at any time if you no longer wish to participate. There are no personal costs associated with participation, and there will be no consequences if you choose to withdraw from the study. The information provided will be securely stored on a password protected computer, and only the supervisor and researchers will be given access to it. If the findings are used in subsequent studies, the same level of privacy and anonymity will be maintained and researchers will need their own subsequent ethics approval.

This research study will be written up as a dissertation and will be available on the university's library website. Should you wish to see the results of the study, these can be freely requested through my email provided below. Your participation will contribute to creating a better understanding of the factors that influence Privacy concerns and data-usage, within South

African retail Loyalty Programs, and, thereafter, the intention to engage in these programs. Therefore, your opinions will be appreciated. There are no right or wrong answers.

The details are below should you have any queries or feedback that you wish to share about this study. If you have any concerns or complaints about the ethical procedures of this research study, you can also contact the University Human Research Ethics Committee (Non-Medical) through the details below.

Thanks so much for reading,

Alexandra

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SECTION A: Consent Form and Screening Questions

Please read the following regarding your participation, and select the most appropriate option for you

I agree to take part in this study and have read and understand that my responses may be used in the research.

YES ○	If 'Yes', the participant continues
NO ○	If 'No', the participant is sent to the end of the survey where they were thanked for their participation

I agree that the information I have provided may be used for academic purposes by other researchers, in an anonymous format; subject to their own ethics clearance being obtained.

YES ○	If 'Yes', the participant continues
NO ○	If 'No', the participant is sent to the end of the survey where they were thanked for their participation

Are you South African?

YES ○	If 'Yes', the participant continues
NO ○	If 'No', the participant is sent to the end of the survey where they were thanked for their participation

Are you above the age of 18?

YES ○	If 'Yes', the participant continues
NO ○	If 'No', the participant is sent to the end of the survey where they were thanked for their participation

Have you bought from a South African retailer in the past three months? (e.g., Woolworths,

Pick n' Pay, Checkers)

YES ○	If 'Yes', the participant continues
NO ○	If 'No', the participant is sent to the end of the survey where they were thanked for their participation

Here are some South African retail Loyalty Programs you might be familiar with, to keep in mind and help you in understanding the focus for the questionnaire:



Image Source: MarkLives, (2022); Dis-Chem, (2023); Shoprite, (2023); Edgars, (2023) and WRewards, (2023)

SECTION B: MCQ questions

Note: All questions here were mandatory to be answered before continuing with the survey

To what extent do you agree with the following statements?

		Strongly Disagree (1)	*Disagree (2)*	*Neutral (3)*	*Agree (4)*	*Strongly Agree (5)*
Awareness						
PA1	I am aware of the privacy issues and practices in our society.	1 ○	2 ○	3 ○	4 ○	5 ○
PA2	I follow the news and developments about the privacy issues and privacy violations	1 ○	2 ○	3 ○	4 ○	5 ○
PA3	I keep myself updated about privacy issues and the solutions that companies and the government employ to ensure our privacy.	1 ○	2 ○	3 ○	4 ○	5 ○
PA4	Loyalty Programs seeking information online should disclose the way the data are collected, processed, and used.	1 ○	2 ○	3 ○	4 ○	5 ○
PA5	A good consumer online privacy policy should have a clear and conspicuous disclosure.	1 ○	2 ○	3 ○	4 ○	5 ○

PA6	It is very important to me that I am aware and knowledgeable about how my personal information will be used.	1 ○	2 ○	3 ○	4 ○	5 ○
Trust						

TR1	Overall, Loyalty Programs are trustworthy.	1 ○	2 ○	3 ○	4 ○	5 ○
TR2	I expect that Loyalty Programs have good intentions toward me.	1 ○	2 ○	3 ○	4 ○	5 ○
TR3	Promises made by Loyalty Programs are likely to be reliable	1 ○	2 ○	3 ○	4 ○	5 ○
TR4	Loyalty Programs would be trustworthy in handling my information	1 ○	2 ○	3 ○	4 ○	5 ○
TR5	Loyalty Programs would tell the truth and fulfil promises related to the information I provide	1 ○	2 ○	3 ○	4 ○	5 ○
TR6	Loyalty Programs are in general predictable and consistent regarding the usage of my information	1 ○	2 ○	3 ○	4 ○	5 ○

TR7	Loyalty Programs are always honest with customers when it comes to using the information that I would provide	1 ○	2 ○	3 ○	4 ○	5 ○
Intention						
IN1	I intend to use Loyalty Programs in the future	1 ○	2 ○	3 ○	4 ○	5 ○
IN2	I am planning on using Loyalty Programs in the future	1 ○	2 ○	3 ○	4 ○	5 ○
IN3	I predict that I will use Loyalty Programs in the future	1 ○	2 ○	3 ○	4 ○	5 ○
IN4	I am currently using Loyalty Programs	1 ○	2 ○	3 ○	4 ○	5 ○
Perceived Risk						
PR1	I feel that using Loyalty Programs involves a high degree of risk	1 ○	2 ○	3 ○	4 ○	5 ○
PR2	I feel the risk associated with using Loyalty Programs is high	1 ○	2 ○	3 ○	4 ○	5 ○

PR3	I am exposed to many data usage uncertainties if I use Loyalty Programs	1 ○	2 ○	3 ○	4 ○	5 ○
PR4	I am concerned about losing financial information while using Loyalty Programs	1 ○	2 ○	3 ○	4 ○	5 ○
PR5	I am concerned about losing my data privacy while using Loyalty Programs	1 ○	2 ○	3 ○	4 ○	5 ○
PR6	I am concerned about e-mail eavesdropping while using Loyalty Program	1 ○	2 ○	3 ○	4 ○	5 ○
PR7	I am concerned about having my identity stolen while using Loyalty Program	1 ○	2 ○	3 ○	4 ○	5 ○

Data Breach						
DB1	I could be subjected to a malicious computer/ information security problem (e.g., virus, privacy, identity theft, hacking and etc.) in loyalty programs	1 ○	2 ○	3 ○	4 ○	5 ○

DB2	I feel my personal information in loyalty programs could be misused	1 ○	2 ○	3 ○	4 ○	5 ○
DB3	I feel my personal information in loyalty programs could be made available to unknown individuals or companies without my knowledge	1 ○	2 ○	3 ○	4 ○	5 ○
DB4	I feel my personal information in loyalty programs could be made available to government agencies	1 ○	2 ○	3 ○	4 ○	5 ○
DB5	I feel my personal information in loyalty programs could be inappropriately used.	1 ○	2 ○	3 ○	4 ○	5 ○
Privacy Concerns for Data-usage						
PC1	I'm concerned that the information I give to Loyalty Programs could be misused	1 ○	2 ○	3 ○	4 ○	5 ○
PC2	I'm concerned that others can find private information abou me : through Loyalty Programs	1 ○	2 ○	3 ○	4 ○	5 ○

PC3	I'm concerned about providing personal information to Loyalty Programs, because it could be used in a way I didn't expect	1 ○	2 ○	3 ○	4 ○	5 ○
PC4	I don't feel comfortable when I don't have control over personal data I give to Loyalty Programs	1 ○	2 ○	3 ○	4 ○	5 ○
PC5	I don't feel comfortable when I don't have control over decisions about how my personal information is collected, used, and possibly shared by Loyalty Programs	1 ○	2 ○	3 ○	4 ○	5 ○
PC6	It usually bothers me when Loyalty Programs ask me for personal information	1 ○	2 ○	3 ○	4 ○	5 ○
PC7	When Loyalty Programs ask me for personal information, I sometimes think twice before providing it	1 ○	2 ○	3 ○	4 ○	5 ○
PC8	I'm concerned that Loyalty Programs are collecting too much information about me	1 ○	2 ○	3 ○	4 ○	5 ○

PC9	I don't feel comfortable sharing information about my current location with Loyalty Programs	1 ○	2 ○	3 ○	4 ○	5 ○
PC10	I'm concerned with the security of sensitive information when I use Loyalty Programs	1 ○	2 ○	3 ○	4 ○	5 ○

PC11	Loyalty Programs shouldn't sell personal information provided to other companies	1 ○	2 ○	3 ○	4 ○	5 ○
PC12	Loyalty Programs should put more time and effort into preventing unauthorized access to personal information	1 ○	2 ○	3 ○	4 ○	5 ○
PC13	No matter the cost, personal information should be protected from unauthorized access	1 ○	2 ○	3 ○	4 ○	5 ○
Personalisation						
PERS1	Loyalty Programs allow me to receive personalised information	1 ○	2 ○	3 ○	4 ○	5 ○
PERS2	I get personalised information when I interact with the Loyalty Program	1 ○	2 ○	3 ○	4 ○	5 ○

PERS3	The personalized information provided by Loyalty Programs meets my needs.	1 ○	2 ○	3 ○	4 ○	5 ○
PERS4	Personalised information in Loyalty Programs helps me make purchasing decisions.	1 ○	2 ○	3 ○	4 ○	5 ○
Attitude towards data-usage						
How important, if at all, is it for you to be able to…		*Not at all important*	*Low Importanc*	*Neutral (3)*	*Importa nt (4)*	*Essenti al (5)*
		(1)	*e (2)*			
ATT1	Know who has information about you?	1 ○	2 ○	3 ○	4 ○	5 ○
ATT2	Control who has access to your information	1 ○	2 ○	3 ○	4 ○	5 ○
ATT3	Use the Internet anonymously?	1 ○	2 ○	3 ○	4 ○	5 ○
ATT4	Use Loyalty Apps without being monitored?	1 ○	2 ○	3 ○	4 ○	5 ○

ATT5	Keep your spending behaviour private?	1 ○	2 ○	3 ○	4 ○	5 ○

Section C: MCQ Continued

This last section involves questions that will revolve around culture. As part of understanding how South Africans feel about their data being used, it's important to also give context to the study, and consider and understand the South African national culture.

In research, this is done through 6 dimensions in Hofstede's model.

Based on your opinions, to what extent do you agree or disagree with the following statements?

Masculinity		*Strongly Disagree (1)*	*Disagree (2)*	*Neutral (3)*	*Agree (4)*	*Strongly Agree (5)*
MAS1	It is considered important for men to have a professional career compared to women	1 ○	2 ○	3 ○	4 ○	5 ○
MAS2	Men are considered to usually solve problems with logic where as women will use intuition	1 ○	2 ○	3 ○	4 ○	5 ○
MAS3	Men are generally considered to solve difficult problems with an aggressive and forceful attitude	1 ○	2 ○	3 ○	4 ○	5 ○

MAS4	There are some jobs that are considered to be better for a man than a woman	1 ○	2 ○	3 ○	4 ○	5 ○
Individualism						
IND1	Individuals should put the interests of others ahead of their own	1 ○	2 ○	3 ○	4 ○	5 ○
IND2	Individuals should stick with the group even through difficulties	1 ○	2 ○	3 ○	4 ○	5 ○
IND3	Group happiness is more important than personal rewards	1 ○	2 ○	3 ○	4 ○	5 ○
IND4	Group success is more important than personal success	1 ○	2 ○	3 ○	4 ○	5 ○
IND5	Individuals should only pursue their goals after considering the wellbeing of others	1 ○	2 ○	3 ○	4 ○	5 ○
IND6	Group loyalty should be encouraged even if individual goals suffer	1 ○	2 ○	3 ○	4 ○	5 ○
Power Distance						

PD1	People in higher positions should make decisions without consulting people in lower positions	1 ○	2 ○	3 ○	4 ○	5 ○
PD2	People in higher positions should not ask people in lower positions for their opinions	1 ○	2 ○	3 ○	4 ○	5 ○
PD3	People in higher positions should avoid socialising with people in lower positions	1 ○	2 ○	3 ○	4 ○	5 ○
PD4	People in lower positions should not disagree with decisions made by their superior	1 ○	2 ○	3 ○	4 ○	5 ○
PD5	People in higher positions should not give important tasks to people in lower positions	1 ○	2 ○	3 ○	4 ○	5 ○
Uncertainty Avoidance						
UA1	It is important to have instructions in detail so that I always know what I'm expected to do	1 ○	2 ○	3 ○	4 ○	5 ○

UA2	It is important to closely follow instructions and rules	1 ○	2 ○	3 ○	4 ○	5 ○
UA3	Rules and regulations are important because they tell me what I need to do	1 ○	2 ○	3 ○	4 ○	5 ○
UA4	Structured and consistent work procedures are helpful	1 ○	2 ○	3 ○	4 ○	5 ○
UA5	Instructions for processes are important	1 ○	2 ○	3 ○	4 ○	5 ○
Long term Orientation						
LTO1	Traditional values are important	1 ○	2 ○	3 ○	4 ○	5 ○
LTO2	Respect for tradition is important	1 ○	2 ○	3 ○	4 ○	5 ○
LTO3	Family heritage is important	1 ○	2 ○	3 ○	4 ○	5 ○
LTO4	I work hard for success in the future	1 ○	2 ○	3 ○	4 ○	5 ○
LTO5	I don't mind giving up today's fun for success in the future	1 ○	2 ○	3 ○	4 ○	5 ○

LTO6	I value a strong link to my past	1 ○	2 ○	3 ○	4 ○	5 ○
LTO7	I plan for the long term	1 ○	2 ○	3 ○	4 ○	5 ○
LTO8	Persistence is important to me, i.e., never giving up and committing to getting something	1 ○	2 ○	3 ○	4 ○	5 ○
	done					
Indulgence						
IN1	There shouldn't be limits on what people can enjoy	1 ○	2 ○	3 ○	4 ○	5 ○
IN2	Relatively free enjoyment of what people want and feel should be valued	1 ○	2 ○	3 ○	4 ○	5 ○
IN3	Wants, especially with respect to sensual pleasures, should not be suppressed	1 ○	2 ○	3 ○	4 ○	5 ○
IN4	The enjoyment of wants should not be delayed	1 ○	2 ○	3 ○	4 ○	5 ○

Section 4: Demographic Information

The next questions will revolve around your demographic information and are for statistical purposes only

What is your gender?

Male	1 ○

Female	2 ○
Non-binary	3 ○
Prefer not to say	4 ○

What is your age group?

18-24	1 ○
25-34	2 ○
35-44	3 ○
45-54	4 ○
55-64	5 ○
65+	6 ○
Prefer not to say	7 ○

What is your highest education level (only indicate the highest)?

None	1 ○
Primary school	2 ○
High school	3 ○
Diploma	4 ○
Degree	5 ○
Postgraduate (Honours, Masters, Doctorate)	6 ○
Prefer not to say	7 ○

What is your race?

Black	1 ○

White	2 ○
Coloured	3 ○
Indian	4 ○
Asian	5 ○
Other	6 ○
Prefer not to say	7 ○

What is your Marital status?

Single (living alone)	1 ○
Married or living with a partner	2 ○
Living with parents	3 ○
Divorced or separated	4 ○
Prefer not to say	5 ○

What is your household income?

Less than R10 000	1 ○
R10 000- R25 000	2 ○
R25 001- R40 000	3 ○
R40 001- R55 000	4 ○
R55 001- R60 000	5 ○
Above R60 000	6 ○
Prefer not to say	7 ○

Open ended questions (voluntary)

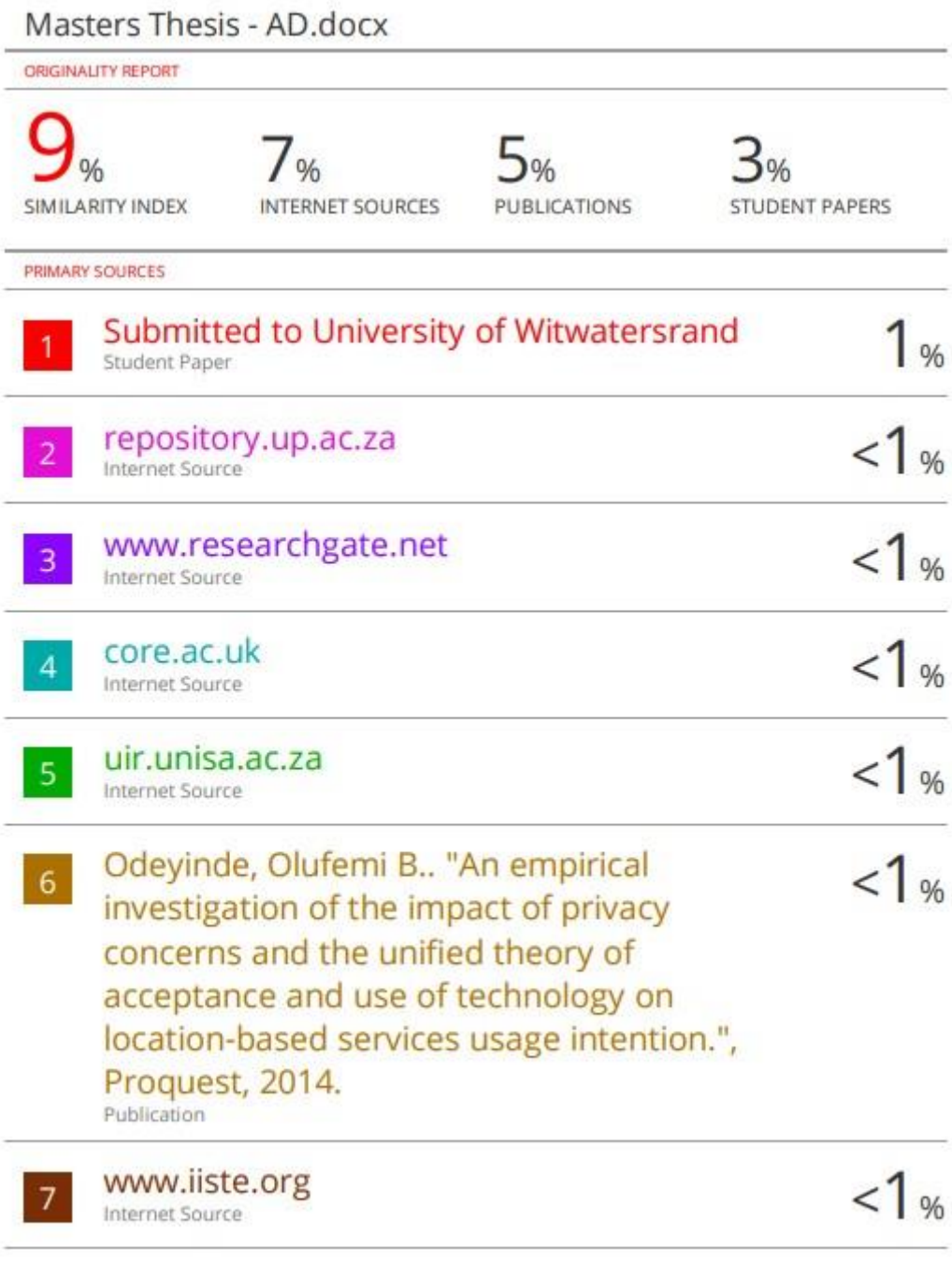
Do you think anything can be improved for the privacy of your data in Loyalty Programs?

_____

Have you experienced a data breach in the past?

Appendix B

Turnitin Report



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Ethics Clearance Certificate

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Dearden

CLEARANCE CERTIFICATE **PROTOCOL NUMBER: H22/10/06**

PROJECT TITLE
Privacy concerns towards data-usage for South African loyalty programs

INVESTIGATOR(S) Miss A Dearden

SCHOOL/DEPARTMENT Business Sciences/

DATE CONSIDERED 21 October 2022

DECISION OF THE COMMITTEE Approved
Risk Level: Minimal

EXPIRY DATE 30 November 2025

DATE 01 December 2022 **CHAIRPERSON** _____
(Professor J Watermeyer)

cc: Supervisor : Prof M Zulu and Prof T Dorson Anning

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and ONE COPY returned to the Secretary at Room 10004, 10th Floor, Senate House,
University. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to submit an amendment of the

protocol to the Committee. I agree to completion of a regular progress report. For Minimal and Low studies, this is due annually on 31 December. For Medium and High-Risk studies, this is due twice annually on 30 June and 31 December.

_____ _____/_____/_____

Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

Appendix C

Table 36. Pilot test results - Cronbach alpha

Construct	Cronbach Alpha
Awareness	0,760
Trust	0,837
Intention	0,925
Perceived Risk	0,866
Data Breach	0,879
Privacy Concerns	0,863
Personalization	0,955
Attitude	0,586
Masculinity	0,777
Individualism	0,909
Power Distance	0,859
Uncertainty Avoidance	0,733
Long-term Orientation	0,007
Indulgence	0,733

Table 37. Codebook

Response	Code
Likert Scale	
Strongly Agree	5
Agree	4
Neutral	3
Disagree	2
Strongly Disagree	1
Importance Scale	
Essential	5
Important	4
Neutral	3
Low Importance	2
Not at all important	1
Gender	
Male	1
Female	2

Non-binary	3
Prefer not to say	4
Age	
18-24	1
25-34	2
35-44	3
45-54	4
55-64	5
65+	6
Prefer not to say	7
Highest Education Level	
None	1
Primary school	2
High school	3
Diploma	4
Degree	5
Postgraduate (Honours, Masters, Doctorate)	6
Prefer not to say	7
Race	
Black	1
White	2
Coloured	3
Indian	4
Asian	5
Other	6
Prefer not to say	7
Marital status	
Single (living alone)	1
Married or living with partner	2

Living with parents	3
Divorced or separated	4
Prefer not to say	5
Household income	
Less than R10 000	1
R10 001- R25 000	2
R25 001 - R40 000	3
R40 001 – R55 000	4
R55 001 – R60 000	5
Above R60 000	6
Prefer not to say	7

Table 38. Abbreviated Construct List/ Guide

Construct	Abbreviation
Awareness	AWA
Trust	TRU
Intention	INT
Perceived Risk	PERCR
Data Breach (Perceived Vulnerability)	DB
Privacy Concerns	PC
Personalization	PERS
Attitude	ATT
Masculinity	MASC
Individualism	INDIV
Power Distance	PD
Uncertainty Avoidance	UA
Long term Orientation	LTO
Indulgence	INDUL

Appendix D

Descriptive statistics (Demographic)

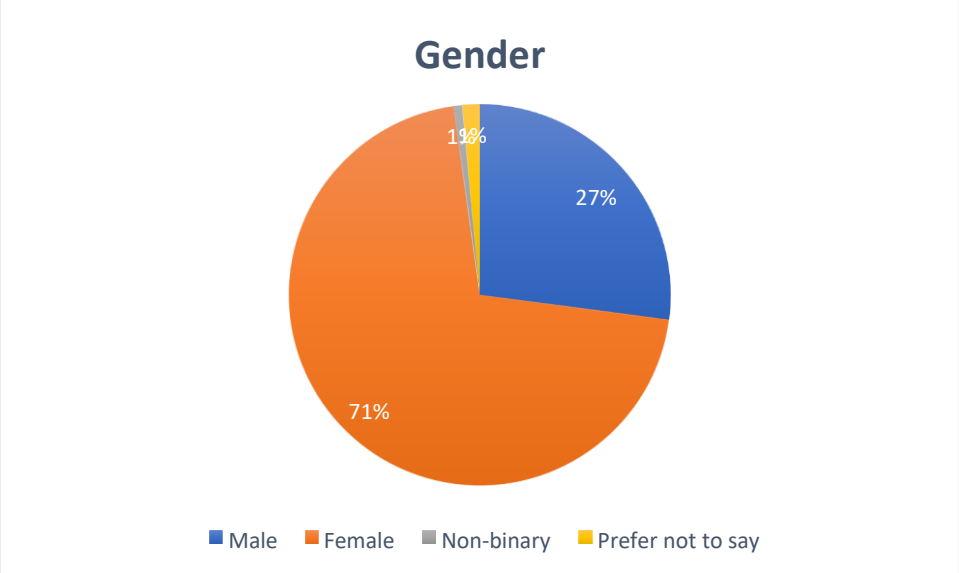

Figure 16. Gender demographics

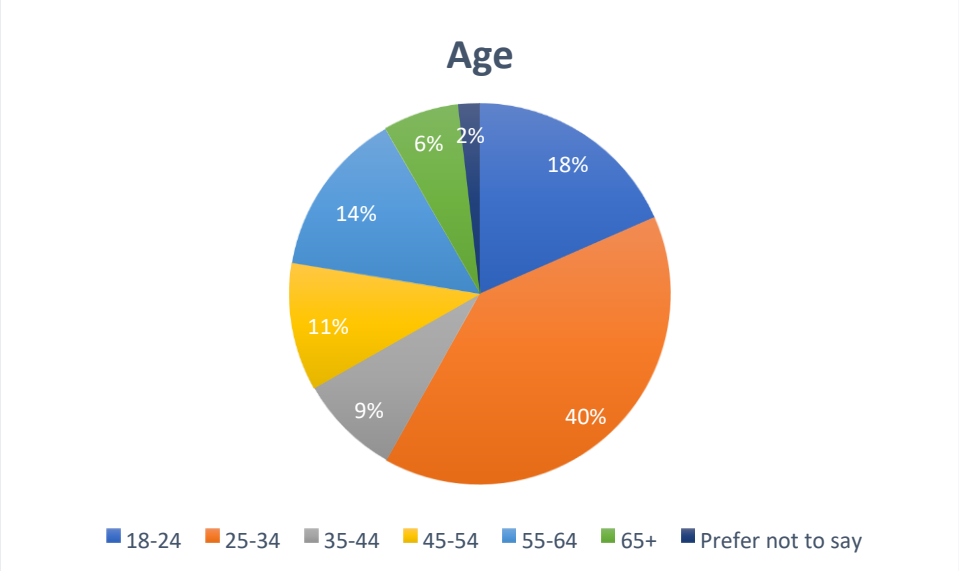

Figure 17. Age demographics

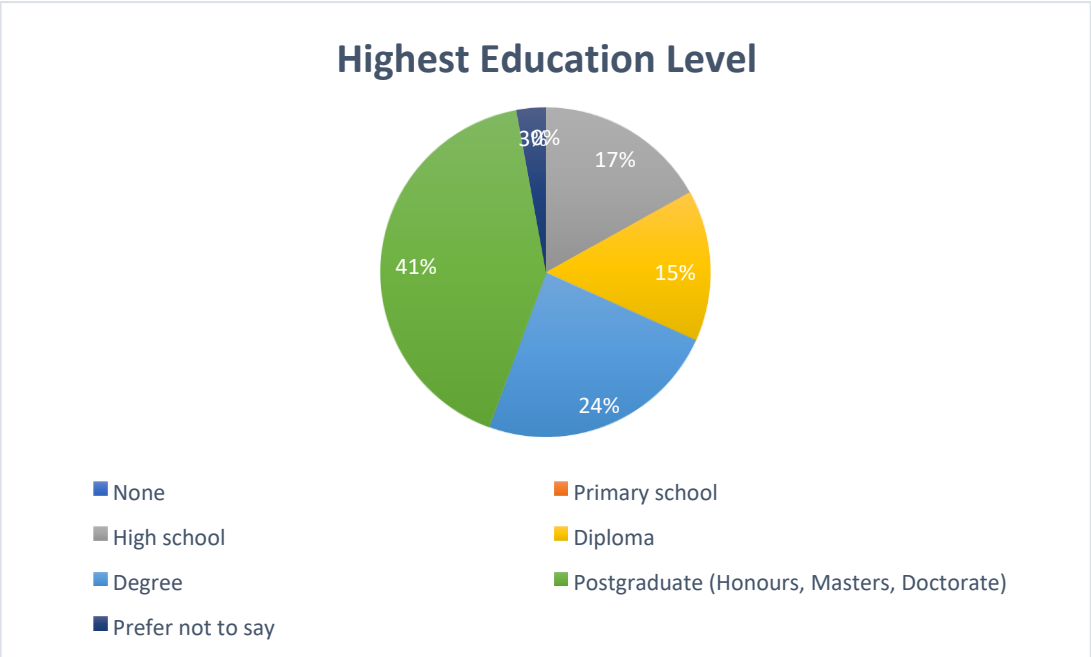

Figure 18. Highest Education Level demographics

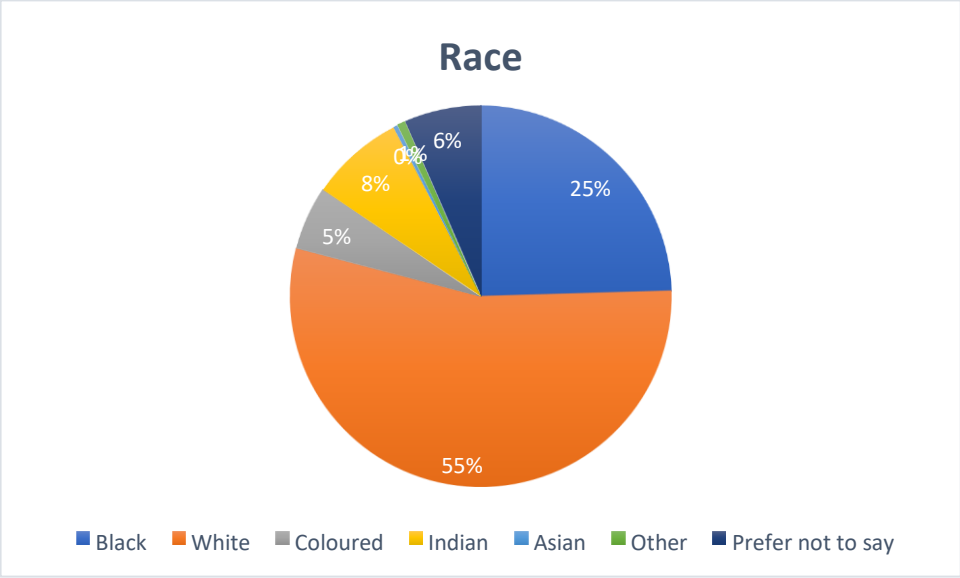

Figure 19. Race demographics

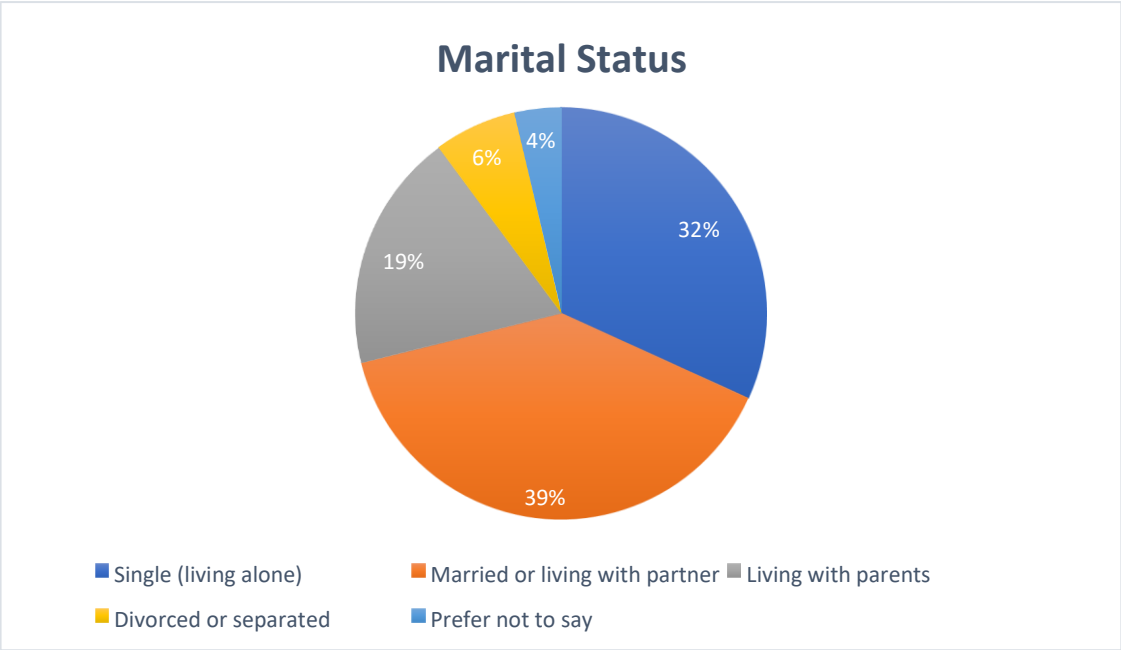

Figure 20. Marital Status demographics

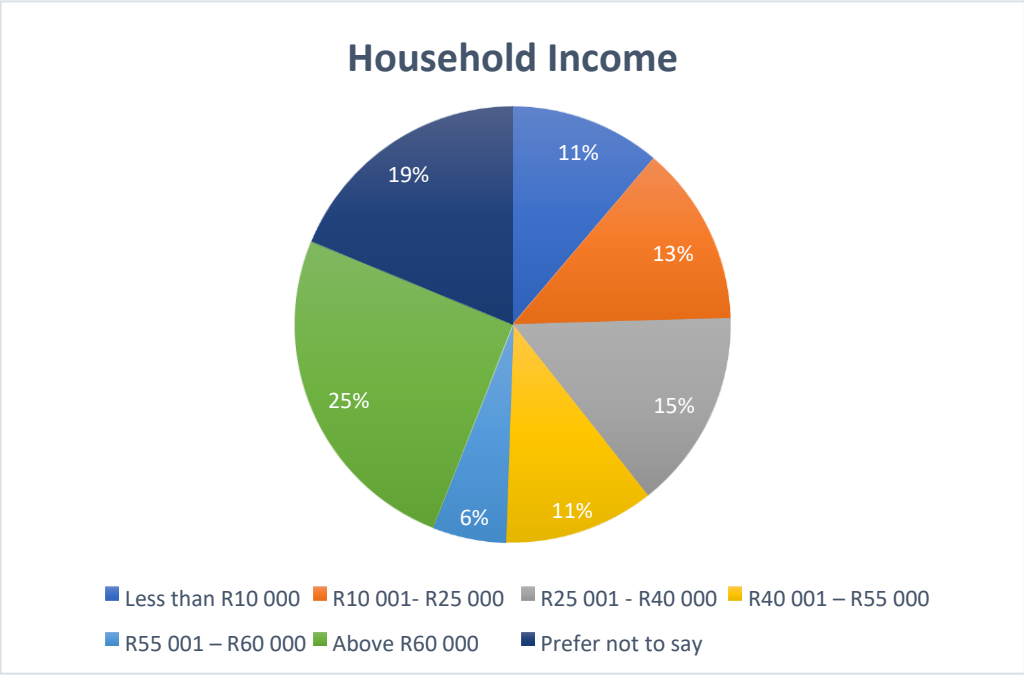

Figure 21. Household Income demographics Table 39. Open ended Responses – Loyalty Program Improvement

Do you think anything can be improved for the privacy of your data in Loyalty Programs?
No
No
Yes
No

Yes

No
Yes
YES
It's difficult to say how as it's generally a black box. But There's enough leaks and sells that it becomes difficult
Yes, for instance have a notification everytime someone access your personal information or accounts, and provide with feedback that has the correct person's information.
How they use our personal information.
Yes
I actually didn't think about my data prior to completing this study.
Yes
No
Yes, more security around our information
Yes, IT Security must be in existence and regularly checked to ensure compliance
Definitely but I wouldn't be able to say what could actually be improved
My name and a card number should be sufficient
Companies should not be allowed to sell your information to a 3rd party at all, this should be monitored better.
Yes
I think the selling of our information to other companies can be investigated and dealt with appropriately.
The language could be simplified (less jargon) and policies shortened. I suspect most people sign up for a program when making a purchase (right at the till before they pay) and don't have the time to scrutinize a long-winded T&C policy where details of they collect and use your data is buried. And I suspect the cashier or staff who offer you the program would not be able to explain the privacy party. Of course, this might be different when shopping online.
Direct rewards, feedback on spending
Yes
Option to opt out of specific data sharing. Also i hate vitality's carte blanche to my personal info and behaviour. Medical, financial and consumer. I dont trust discovery at all.
They should be clear that they are collecting my data
Yes, reduce the fine print and state where info will be stored, who it will benefit, why do they need certain info?
Yes
Using birth dates instead of ID numbers. Using secure websites. Not selling my details to marketing companies.
Making terms and conditions of use easier to read and clearly stating companies that will handle the information visibly.
Emphasis should be placed on the safety of any data collected for the purpose of Loyalty Programs. The accessibility of such data should also be limited to only necessary individuals and not any third parties.
Transparency in how my data is used and who has access to it
By using loyalty programs I accept trading my personal information for financial gain. It's a trade-off. With that said, it must remain sane.

Not that I can think of

Yes, of course. I feel relatively overwhelmed and exhausted of trying to protect my data from multiple different sources. Loyalty programs should improve data privacy but since they are one of many technologies I use every day that misuse my data I tend to feel get apathetic.
I think the software systems used by companies that have loyalty programs can better implement privacy and security within their databases and processes.
Honestly they are probably fine, I don't trust any company with my data but the harm they can do with my grocery list is limited. A law like GDPR in the EU would make me more at ease than anything Checkers can ever say.
Yes - easier management of data usage
To be honest, I never really thought about retailer loyalty data breaches. They're a low level secutity concern for me but I really can't remember what info i gave them apart from name email and phone number. I know they gather data on when I buy bananas or gnocci because i get vouchers for same products a month later. And i like that. But I don't think that data can be used maliciously against me.
Yes
Stonger enforcement of popi compliance to heavily penialise companies selling data
Woolies / Discovery Eco-system.
No behind your bac the institutions will use it the way they want
This questionnaire made me realise I hadn't questioned my programs and presume my data is safe
Môre individual feedback
Maybe
I don't have enough background to give an informed response.
companies must sign a strict non disclosure agreements with clients and there should be a punishment for breaking the agreement plus a compensation for the client . In some cases a compensation does not reverse the damage of braking the agreement but it helps the client to know that the company has suffered damage for violating the clients privacy .
Yes. Companies should not be selling private information to 3rd parties or other companies.
Yes, data shouldn’t be sold to third parties
Yes, as technology is constantly advancing.
I don't know enough about the privacy policy of loyalty programs to imagine how they could be improved.
Yes spend the funds on ensuring its safe big Mr. Retail outlet.
No sharing with any other organisation - I sign up for a specific program not to be used by anybody else
yes, stricter regulation
I think as long as loyalty programs adhere to the POPI Act we should be protected.
Yes
Yes
yes
SA companies need to be disallowed from using national identify numbers for commercial reasons

They should send you a monthly report to opt out of some tracking
No
I think they shouldn't have as much access to personal information, for example ID number, and bank details should not be connected to your card

No, I believe that POPIA has adressed many of the issues that were present.
More honesty and openness
Yes
Yes, not sharing my information to others
Yes
Not sure
Nope
Yes
Restricted only for that program and not made available to anyone else including suppliers etc
Yes, they can offer more security options a customer is comfortable with
Yes it can and should be improved
Not giving third party access where third parties are permitted to use the data to contact me is essential.
Data encryption
Realistically they have all the information they need already.
I think the introduction of certain laws and regulations have been made with the intention of improving privacy of data, such as the POPI Act.
I dont think its necessary to have so much personal info for shopping
Yes
Even though POPIA is in force, it doesn’t seem like cases brought to the information regulator are actively pursued, possible due to a lack of capacity. A cultural shift is needed so people feel comfortable declining requests for personal information such as SA ID number when the requester cannot explain what it is needed for. Currently if you ask these questions, you are looked at as being difficult.
Keep it short and concise, stop hiding relevant information in pages of paragraphs.
Making people more aware
Yes
Strict monitoring of my data has to be a priority
Transparency
Yes. I think that having a lot of information about a consumer isn't necessary at all.
Yes - stricter governance rules
Yes
I was generally unaware that sharing my data with loyalty programs could lead to identity theft and even financial theft, which are both concerning to me. But I do not spend time ready terms and conditions and don’t follow news on data privacy, so I would need to be more proactive in that in order to be able to say if I think anything can be improved or not.
Clearer descriptions of how they are used and what they are used for. Clearer understanding of who will get to see the data.

I think so. I actually don't know a huge amount about it.
Probably, seeing as we generally have no idea how our data iz used
People should just be as respectful of other people as they would have other be to them.
It is hopefully illegal to share private info and it should not be lip service. There MUST be consequences!
Ultimately I do get better deals and more savings when signing up for the loyalty programs. I know my data may be misused but the trade off is worth it.
Terms of service - better regulation
Complete transparency in the terms & conditions.
Some are misleading/seem pointless. I often wonder what the 'rewards' really are! I prefer a monetary reward as at Clicks and Dischenm. My bank's so-called rewards are nebulous and always changing and I never seem able to benefit from them. not always
Not sure
Have not really read into the ts and cs in all honesty which is bad but with xtra savings for example you're more focused on how much you're saving more than what data is being taken
No - it works for me
Cyber security standards should be extremely high at the rewards company
Yes they can stop collecting unnecessary data from me. My loyalty card should be anonymous an not linked to my name or anything.
No Loyalty programs should have security systems in place
There should be regular re-examination by companies of adherence to privacy rules and technology.
No
Never thought about it until this survey.
No
YES
Yes
yes
Yes
Yes
yes
More thought in structuring question/data collection soecific to program
Tighter Cloud Security is a good step forward
Yes. Loyalty programs should not share personal information to other brands/companies that may be related to them without my consent. Automatic consent should not be common practice.

Table 40. Open ended Responses - Data Breach

Have you experienced a data breach in the past?
Yes
No
No

No
No
No
No
YES
Yes. Some online portals, and some companies that added me to their loyalty program without my permission (person collecting data didn't ask me to be added and just did, as they received and incentive to add more people)

Yes, I feel like someone or people have access to my personal information and accounts.
No
No
Not that i am aware of
No
No, but I don't use them a lot
No
Yes
I have been hacked previously on social media. Now I've implemented two factor authentication and things seems fine.
Yes
Yes I think so. Sometimes I'll get SMSes from companies such as Edgars or Truworths regarding promotions or sales etc. knowing absolutely certain that I have never given them specifically my phone number.
No
Yes
Not that I'm aware of
No
No
I have noticed that I have been receiving more spam calls on my phone since I joined some loyalty programs last year. I was not too worried about it but after doing this survey I am a bit concerned.
No
Not that I know but probably
No
Yes.
Yes credit bureau
No
Getting a lot of spam in e-mail and cell phones, I did not give out that information so I wonder where they get it from?
Yes
No.
Yes, my transunion account was accessed. It was quickly identified and addressed.

No, I have not.
Yes
Yeah, but for an old Yahoo account.
No. My email address was found in breaches, but no passwords, and I never had personal data stolen. 2FA everything you can!
Multiple times through emails being leaked. Additionally experian.
Yes. New spam sms es
yes
Yes
No
No

No
Not as the result of a loyalty program, but because of RCS and how easy they make it to get a new RCS credit card from just about anywhere.
Yes but none through loyalty programs.
No
I have. But through my bank and ISP, not loyalty cards from memory
Yes
Yes
I work in Data Analysis for international companies, Data Breaches happen often from "Phishing" more than breaches. - A leaked email can spiral to targeted attacks as an email is how you can search up a person's Social media and start a manipulation attacks.
No.
No, i worked with the data
Yes, with an organisation I donate monthly to
No
Yes
Not that I am aware of
Yes
No I haven’t
No
no
Yes
No
No
No, but my family and friends have.
No
Not that I am aware of
No
No

No
no that i'm aware of
No
No
No
Not from loyalty programmes (From Absa bank only)
yes
N/A
Yes
Yes
yes
No
Not to my knowledge
No

Yes
No
No
Yes
Yes. Bank
No
No
Yes
Yes
Nope
Yes - being contacted with promotional content through social media and email
No
Yes
No
No
Yes
No
Yes-received emails I wasn't supposed to receive from different companies/agencies
Yes
Not to my knowledge.
Yes
No
No
Yes.
No

I have experienced a data breach in the past, whereby insurers have obtained private data from internet service providers.
No
No
Yes
Yes. I got a call the other day from a call center selling King Price insurance. I had never given them my phone number nor consent to call me for marketing purposes, but they had bought my personal information from a shady internet website.
No
No
No (touch wood)
Yes
Yes
Not sure
Yes
Yes. Several times. A few times by my own bank offering me products based on information they had access to on my profile.
Yes
No
No
No
Possibly
No
No
No
Yes. Via a bank!
Nope
No
No
My fb page has been hacked / cloned twice.
Yes
No
No
No
At the school where I worked
No.
No
No
No
Yes, but not through loyalty programmes, but through buying online.
Yes!!!!

No
No...My husband & mother inlaw
Not that I am aware of.
No
NO
No
no
No
No
Yes I have, but I wouldn't know where the information was leaked from. I just noticed spam emails from companies I have never heard of.
Yes
no
No
Yes, Multiple actually.
Yes, I have but to a minor degree.

Appendix E

Table 41. Kurtosis and Skewness values

Construct Item	Kurtosis	Skewness
AWA1	0.178	-0.860
AWA2	-0.660	-0.318
AWA3	-0.759	-0.058
AWA4	1.739	-1.224
AWA5	0.719	-0.985
AWA6	2.664	-1.409
TRU1	-0.081	-0.432
TRU2	-0.186	-0.688
TRU3	0.026	-0.635
TRU4	-0.556	-0.216
TRU5	-0.365	-0.397
TRU6	-0.361	-0.347
TRU7	-0.275	0.128
INT1	2.023	-1.076
INT2	1.695	-1.032
INT3	2.550	-1.200
INT4	2.802	-1.590
PERCR1	-0.390	0.409
PERCR2	-0.417	0.382

PERCR3	-0.583	-0.124
PERCR4	-0.672	0.450
PERCR5	-0.956	-0.244
PERCR6	-1.032	-0.026
PERCR7	-0.924	0.320
DB1	-0.925	-0.154
DB2	-0.183	-0.651
DB3	-0.558	-0.485
DB4	0.601	-0.807
PC1	-0.245	-0.576
PC2	-0.932	-0.335
PC3	-0.466	-0.514
PC4	0.247	-0.823
PC5	0.627	-0.908
PC6	-0.500	-0.520
PC7	0.507	-0.959
PC8	-0.825	-0.356
PC9	-0.109	-0.953
PC10	-0.009	-0.701
PC11	7.021	-2.532
PC12	1.090	-1.320
PC13	2.235	-1.615
PERS1	0.040	-0.616
PERS2	-0.159	-0.491
PERS3	-0.493	-0.278
PERS4	-0.768	-0.279
ATT1	1.147	-1.182
ATT2	2.725	-1.418
ATT3	0.188	-0.770
ATT4	-0.023	-0.723
ATT5	-0.183	-0.759
MASC1	-1.118	0.190
MASC2	-1.195	0.073
MASC3	-1.094	-0.044
MASC4	-0.657	-0.646
INDIV1	-0.611	-0.005
INDIV2	-0.846	0.018
INDIV3	-0.719	0.033
INDIV4	-0.861	-0.097
INDIV5	-1.012	0.039
INDIV6	-0.312	0.554
PD1	0.962	1.099
PD2	2.411	1.314
PD3	3.647	1.889

PD4	2.159	1.274
PD5	1.994	1.298
UA1	1.114	-1.065
UA2	0.170	-0.534
UA3	0.842	-0.781
UA4	2.073	-0.676
UA5	-0.530	-0.112
LTO1	-0.302	-0.520
LTO2	-0.156	-0.573
LTO3	0.099	-0.643
LTO4	0.540	-0.886
LTO5	0.740	-0.886
LTO6	-0.189	-0.337
LTO7	0.410	-0.762
LTO8	0.148	-0.704
INDUL1	-0.998	0.248
INDUL2	0.530	-0.507
INDUL3	-0.699	-0.156
INDUL4	-0.156	0.335

Table 42. Fornell and Lacker matrix - Discriminant Validity

	ATT	AWA	DB	INDIV	INDUL	INT	LTO	MASC	PC	PD	PERCR	PERS	TRU	UA
ATT	0.749													
AWA	0.419	0.734												
DB	0.393	0.281	0.779											
INDIV	-0.189	0.058	-0.098	0.780										
INDUL	-0.000	0.035	-0.032	0.025	0.770									
INT	-0.173	-0.070	-0.241	0.067	0.113	0.913								
LTO	0.212	0.225	0.143	0.088	0.101	0.170	0.736							
MASC	-0.016	-0.067	0.058	0.032	-0.091	-0.077	0.230	0.687						
PC	0.579	0.425	0.690	-0.197	-0.089	-0.342	0.104	-0.061	0.748					
PD	-0.208	-0.117	-0.119	0.319	-0.099	0.028	0.030	0.093	-0.140	0.717				
PERCR	0.398	0.332	0.641	-0.041	-0.018	-0.384	0.118	-0.036	0.718	0.018	0.756			
PERS	-0.173	-0.046	-0.183	0.064	0.151	0.365	0.166	0.006	-0.140	0.113	-0.092	0.839		
TRU	-0.233	-0.212	-0.380	0.189	0.105	0.429	0.269	0.129	-0.426	0.152	-0.408	0.420	0.767	
UA	0.084	-0.027	-0.064	0.099	0.002	0.125	0.354	0.222	-0.078	0.034	-0.099	0.135	0.250	0.825

Appendix F

Table 43. F-squared values

	ATT	AWA	DB	INDIV	INDUL	INT	LTO	MASC	PC	PD	PERCR	PERS	TRU	UA
ATT														
AWA									0.105					
DB									0.576					
INDIV									0.033					
INDUL									0.015					
INT														
LTO									0.003					
MASC									0.012					
PC	0.465					0.011								
PD									0.001					
PERCR						0.044								
PERS	0.015								0.007					
TRU									0.037			0.214		
UA									0.000					

Table 44. Predictive validity (using Q-squared predictive values)

	Q^2predict	PLS-SEM_RMSE	PLS-SEM_MAE	LM_RMSE	LM_MAE
ATT1	0.108	0.806	0.623	0.821	0.621
ATT2	0.159	0.663	0.525	0.716	0.542
ATT3	0.118	0.897	0.706	0.943	0.731
ATT4	0.144	0.859	0.684	0.922	0.729
ATT5	0.100	0.886	0.705	0.968	0.771
INT1	0.140	0.738	0.523	0.742	0.555
INT2	0.126	0.779	0.568	0.803	0.608
INT3	0.108	0.738	0.515	0.789	0.582
INT4	0.053	0.898	0.621	0.941	0.675
PC1	0.451	0.728	0.561	0.737	0.544
PC10	0.306	0.833	0.637	0.861	0.684
PC2	0.352	0.882	0.686	0.850	0.659
PC3	0.475	0.730	0.563	0.677	0.532
PC4	0.193	0.873	0.644	0.931	0.704
PC5	0.180	0.867	0.629	0.919	0.695
PC6	0.322	0.868	0.686	0.914	0.721
PC7	0.265	0.826	0.646	0.846	0.661

PC8	0.397	0.850	0.672	0.925	0.714
PC9	0.170	1.000	0.778	1.055	0.853
PERS1	0.080	0.934	0.747	1.042	0.820
PERS2	0.082	0.925	0.752	1.018	0.800
PERS3	0.154	0.918	0.741	1.020	0.823
PERS4	0.137	1.037	0.863	1.143	0.920