



Masters Dissertation in Marketing (BUS5000W)

**MODELLING THE ANTECEDENTS THAT INFLUENCE BRAND
INNOVATIVENESS, AGE AND PERSONAL INNOVATIVENESS IN SOCIAL
COMMERCE SHOPPING BEHAVIOUR.**

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Research Dissertation presented in partial fulfilment of the requirements for the degree

Of Masters Dissertation in Marketing at the University of Cape Town

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SCHOOL OF MANAGEMENT STUDIES
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Declaration

I, the undersigned, Vanessa Fernandes De Freitas, declare that this research paper is my own work and is submitted in partial fulfillment of the requirements for the degree of Masters Dissertation in Marketing (BUS5000W) at the University of Cape Town.

11/08/2021

Signed by candidate

Signature of Student

Date

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ABSTRACT

Through the recent growth of information and communication technology and Web 2.0 technologies, a new branch of e-commerce called social commerce has emerged (Hajli, 2013). This study explores the effects of personal innovativeness on the relationship between brand innovativeness and customer-based brand equity among South African social commerce users, aged from 18 to 55 years, of all ethnicities. The conceptual model of the study proposes that the moderating effect of personal innovativeness and age influences the relationship between brand innovativeness and Customer-Based Brand Equity factors, namely brand trust, brand reputation, brand quality, brand credibility and brand loyalty in a social commerce context. The findings of this study aim to find insight regarding purchasing behaviours on local brands by active South African social users. Respondents who formed part of this investigation filled in an online survey to determine the factors that influence the decision to purchase a local brand. The results of the data was analysed using the Structural Equation Modelling (SEM) programme, more specifically Partial Least Squares 3.0 software package. Most hypotheses in the study were supported, whereas some were not supported. The relationships with the moderating effect of age between brand innovativeness and brand reputation, brand quality and brand credibility, brand trust and brand loyalty revealed a positive and significant relationship. The weakest relationships found was that of the moderating effect of personal innovativeness on brand innovativeness and brand trust and the moderating relationship of personal innovativeness on brand innovativeness and brand loyalty. Furthermore, the findings revealed that age plays an essential role in moderating and that due to individual's personal decision to adopt an innovation, personal innovativeness deems to be a subjective topic. The effects of personal innovativeness and age on brand innovativeness and CBBE factors in social commerce shopping behaviour are new insights provided by this study. The impact of brand innovativeness and quality on attitude (Boisvert & Ashill, 2011), the impact of brand equity and innovation on the long-term effectiveness of promotions (Slotegraaf & Pauwels, 2008), consumer innovativeness in the context of a robotic restaurant (Hwang, Park & Kim, 2020) and the effect of personal innovativeness for e-store loyalty (Jianlin & Qi, 2010) are examples of prior studies on brand and personal innovativeness that were investigated in different situations (Thakur, Angriawan & Summey, 2016). The majority of studies have evaluated the effects of CBBE factors on businesses, brands, and consumers. This study, however, made an effort to look at innovativeness and

CBBE from the perspective of the customer. Taking into account the study's findings, management implications are crucial since they show how any company can improve its present and future business practices. The results based on this study calls on businesses to re-evaluate their present business plans and consider developing a social commerce strategy where trust may be established through trust drivers on their respective platforms.

Keywords: *social commerce; personal innovativeness; age; brand innovativeness; customer-based brand equity.*

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LIST OF ACRONYMS

CBBE : Customer-based brand equity

SEM : Structural Equation Modelling

SEM-PLS: Structural Equation Modelling-Partial Least Squares

CA : Cronbach Alpha

CR : Composite Reliability

AVE: Average Variance Extracted

PIIT : Personal Innovativeness in the domain of Information Technologies

HTMT : Heterotrait-Monotrait ratio of correlations

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The current South African e-commerce environment has grown exponentially, with mobile phone adoption becoming a massive growth factor linked to a series of innovations that support various human activities (Lubua & Pretorius, 2018). The recent Web 2.0 application shifted marketers' focus from one-on-one marketing to community-based marketing, as consumer purchasing decisions are influenced by others on the social platform. As a result of consumer social interactions on the internet, a new business model known as social commerce was introduced (Makudza, Sandada & Madzikanda, 2021). Users can now engage in commercial activities on social media by selling or buying goods.

In a social commerce shopping behaviour perspective, this study examines the moderating effect of age and personal innovativeness on the relationship between brand innovativeness and customer-based brand equity factors such as brand trust, brand reputation, brand quality, brand credibility and brand loyalty respectfully.

In today's modern and extremely dynamic world, globalization, economic problems, competition and technological advancements challenge the ability of companies to sense and respond to market changes quickly and accurately (Laura, 2018). Pappu and Quester (2016) conclude that brands innovativeness needs to be communicated through quality to retain loyal customers. Brand innovativeness according to Barone and Jewell (2014) is defined as "the degree to which consumers perceive a brand to be innovative".

Brand trust, brand reputation, brand quality, brand credibility, and brand loyalty are all elements of brand equity, whom according to Keller (1993), is the way in which brand knowledge affects the response of consumers towards the marketing of a brand. Keller (1993) further describes that only when a brand is credible and the consumer has positive, strong, and distinct brand associations does the process of brand equity begin. Aaker (1991) defines brand equity as the linkage of assets and liabilities associated with a brand, such as a name or a symbol that may or may not contribute to the value supplied by the product and/or service to the firm and/or its customers. Despite the importance of online buying to consumers, the moderating effect of significant individual variations on the accepted relationships of online

purchasing decisions has received little attention, whereby not many studies have explored the conditions that influence online consumers' online shopping behaviour. In saying this, the use of online shopping solely depends on a person's innate innovative personality (Lee, Qu & Kim, 2007).

Age has always been a topic of discussion, and it has been shown to be a decisive factor not just in user acceptability of online shopping, but also in purchase intent. Consumer motives based on shared values and beliefs are revealed by age groups. Introducing age groups, according to Lissitsa and Kol (2016), is a more cohesive strategy to classify markets than simply using age. Web 2.0 technologies have introduced new developments to e-commerce such as social networking sites. Social commerce is a new phenomenon that leverages off social media to allow customers to interact on the internet. Social commerce is typically a subset of e-commerce that allows customers to create content and businesses to reach new markets (Hajli, 2015). Online communities created by social media, allows for more collaborative interaction and engagement between consumers and companies (Kietzmann, Hermkens, McCarthy & Silvestre, 2011). Social media is a powerful tool in social commerce and is what ultimately separates e-commerce from social commerce (Hajli, 2015). Social media can be accessed through platforms, such as Facebook, Youtube and Instagram with 8.28, 2.68 and 13 million Youtube, Instagram and Facebook users respectively in South Africa, and most of whom are youths (Snyman, 2016).

This study commences with a background of the study followed by the problem statement.

1.2 BACKGROUND

Social commerce has surfaced as a significant emerging research area combining people, management, technology, and information dimensions, indicating that social commerce is a comprehensive research area (Lin, Li, Wang, 2017). Most African countries had very low access to e-commerce channels, however with the introduction of technological advancements, specifically mobiles, the combination of mobile services and social media has formed a hybrid platform for businesses which is now referred to as social commerce (Pretorius & Lubua, 2019). Consumers are becoming more conscious of social media and its developments, and their reliance on traditional sources is dwindling as technological advancements continue, whereas a recent discussion among innovation strategy researchers has come to light regarding whether innovations are primarily driven by consumer demands or technological advances (Nguyen, Yu, Melewar & Chen, 2015). The degree to which

consumers perceive a brand to be innovative is referred to as brand innovativeness (Barone & Jewell, 2014). However, according to Walley et al., (2017) individuals' willingness to try out new technology stems from their innate personal innovativeness, which explains why individuals respond differently when introduced to innovations. According to recent research, people of different generations interact and participate in technological innovations in different ways, and age is a common characteristic that influences users' behavior, particularly in the online context (Mothe & Nguyen-Thi, 2021) (Molinillo, Aguilar-Illescas, Anaya-Sánchez & Liébana-Cabanillas, 2021). It is further highlighted by Hoang, Wang, Van Ngo and Chen (2019) that a consumer's perspective of brand equity is an individual's perception of how much better one brand is compared to another. For the purpose of this study, which is through the lens of the customer, customer-based brand equity factors that will form part of the study are brand trust, brand reputation, brand quality, brand credibility and brand loyalty. Woolworths, a retail company that sells a wide range of products such as clothing, food, homeware, and general merchandise and ensures that consumers are aware of product authenticity and quality, as well as that their products are safe, healthy, ethically sourced, and do not harm the environment has established a powerful social commerce presence among the South African population and is the brand that will be utilised in this study (Dos Santos, Svensson & Padin, 2013). The main aim of this study is to test whether age and personal innovativeness influence the relationship between brand innovativeness and customer-based brand equity factors using Woolworths as the tested brand in a social commerce context.

1.3 PROBLEM STATEMENT

Social commerce is a significant research area that has an impact on business practices (Lin, Li & Wang, 2017) and is a new phenomenon that innovators have yet to embrace (Lee, Qu & Kim, 2007). Consumers are becoming more aware of social media and its developments thereof whereby consumers' connection to traditional sources is diminishing as advancements in technology continue to rise. The internet now serves as a revolutionary instrument through which brands can advertise to and communicate with consumers.

In the context of social commerce, this study aims to explore the moderating effects of age and personal innovativeness on brand innovativeness and customer-based brand equity

factors such as brand trust, brand reputation, brand quality, brand credibility and brand loyalty.

Among many brand equity models in literature, Aaker's brand equity model was chosen. Aaker's brand equity model underpins the chosen constructs to be tested against age and personal innovativeness respectively.

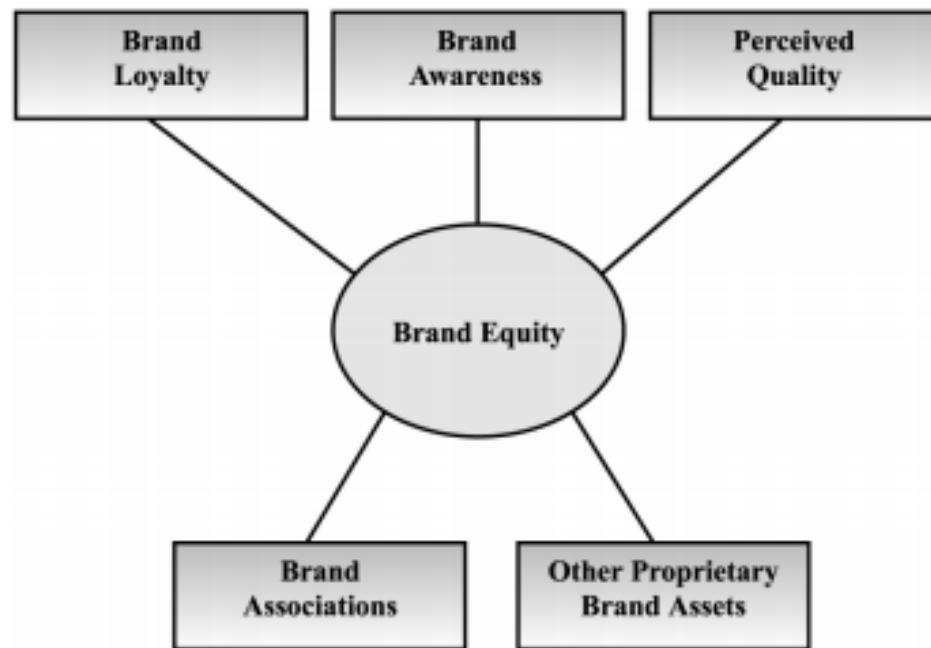


Figure 1.2: Aaker Brand Equity Model (1991)

It is of utmost importance to understand how exactly consumers' perceptions of innovation of a brand affects loyalty toward that specific brand (Pappu & Quester, 2016). There is a need to see how existing consumer behaviour theories can be applied to all areas of online customers' decision-making processes, where personal innovativeness plays a key part (Lee, Qu & Kim, 2006).

Age and purchasing behaviour will be examined in this study. Limited research has been conducted testing age in an online shopping setting (Lissitsa & Kol, 2016).

1.4 RESEARCH QUESTIONS

The primary research question was derived from the problem statement.

“Does age and personal innovativeness moderate the relationship between brand innovativeness and customer-based brand equity factors?”

The following secondary research questions were raised:

1. Does personal innovativeness moderate the relationship between brand innovativeness and brand trust?
2. Does personal innovativeness moderate the relationship between brand innovativeness and brand reputation?
3. Does personal innovativeness moderate the relationship between brand innovativeness and brand quality?
4. Does personal innovativeness moderate the relationship between brand innovativeness and brand credibility?
5. Does personal innovativeness moderate the relationship between brand innovativeness and brand loyalty?
6. Does age moderate the relationship between brand innovativeness and brand trust?
7. Does age moderate the relationship between brand innovativeness and brand reputation?
8. Does age moderate the relationship between brand innovativeness and brand quality?
9. Does age moderate the relationship between brand innovativeness and brand credibility?
10. Does age moderate the relationship between brand innovativeness and brand loyalty?

This research builds on the investigation of brand innovation conducted by Nguyen et al., (2015) and Banda, Pritchard and Nhedzi (2020) as well as the research done in Equity by Moliner-Velázquez et al., (2019) and Yao et al., (2021). The uniqueness of this study lies in the inclusion of age and personal innovativeness as moderators between brand innovativeness and customer-based brand equity factors.

1.5 RESEARCH OBJECTIVES

Reviewing literature and theory on a subject can help researchers obtain a better understanding of the constructs they want to test (Du Plessis, 2007). The theoretical objectives of this research are to conduct a literature review on the following topics:

- **Age**
- **Personal Innovativeness**
- **Brand Innovativeness**
- **Social Commerce**
- **Brand trust**
- **Brand reputation**
- **Brand quality**
- **Brand credibility**
- **Brand loyalty**

In addition to the theoretical objectives, the following empirical objectives are stated in the Primary Research Objective for the study:

To measure whether age and personal innovativeness moderate the relationship between brand innovativeness and customer-based brand equity factors.

Empirical study involves formulating hypotheses and testing the relationships between constructs (Du Plessis, 2007). The Secondary Research Objective for the study is as follows:

1. To determine the moderating effect of age and personal innovativeness on the relationship between brand innovativeness and customer-based brand equity factors; brand trust, brand reputation, brand quality, brand credibility and brand loyalty.

1.6 CONCEPTUAL MODEL

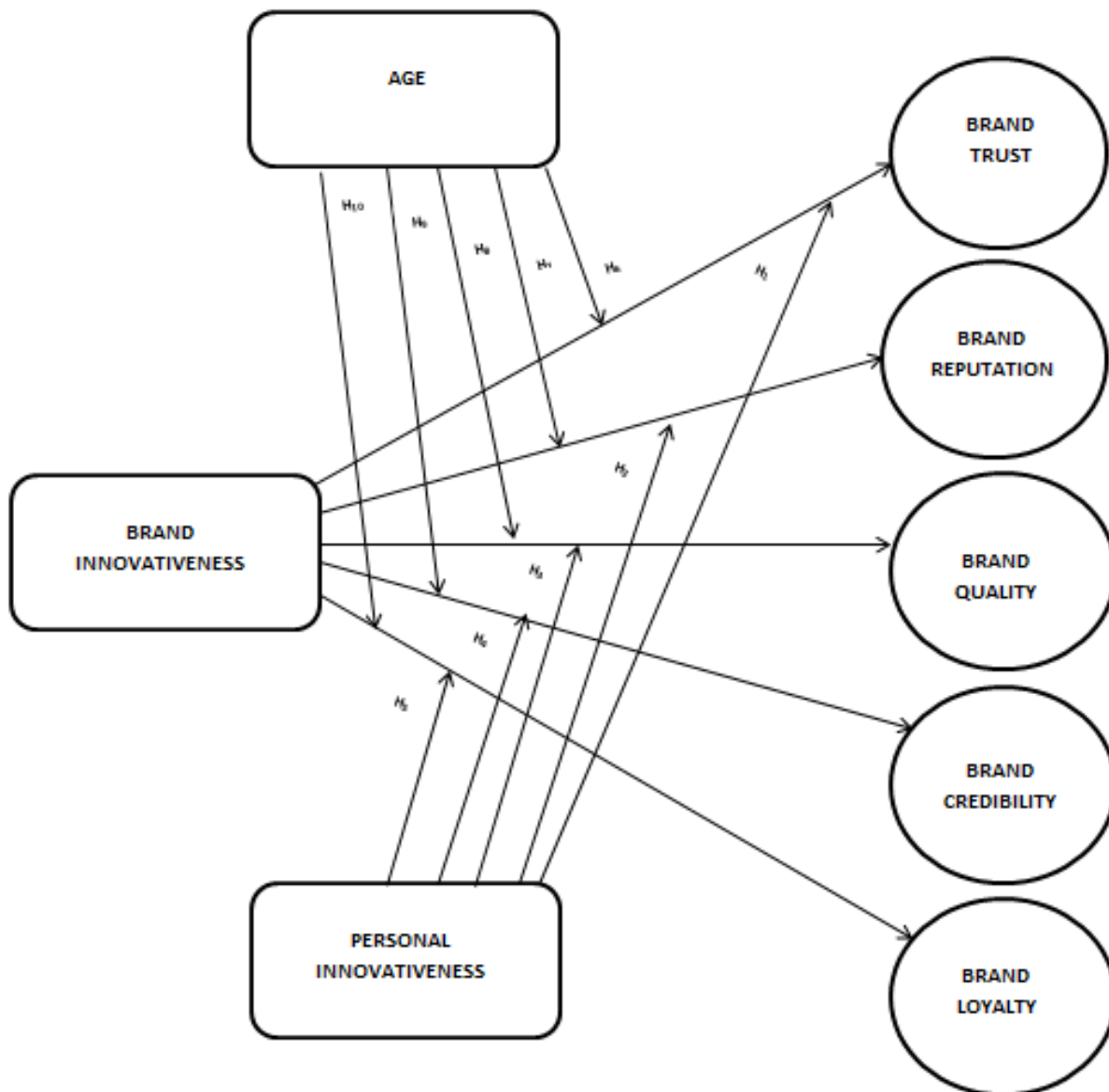


Figure 1.3. The research model with the hypotheses

H₁ Personal innovativeness moderates the relationship between brand innovativeness and brand trust.

H₂ Personal innovativeness moderates the relationship between brand innovativeness and brand reputation.

H₃ Personal innovativeness moderates the relationship between brand innovativeness and brand quality.

H₄ Personal innovativeness moderates the relationship between brand innovativeness and brand credibility.

H₅ Personal innovativeness moderates the relationship between brand innovativeness and brand loyalty.

H₆ Age moderates the relationship between brand innovativeness and brand trust.

H₇ Age moderates the relationship between brand innovativeness and brand reputation.

H₈ Age moderates the relationship between brand innovativeness and brand quality.

H₉ Age moderates the relationship between brand innovativeness and brand credibility.

H₁₀ Age moderates the relationship between brand innovativeness and brand loyalty.

The relationship between brand innovativeness and customer-based brand equity factors were not tested due to the mere fact that there is copious amounts of research regarding the matter whereby all relationships proved to be positive conducted by the likes of Guceri-Ucar (2014) Huang and Shih (2017) and Suwarno (2022). For this reason, testing of the above-mentioned was excluded and focus was rather put into testing the effect of age and personal innovation on the relationship between brand innovativeness and customer-based brand equity factors.

1.7 RESEARCH DESIGN AND METHODOLOGY

To investigate the conceptual model and provided hypotheses this study used a positivist philosophy and a deductive research approach. In essence, the positivist approach solely depends on the amount of quantifiable observations that can be used in statistical analysis. It is an objectivist perspective with a belief that factual knowledge gained through measurements is trustworthy (Onwuegbuzie, Johnson & Collins, 2009). In addition, data was gathered using an online survey. The cost is low, anonymity contributes to higher response rates and participants are able to participate at their earliest convenience. The realised sample comprised of 434 South Africans active social commerce users, of all ethnicities aged between 18 and 55. Etikan, Musa and Alkassim (2016) define sampling as the total quantity of the things or cases which are the subject of research. Sampling is essential to research studies as it allows the researcher to gain information on the whole population segment, by accurately acquiring results on the properties of a finite part of a statistical population (Webster, 1985). The measurement instruments of the study were adapted from existing

scales. The survey was divided into section A and section B where all the constructs were measured in section A and used a five-point Likert scale (strongly disagree – strongly agree) to do so. Section B comprised of all the demographic profile of the respondents. SEM-PLS was the statistical program used to analyse the data. Before undertaking the fieldwork of the study, the questionnaire of the study was completed by 40 respondents to test the reliability and validity of each measurement instrument and overall to ensure there were no mistakes upon conducting the fieldwork. This was executed by firstly testing the reliability of the measurement model in terms of the Cronbach's Alpha (CA) and Composite Reliability (CR). To test the validity of the instruments, the Average Variance Extracted (AVE) and Heterotrait-Monotrait ratio of correlations (HTMT) were used. Thereafter, the structural model was assessed to also check for the quality of the instruments, more specifically the reliability and validity of each instrument and this was executed by using the PLS-SEM statistical programme. The purpose of assessing the structural model is to show the paths and the relationships between the constructs and in order to do so, the bootstrapping tool was utilised to determine the path coefficient values and the t-values to check the significance of each hypotheses. A comprehensive discussion of the research design and methodology is compiled in chapter 3.

1.8 ETHICAL CONSIDERATIONS

The researcher protected the participants' information, however intends to have and give the supervisor full access to the data collected. The data will remain anonymous and will be stored in an SPSS file that will be password protected and available if needed by UCT.

Lewis, Saunders & Thornhill (2009) refer to ethics as the appropriate behaviour of the researcher within the research project and its subjects thereof. The researcher disclosed the objectives of the study to the participants before they engaged in the study, and were assured that they are free to discontinue participation in the study should they choose to do so.

Before the study was conducted, the researcher had all research tools e.g. questionnaires verified by the University of Cape Town's Ethics Committee, to ensure that no ethical principles had been violated. See Appendix for a copy of the ethics approval.

1.9 LIMITATIONS

The current study contained a few limitations. Firstly, the sample of the study does not represent all social commerce shoppers in South Africa and this may restrict the study in terms of generalisability. Second, only one method, a quantitative approach, was used to analyse the data in this study. Perhaps if a mixed method approach was used, the results could be a lot more insightful.

1.10 SIGNIFICANCE OF THE STUDY

The present study filled an important knowledge gap by deepening the understanding between social commerce and purchasing behaviour through the empirical examination of how brand loyalty, brand trust, brand credibility, brand quality and brand reputation impacted brand innovativeness, personal innovativeness and age respectively in a social commerce context.

It contributed to retailers understanding consumer traits and behaviour. Other than that, the study provided literature which filled in the gaps on brand innovativeness, personal innovativeness, social commerce, age, brand loyalty, brand trust, brand quality, brand reputation and brand credibility , whereas marketers can engage with active social commerce users.

This study benefits marketers and retailers that are devoted to keeping up with the times in our modern day society through innovations. It is no surprise that retailers in general struggle to keep consumers as such attached to their brands. Therefore it is essential that retailers educate themselves and explore other avenues in which they will be able to retain their customers.

To understand consumer age groups and personal purchase intent, marketers are encouraged to understand the underling factors of this study which form the store patronage and purchase intention of the consumers. In saying that, it is crucial that marketers expand and align their marketing efforts and campaigns as well as promotional activities for different age groups, this will keep marketers connected to their customers by satisfying each segment accordingly; reason being each age group portrays different shopping behaviours.

This research therefore served as a helpful guide for devising marketing plans or strategies for the best outcome in innovativeness, age and social commerce. Therefore, through

exploring consumption motivations through age and personal innovativeness on brand innovativeness, it was the goal for this current research to bring insight into the modern day and new growing purchasing behaviours of the consumers in the market through online shopping.

This study also added to the knowledge of marketing practitioners whereby this specific study distinguished the effect of brand innovativeness in a social commerce context on brand trust, brand reputation, brand quality, brand credibility and brand loyalty intertwined with the moderating roles of personal innovativeness and age. The results portrayed by this study can assist retailers to develop new policy plans and if need be, new brand strategies too.

1.11 CHAPTER SUMMARY

Chapter one lays down the foundation for this study which begins with a thorough discussion about what exactly social commerce is, social commerce categories as well as constructs and how it forms part of the study. This brings us to the gap in research which is addressed - to determine the effects of personal innovativeness and age respectively on the relationship between brand innovativeness and Customer-Based Brand Equity variables. Lastly, methodology is highlighted explaining the way in which the study will be conducted. The next chapter will discuss Customer-based brand equity (CBBE) and the various variables which will be under investigation namely brand trust, brand reputation, brand quality, brand credibility and brand loyalty following core topics of brand innovativeness, personal innovativeness and age.

1.12 OUTLINE

As illustrated in Figure 1.4, this dissertation comprises five chapters and is categorically divided into four parts.

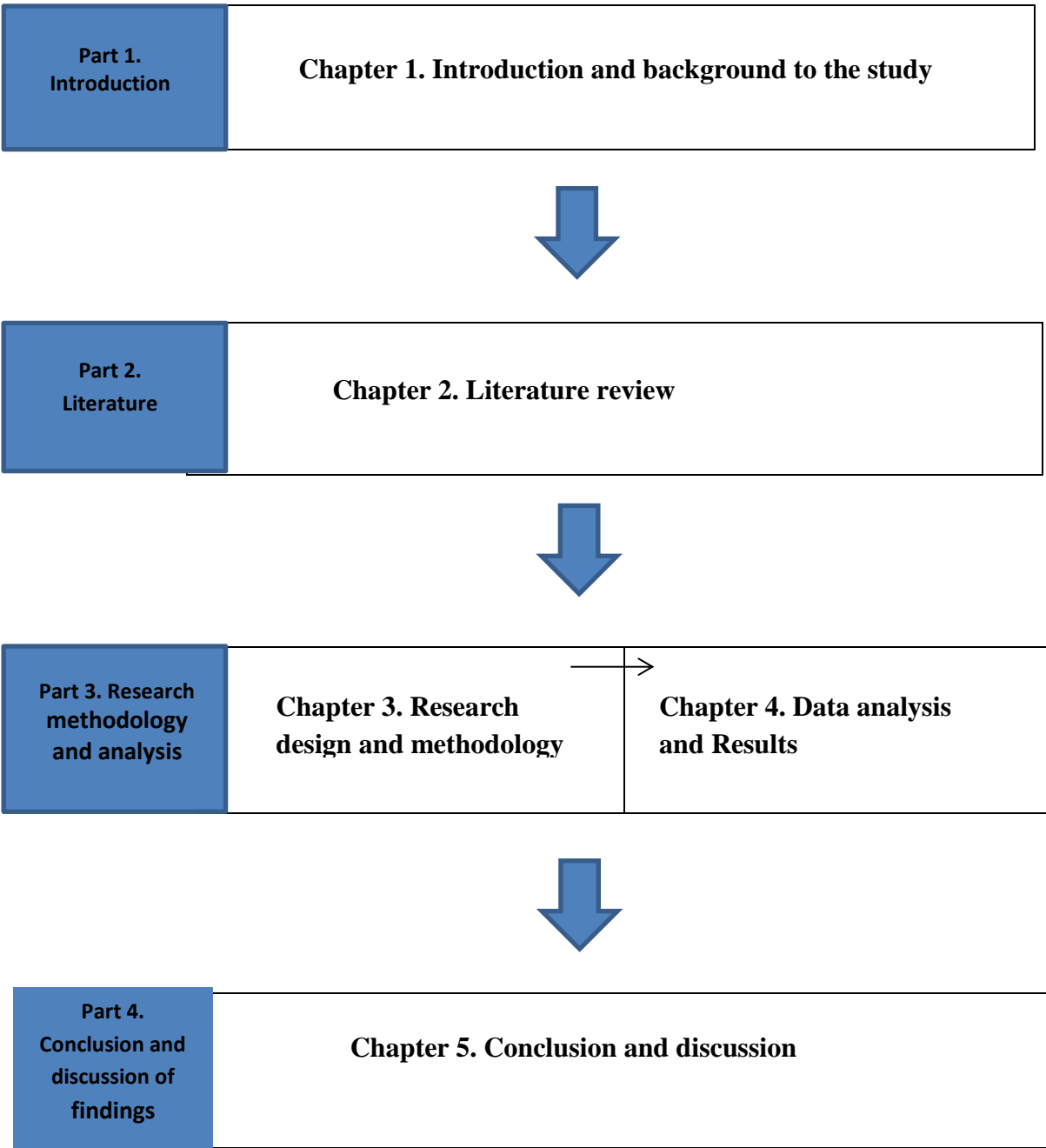
Part one contains chapter one, which introduces the research to be undertaken, the problem description, the study's purpose, the research question to be tested, the research objectives, the study's justification, and the contribution that this study will make to academia.

Part two makes up chapter two and contains the literature review section which discusses the theories that are present within the conceptual model namely, brand trust, brand reputation, brand quality, brand credibility and brand loyalty. The chapter concludes by explaining the core topics of brand innovativeness, personal innovativeness and age.

Part three comprises of chapter three and chapter four. Chapter three underpins and justifies the research design and methodology to be used for the present study as well as which data analysis methods will be used to achieve the most accurate results. This includes a discussion of the research philosophy and approach, as well as an explanation of the research design and the operationalization of the variables. Lastly, all data analysis methods are stated, specifically the quality assessment of the model, the two moderating variables and the assessment thereof and how the pilot study of this particular study was conducted.

Chapter four follows suit of chapter three by executing the data analysis methods and presenting the result of the findings. These findings include the demographic and descriptive statistics, the reliability and validity assessment of the data, path modelling and hypotheses testing.

Part four, chapter five, presents the study's general conclusion based on the results portion of the study and highlights the following subsections: theoretical and managerial implications of the study, limitations of the study, and suggested recommendations for future research of the study.



Source: Compiled by researcher (2021)

Figure 1.4: Dissertation structure

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Chapter 2 begins by exploring the multi-dimensional definitions of social commerce and further explains the core topics of brand innovativeness, personal innovativeness and age groups. Brand equity is later discussed followed by customer-based brand equity and the variables to be tested namely, brand trust, brand reputation, brand quality, brand credibility and brand loyalty which is discussed and based on existing literature.

2.2 Social Commerce

The internet has ushered in a new era of purchasing (Crespo & Del Bosque, 2008). The usage of social media for electronic commerce (e-commerce) transactions gave rise to social commerce (Molinillo, Aguilar-Illescas, Anaya-Sánchez & Liébana-Cabanillas, 2021).

Yahoo introduced social commerce in 2005 which began adding value to commercial services whereby customer engagement was later actioned by companies such as Amazon, eBay and Groupon (Han, Xu & Chen, 2018). This could be the reason for why patronage in malls are declining and people are spending less time there (Eastman, Iyer & Randall, 2009). In accordance with literature, the field of social commerce is still in its infancy, and because of this, no single definition has yet been adopted (Kim & Park, 2013) (Marsden & Chaney, 2012). Diao and Yuan (2015) further state that there has been no set definition for this phenomenon due to the constant change of development and form in social commerce. Many researchers have somewhat developed similar definitions pertaining to social commerce whereas, Wang and Zhang (2012) state that it is the process of purchasing and selling of goods and services through social media platforms. This phenomena develops social and interactive approaches and in return allows customers to express their thoughts and share their opinions not only with other customers but with the business itself (Huang & Benyoucef, 2013). It is obvious that social commerce allows customers to connect on the internet and is a new trend in e-commerce brought about by the use of social media (Hajli, 2015), however it has also opened doors for selling and buying of products and services on major social media platforms such as Facebook and Instagram (Shadkam & O'Hara, 2013). For Lin, Li and Wang (2017), social commerce is a significant tool for consumers to utilize

for socializing and to share information, forming a major part of social media and Web 2.0 technologies.

Firms whom actively use social media tools for business online are also achieving marketing values (Lin, Lee, Wang, 2017). Firms that have a Facebook profile, for example, can connect directly with their customers, potentially improving and managing client relationships. Shanmugam, Sun, Amidi, Khani & Khani (2016) suggested that because of the rise and increase of social networking sites (SNSs), social commerce has become the new way of shopping and researching online. According to Hajli (2015), one of the key reasons for progress in this sector is the use of social networking sites (SNSs).

Table 1.1 contains a list of additional definitions of social commerce found in contemporary literature.

Table 1.1: A list of recent literature-based definitions of social commerce

Date	Author	Definition
2021	De Freitas	“Social commerce is the interaction between customers and businesses on a digital platform”
2021	Molinillo, Aguilar-Illescas, Anaya-Sánchez and Liébana-Cabanillas	“Social commerce is a business model which emanated from the use of social media for electronic commerce (e-commerce) transactions whereby business use social media to sell, interact, engage and create communities with their customers as well as to cultivate loyalty through online chats, reviews, virtual groups and video sharing.”
2017	Wang and Yu	“Social commerce is defined as exchange-related activities that occur in, or are influenced by, an individual’s social network in computer-mediated social environments, where the activities correspond to the need recognition, pre-purchase, purchase, and post-purchase stages of a focal exchange.”
2017	Chen, Lu and Wang	“Social commerce is moderated by social media and involves a linkage between online and offline environments.”

2016	Lu, Fan and Zhou	“Social commerce can be considered a subset of social commerce. It specifically involves the use of social technologies to assist e-commerce transactions and activities.”
2013	Zhou, Zhang and Zimmermann	“Social commerce is not only a mix between e-commerce and social networking technology, it is also the integration with commerce activities, as well as a mechanism for promoting social relationships and trust.”
2010	Turban, Bolloju and Liang	“Social commerce is most commonly referred to the delivery of e-commerce activities and transactions via the social commerce environment. Social commerce also involves the use of social media technology to support online interactions and user contributions to assist the purchase of products and services.”

Source: Authors own summary

2.2.1 Difference between social commerce and traditional e-commerce

On a one-way browsing basis e-commerce is done with the click of a button, whereas social commerce is quite the opposite of this as it provides a digital platform for customers to purchase online by means of establishing two-way communications with other consumers (Wang & Yu, 2017). Social commerce is either seen as an evolution of e-commerce or a subset of e-commerce (Liang & Turban, 2011), however the goals that a business aims to achieve, the connection it anticipates to create with customers and the systematic methods to provide interaction is ultimately what sets social commerce apart from e-commerce (Han, Xu & Chen, 2018). Social commerce is able to create value within the customers towards their platform through interaction and engagement between consumers online (Hajli, Sims, Zadeh & Richard, 2017); (Molinillo et al., 2021).

2.2.2 Differences: Social Commerce and Social Shopping

‘Social Commerce’ and ‘Social Shopping’ have been used synonymously throughout research but are in fact two different concepts. Social shopping occurs on an e-commerce social network and all the activities performed here by consumers are influenced by social circles (Han, Xu & Chen, 2018). On the other hand, social commerce provides platforms and networks to both the buyer and the seller to shop, therefore social commerce is much broader than social shopping (Han, Xu & Chen, 2018).

2.2.3 Categories of Social Commerce

Considering that social commerce is a new area to be explored, more attention needs to be applied for a better understanding of this topic (Zhou, Zhang & Zimmermann, 2013). According to Han et al. (2018) the categorization of the types of social commerce is not set in stone so from a broad perspective, four basic categories of social commerce have been identified by Diao and Yuan (2015) which are listed below and supported by academic research.

2.2.3.1 -E-commerce-oriented social commerce

This social commerce type is an e-commerce platform. This category includes direct sale websites such as Amazon. Amazon blends internal socialization amongst customers forming a community of active users as well as loyal users (Diao et al., 2015).

2.2.3.2 -Interest-oriented social commerce

A social commerce platform which introduces a community of people based on a topic or interest that has been developed by third parties to discuss common interests. According to Diao et al., (2015) on these kind of websites, future buyers are able to review recommendation and also opinions posted by others within the community which helps facilitate their purchasing decisions.

2.2.3.3 -Social network-orientated social commerce

Includes social network platforms such as Facebook, Twitter and WeChat. This type of interaction amongst social media users brings real life friendship to the online world and encourages the sharing of product information with friends. Consumers also turn to their social community to seek advice and opinions on products to purchase (Diao et al., 2015).

2.2.3.4 -Group buying-orientated social commerce

This final category includes group buying websites such as Groupon, LivingSocial etc. This phenomenon offers one group coupon product daily, whereby there needs to be a certain number of buyers for a deal to be closed; sellers may also set a threshold to manage the number of coupons sold. The group members in such communities are educated in the products and persuade others to join the buying group (Diao et al., 2015).

Social commerce constructs

The figure below was introduced by Hajli (2015) to depict Social Commerce Constructs.

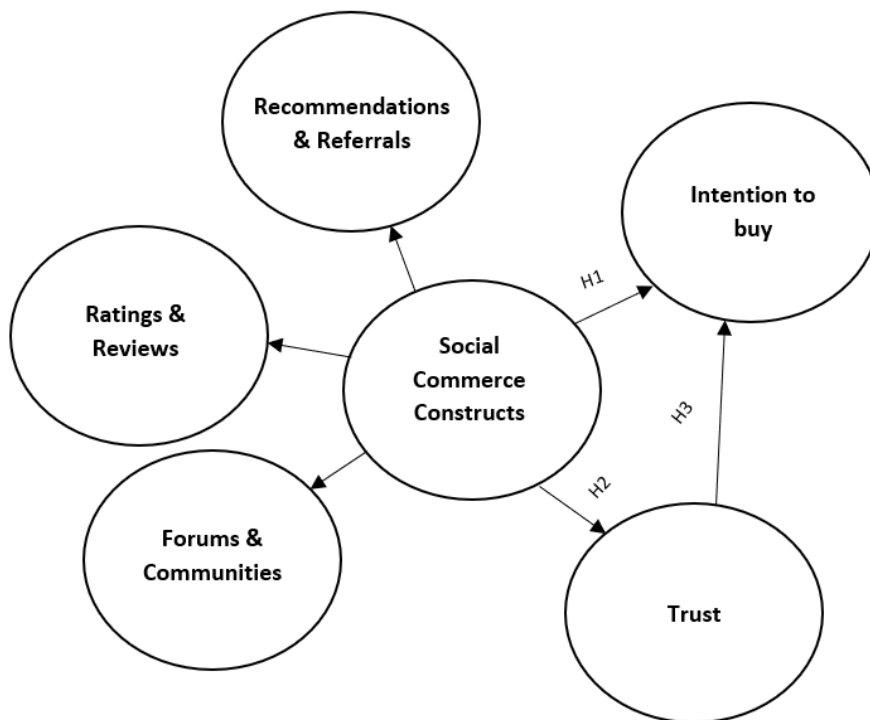


Figure 1.1. Social commerce constructs model (Hajli, 2015)

An investigation performed by Hajli (2015) reveals three social commerce constructs. The first construct is rating and reviews which shapes social commerce. The second construct is recommendations and referrals which influence the desire to utilise social commerce to purchase and the third construct is referred to forums and communities known to facilitate social interactions.

Ratings and reviews depicted in Figure 1.1 shapes social commerce and determines the credibility and trustworthiness of a brand. Individuals post product reviews and rate products

online (Hajli, 2015) and consumers in turn base their decision-making on this. These ratings and reviews provide potential customers with comprehensive information about products (Hajli, 2015).

Referrals and Recommendations are very popular and are widely used amongst consumers. When shopping online, consumers are not able to pick up, touch or even try products, hence why online shopping is regarded as a risky purchase (Hajli, 2015). However, with the help of referrals and recommendations by others on a platform, consumers are able to gain further insight on products and services. Users of this platform look out for the opinion of others by searching for information which has already been posted or by posting a question of a product or service which they seek an answer to (Hajli, 2015). Users' decision-making is therefore influenced by the information posted on these communities (Hajli, 2015).

Forums and communities is the third construct of the model and facilitate social interaction between individuals participating on the platform. Individuals who belong to these online communities support and help others by sharing information and their experiences respectively thus allowing others to view information about favoured products and services. Therefore, individuals are able to support one another through conversations and social interactions on these platforms (Hajli, 2015).

This concludes social commerce and the way forward for this study. Online shopping is a new phenomenon yet to be embraced by innovators (Lee, Qu & Kim, 2007). Recent studies have made strong connections between brand and personal innovativeness and age in a social commerce environment however, there are gaps within this topic to be explored.

2.3 Woolworths

Woolworths is one of the top businesses listed in the JSE Limited Securities Exchange and has presence in sub-Saharan Africa, New Zealand and Australia (WHL, 2020b,2021). The large retail brand offers a wide range of products from clothing to food and homeware. According to WHL (2021) by 2025, their existing social commerce platform is expected to grow three times faster than traditional e-commerce. In order to establish long-term relationships with its customers, the large retailer prides itself on upholding its fundamental values of quality and style, value for money, service, innovation, integrity, energy, and sustainability as well as ensuring that their products are safe, healthy, ethically sourced, and

do not harm the environment. (Dos Santos, Svensson, & Padin, 2013) and (Luiz, Bowen & Beswick, 2011).

2.4 Brand innovativeness

Innovativeness is a topic that has been explored from different perspectives (Pappu, Pascale & Quester, 2016) because it is a broad concept (Salavou, 2004). According to Crespo and Del Bosque (2008) innovativeness is the explanation for the adoption of new products. Innovations can transform markets, create new markets and ultimately shift a market by introducing new technology (Nguyen, Yu, Melewar & Chen, 2015). The capacity and ability to innovate can impact business performance on a large scale (Hult, Hurley & Knight, 2004). It is crucial for any firm to be aware of innovation orientation and innovation capability, as these two constructs lay down the grounding for brand innovativeness in the mind of the consumer. A firm needs to communicate those two constructs to customers in a clear, successful and persuasive manner regarding their product or service to target customers. Innovativeness is defined by Hult, Hurley and Knight (2004) as a firm's ability to engage in innovation through the introduction of new processes, products, and ideas within the organization. Product innovativeness (Kleinschmidt & Cooper, 1991), organisational innovativeness (Pallas, Böckermann, Goetz & Tecklenburg, 2013) and firm innovativeness (Rubera & Kirca, 2012) are all at different levels in an organisation whereas the topic of this study is brand innovativeness and is the extent to which customers believe a brand can create creative and helpful methods to meet their needs (Pappu and Quester, 2016). Brand innovativeness according to Barone and Jewell (2014) is the extent to which consumers perceive a brand to be innovative. In this study, brand innovativeness refers to the perception of the consumer on the ability of a brand to introduce innovations into the market and acts as a positive signal that influences consumer perceptions about the quality of the brand (Pappu, Pascale & Quester, 2016). Furthermore, personal innovativeness and age respectively are the moderating variables. A moderator variable reshapes the strength or direction between variables (Herrando, Jimenez-Martinez & Martin-De Hoyos, 2019). These variables are further explained.

2.5 Personal innovativeness

Agarwal and Parasad (1998) define the term personal innovativeness as “the willingness of an individual to try out new technology”. Personal innovativeness is a lifetime personality trait (Lu, 2014) and is the reason for why people react differently when presented with innovations (Walley, Goodall, Humphries, Huntington, White & Asson, 2017). Research has been conducted before regarding personal innovativeness in new technologies, including online shopping. These particular studies indicated that an individual's level of technology usage behaviour is determined by his or her own level of personal inventiveness (Lee, Qu & Kim, 2007). An individual's personal innovativeness has been investigated as a theory of risk-taking tendencies because online shopping is said to be more risky than offline purchasing, whereby highly innovative shoppers are more likely to welcome and adopt online shopping (Lee, Qu & Kim, 2007); (Thakur ,Angriawan,Summey, 2016) and (Walley, Goodall, Humphries, Huntington, White & Asson , 2017).

2.5.1 Personal Innovativeness in the domain of Information Technologies

Questions arose as to why certain individuals adopt to new information technologies quickly whilst others simply reject them. (Amoroso & Lim , 2015:665) defines consumer innovativeness as a “rich and multifaceted construct, where innovativeness could be defined as the innate tendency to early adopt, or to have self-confidence and self-efficacy, or to be risk-taking.”(Agarwal & Prasad, 1998) introduced the “Personal Innovativeness in the domain of Information Technologies model (PIIT)” and defined personal innovativeness as is the degree to which a person believes he or she is positive toward the usage of new technologies. The PIIT construct was ultimately formulated to measure “the willingness of an individual to try out new technology” (Agarwal et al., 1998:138). In essence the PIIT model is a basis for segmenting consumer populations into innovators and non-innovators and shows that the relationship between perceptions of relative advantage, ease of use, compatibility, and the decision to accept an invention is positively moderated by personal innovativeness. Individuals with greater PIIT levels are likely to generate more favourable opinions of innovation and have more positive attitudes toward using new Information Technologies, therefore PIIT is a key moderator in technology acceptance behaviour (Lu, 2013). Amoroso and Lim (2015) further highlights that online shopping is adopted by highly innovative shoppers.

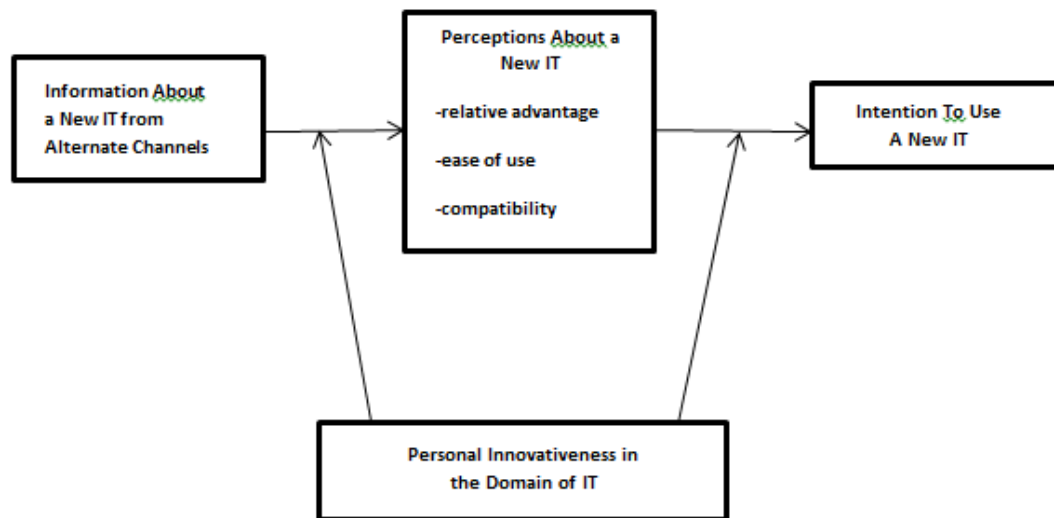


Figure 1.5. Personal Innovativeness in the domain of Information Technologies model by Agarwal and Prasad (1998)

Individuals respond to innovations differently due to their individual differences (Agarwal & Prasad, 1998), whereas Xu and Gupta (2009) stipulate that the Unified Theory of Acceptance and Use of Technology (UTAUT) identifies four key constructs that determine technology usage intention and behaviour whereas gender, age, experience and voluntariness of use are the factors mentioned on an individual level. Having established the validity of brand innovativeness and personal innovativeness in the study, the next section explores the importance of age, the different characteristics and shopping mentality of age groups. The underlying determinants of how and why people shop has always been a topic of interest (Berkup, 2014). Age is analysed in this chapter and is the other moderating variable measured against CBBE to investigate how age responds to the CBBE constructs in a social commerce context. People tend to have completely different mind-sets due to different periods in time and thus having different personalities, viewpoints and values. Age groups are defined by birth years and last 20–25 years, or as long as it takes for one birth group to mature, age, and have their own offspring (Lissitsa & Kol, 2016). Each age group have different motivations, reasons and a certain manner of using the online media (Fietkiewicz, Baran, Lins & Stock, 2016). For the purpose of this study, the age groups discussed are between 40-55, 25-39 and 18-24.

2.6. Age

Technological innovation is portrayed as a social and multidimensional process whereby it involves participation as well as interaction of individuals from different generations (Mothe & Nguyen-Thi, 2021). This is further emphasised by Molinillo, Aguilar-Illescas, Anaya-Sánchez, and Liébana-Cabanillas (2021) state that age is a common characteristic influences users' behavior in the online context.

The fundamental factors that influence how and why individuals shop have always been a research area (Berkup, 2014) and behaviour displayed by an individual upon receiving external stimulation is influenced by age (Huaman-Ramirez & Merunka, 2019). Age is analysed in this chapter and is the other variable measured in the study by moderating brand innovativeness and CBBE and how age responds to the CBBE variables in a social commerce context. Different periods in time allow for different personalities amongst people. The cause of this is directly related to changes in economy, culture and politics (Berkup, 2014). For the purpose of this study, the age groups discussed are between 40-55, 25-39 and 18-24.

2.6.1 Age group (40-55)

Generation x (40 years - 55 years) is a reactive generation born from 1961 to 1979 whom grew up with both economical and societal uncertainty such as industrial restructuring, organisational downsizing, contractions in government and increased rates of temporary unemployment (Krahn & Galambos, 2014) however are one of the most highly educated generations (Jackson, Stoel & Brantley, 2011) and are seen as savvy in terms of technology and media, they are skeptic and pragmatic, very individual and self-reliant individuals (Lissitsa & Kol, 2016) (Reisenwitz & Iyer, 2009). This generation grew up with promotions rather than brand advertising which is the cause of lack of brand loyalty however in odd occasions their loyalty may last six to eight months (Reisenwitz and Iyer, 2009). According to Jackson, Stoel and Brantley (2011) Generation x is driven due to early disappointment with cultural icons, the constant change in internet as well as the profound desire to enrich their daily lives through relationships and activities.

2.6.2 Age group (25-39)

Generation y (25 years - 39 years) , also known as “Echo Boomers, the Millennium Generation, Generation Next, Generation why? And Net Generation” (Reisenwitz and Iyer, 2009) are the babies of the generation x and have been socialised in terms of family, school and mass media into consuming earlier than previous generations (Bakewell & Mitchell, 2003). Generation y also have a significant purchasing power according to Bakewell and Mitchell (2003) whom are obsessed with fashion (Valaei & Nikhashemi, 2017) and are open to new ideas and concepts relating to conspicuous shopping behaviour. However Kim and Jang (2014) adds that they are also status seeking consumers. Giovannini, Xu and Thomas (2015) explain that for the Generation y population, luxury is a definite and is certainly not seen as a privilege but more of a right. Due to their high level of self-esteem and exceptionally high level of brand consciousness, generation y’s who stem from college students and become established in the workforce make purchasing judgments depending on what their peers think (Giovannini, Xu & Thomas, 2015).

2.6.3 Age group (18-24)

Generation z (18 years - 24 years) born in the mid-1990s through the late 2010’s (Turner, 2015) make them the demographic cohort after Generation y’s and x’s and are the future of the global economy (Nakay, 2017). By 2020 the members of this generation will constitute 40% of the buying group (Laura, 2018). According to Noh, Runyan and Mosier (2013) young people choose to buy things that have a "cool" concept associated to them so ultimately innovativeness is an important factor for success and determines the acceptance or rejection of a new product. Generation z are entrepreneurs, innovative and independent learners (Seemiller & Grace, 2016) who have a low tolerance to delays, want anything to happen quickly and instantly and want information at their fingertips (Johnston,2013). The members of generation z known as the technology generation, born into technology rather than having to accustom to it have a profound ability in connectedness through social media platforms. Therefore managing this generation requires mastering the tools of social media (Tulgan, 2013). This generation are called “Children of Internet, Digital Generation, Digital Natives, Media Generation, .com Generation, iGen or Instant Online” (Levickaite, 2010:173). According to Turner (2015) the amount of media usage with respondents aged between 8 and 18 has reached tremendous proportions which emphasizes how generation z members are exposed to media more than any other activity.

Now that the two moderators have been discussed namely personal innovativeness and age which will affect the relationship between Brand Innovativeness and Customer-based brand equity factors. A discussion about Brand Equity and the five Customer-based brand equity factors to be tested in this study is explored.

2.7 Brand Equity

In the Marketing world, the term “brand” is a name, design or even a symbol. It may also refer to other features that distinguish goods and services from a competitor (Bang, Odio & Reio, 2014). Brand equity enables strong brands to gain competitive advantages in their specific markets, hence why brand equity is a crucial topic to be dealt with in business practise (Wang, Wei & Yu, 2008). However, a consumer’s perspective of brand equity is the perception that is held by an individual about how much better a brand is compared to another brand (Hoang, Wang, Van Ngo & Chen, 2019). Customers' mind-sets, product market outcomes, and financial market outcomes are all factors that researchers consider when looking at brand equity. The CBBE method is frequently used to assess a consumer's attitude toward brand equity (Aaker, 1991), and is explored in the next section.

2.8. Customer-Based Brand Equity

Aaker (1991) developed the first customer-based brand equity (CBBE) model, which he described as "the differential effect of brand knowledge on consumer response to brand marketing." Aaker (1991) claims that the brand equity of a brand will always have a balance of opposite forces (positive-negative brand equity) because consumers can have a more or less favourable reaction to the exact same marketing elements of other brands.

There have been no consistent methods of measuring brand equity, therefore researchers have explored brand equity measurements based on consumers ‘perspectives (Boo, Busser, Baloglu, 2009). Customer-based brand equity, according to Wang, Wei, and Yu (2008), arises when a customer becomes familiar with a certain brand and establishes a strong and distinctive brand association with it. Customer-based brand equity encompasses two components. The first component is brand strength which is the brand associations held by customer and the second component is brand value which is the positive effect of gains that accumulate when brand strength is leveraged resulting in current and future profits (Wang, Wei & Yu, 2008).

The purpose of this study is to use the Aaker (1991) customer-based brand equity framework as an empirical test to investigate brand trust, brand reputation, brand quality, brand credibility and brand loyalty variables. Customer-Based Brand Equity (CBBE) is a topic that is widely spoken of in the world of marketing and has recently gained the attention of researchers (Hoang, Wang, Van Ngo & Chen, 2019). Boo, Busser and Baloglu (2009) and Blain, Levy and Ritchie (2005) highlighted that there is a need to refine and measure CBBE because there are no set measurements to measure brand equity from a customer's perspective. These major constructs are discussed in detail below.

2.8.1 Brand trust

Brand trust is the process by which an individual develops trust in a brand, solely based on their experience with that brand. When there is trust between a brand and a customer, the customer is confident that their needs will be met by the brand (Delgado-Ballester & Munuera-Alemán, 2001). Trust may also be measured through the ability of the brand (Chaudhuri & Holbrook, 2001) to execute its promised and confirmed task (Idrees, Xinping, Shafi, Hua & Nazeer, 2015). Therefore, trust is a crucial factor to be considered in order to maintain a long term relationship with a customer (Idrees, Xinping, Shafi, Hua & Nazeer, 2015) and plays a huge role in consumers' e-commerce behaviour (Zhang & Benyoucef, 2016). Brand trust also moderates customer behaviour in terms of the before and after purchase of products as well as contributes to long-lasting loyalty. According to Gözükarar and Çolakoğlu (2016) trust is a significant component in behavioural and attitudinal loyalty, which determines marketing outcome-related aspects such as market share maintenance and price elasticity. Hence Idrees, Xinping, Shafi, Hua and Nazeer (2015) suggest that the loyalty or commitment consumers feel towards a brand is directly measured against the outcome of trust. Idrees et al. (2015) further explains that brand trust results in commitment to a specific brand, reason being that trust in a relationship between a producer and a consumer is highly valued, especially by the latter.

The general overall satisfaction by a consumer generates from trust because it is an indication that a brand has been consistent with its promise where mentally for the consumer, the brand has protected and taken care of their welfare and interests. Nonetheless, taking into consideration the condition of involvement to motivate an individual to trust a brand as a means of managing and moderating the inherent risk associated, it is therefore hypothesised that:

H₁ Personal innovativeness moderates the relationship between brand innovativeness and brand trust.

H₆ Age moderates the relationship between brand innovativeness and brand trust.

Brand reputation is discussed in the next subsection.

2.8.2 Brand reputation

Brand reputation is the opinions of others that a brand is reliable and of good quality (Selnes, 1993), therefore any firm needs to own qualities such as honesty and trustworthiness to keep a good reputation. A reputation outlines the experience with third parties, whereby it opens doors for a potential exchange in the future (Idrees et al., 2015). Example, if a consumer thinks that other people are in favour of a specific brand, that consumer begins to trust the brand adequately enough for consumption needs. The innovativeness of a firm directly influences a company's overall reputation (Chun, 2006). Chun further states that Corporate Social Responsibility (CSR) as well as innovation within a firm are key elements for sustainable reputation. Following the discussion above, and taking overall satisfaction as a comprehensive overview of total purchase and consumption experience with a brand into account, it is therefore reasonable to expect that:

H₂ Personal innovativeness moderates the relationship between brand innovativeness and brand reputation.

H₇ Age moderates the relationship between brand innovativeness and brand reputation.

Brand quality is discussed in the next subsection.

2.8.3 Brand quality

Brand quality is “the recognition of product quality” (Chepchirchir & Leting, 2015:8). Regarding consumer perception, brand quality is the ultimate driver of sales for any business (Morton, 1994). Customers look out for quality signal cues such as advertising, price, the warranty, the brand name, the country of origin of the product and the store name to evaluate the quality of a product line of different brands (Agrawal, Grimm, Kamath & Foscht, 2011). Brand quality harmonizes with brand value and is a construct of brand equity (Tran, Dauchez & Szemik, 2013). Therefore, we propose that:

H₃ Personal innovativeness moderates the relationship between brand innovativeness and brand quality.

H₈ Age moderates the relationship between brand innovativeness and brand quality.

Brand Credibility is discussed in the next subsection.

2.8.4 Brand credibility

Brand credibility is the consumer's response to a brand. Brand credibility deems to be present when a consumer assesses the brand's ability and the terms of exchange versus the expected performance is met. In other words, the products of a brand should carry through its promise of value to customers (Erdem & Swait, 2004). Credibility is the internal and subjective response from consumers and is fulfilled when consumer expectations are satisfied and his or her needs are met (Gurviez & Korchia, 2003). Jiménez-Barreto, Rubio, Campo and Molinillo (2020) highlight that this is a process where a brand is perceived as faithful, not only to itself but to its consumers too. A faithful brand to consumers is one that shows empathy and fulfils its key responsibilities. According to Erdem and Swait (2004:191) brand credibility is described as "the believability of the product position information contained in a brand", In other words, people perceive a brand's trustworthiness when they believe it has delivered and will continue to deliver on its promises. Credible signs as such are what set the brand apart from other marketing mix elements (Erdem & Swait, 2004). It is therefore hypothesised that:

H₄ Personal innovativeness moderates the relationship between brand innovativeness and brand credibility.

H₉ Age moderates the relationship between brand innovativeness and brand credibility.

Brand loyalty is discussed in the next subsection.

2.8.5 Brand loyalty

Brand loyalty plays a crucial role in CBBE, therefore an important brand performance metric (Pappu & Quester, 2016) and occurs once a customer has a relatively high attitude towards a brand and this is proven through repetitive buying behaviour (Idrees, Xinping, Shafi, Hua & Nazeer, 2015). It is further stated that brand loyalty has a strong commitment to repurchase or alternatively repatronise a preferred product or service repeatedly in the future, which inevitably results in a repetitive purchase of the same brand, however it must be mentioned that switching behaviour from one brand to another exists within consumers and a brand needs to ensure that its marketing efforts and situational influences are handled at all times to limit this from happening. One of the key factors to predicting consumer behaviour is by

overall satisfaction of a product or service by the consumer and consumers show their contentment with a product or service through loyalty. (Delgado-Ballester & Munuera-Alemán, 2001). Brand loyalty is a key determinant of CBBE because it can be used to measure the performance of a brand (Keller, 1991). Wang, Wei and Yu (2008) emphasize that the origin of brand equity lies in the confidence that customers place on a brand than that of its competitors whereby this confidence is later turned into customer loyalty. Brand loyalty from a consumer's perspective is to buy a brand as the first choice. (Pappu, & Quester, 2016). Customers' impressions of a brand's innovativeness have an impact on brand loyalty, however research with regards to how exactly innovativeness affects consumer loyalty still remains scarce and is a topic to be explored (Pappu et al., 2016). Nevertheless it is further explained by Hew, Lee, Ooi and Lin (2016) that social commerce activities does influence brand loyalty in a positive direction, and the following hypotheses have been developed:

H₅ Personal innovativeness moderates the relationship between brand innovativeness and brand loyalty.

H₁₀ Age moderates the relationship between brand innovativeness and brand loyalty.

2.9 Chapter summary

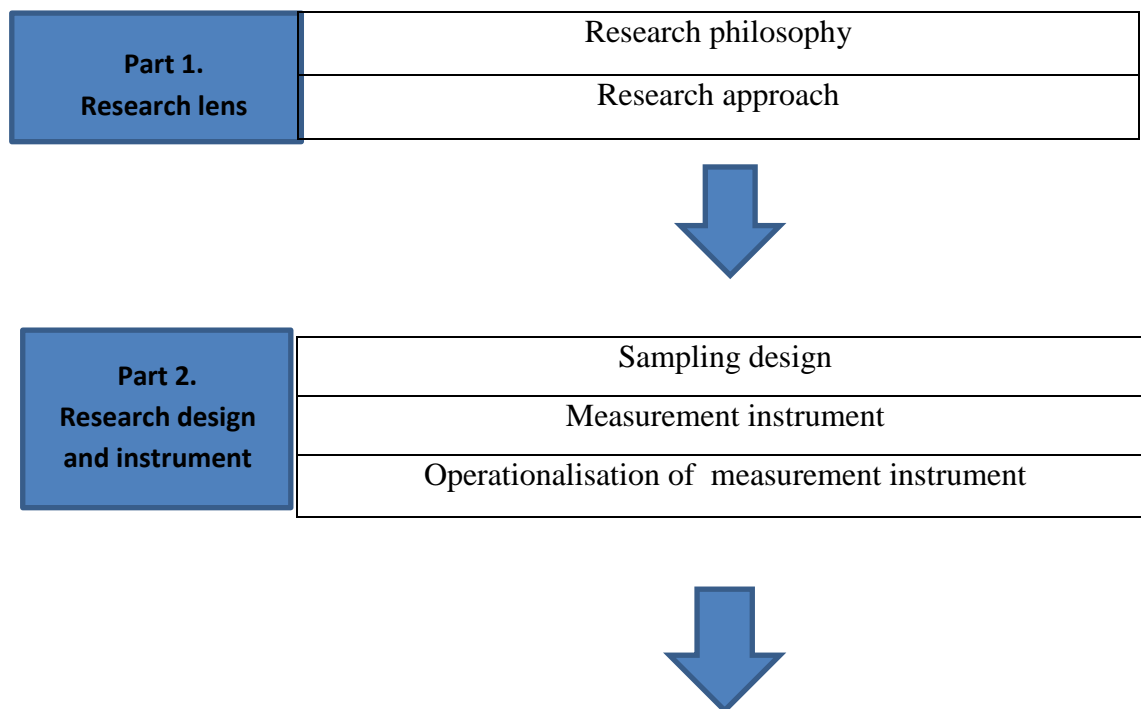
As the context for this research, social commerce is extensively discussed. Brand innovativeness is explained from a consumers perspective and personal innovativeness from an individual's perspective (Jeong, Yoo & Heo, 2009) and is discussed using the PIIT model. The age groups used in this study – (18-24), (25-39) and (40-55) is explained and discussed respectively. Age groups are connected to certain values and priorities (Jackson, Stoel & Brantley, 2011). Each age group was scrutinized in terms of characteristics, shopping behaviour, patterns and trends as well as how the mind of individuals in each age group think in terms of social commerce. Brand equity and the CBBE constructs articulated is the heart of this study in a social commerce context.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The methodological approach to this study is outlined in this chapter. Ponterotto (2004) defines methodology as the process and procedures of the research. A research methodology is the explanation of all the procedures of the research methods to be used by the researcher (Krippendorff, 2004:21). The research questions, study aims, and objectives drive the research approach (Bilau, Witt & Lill, 2018). It is also seen as the framework applied in producing research data as well as forms the analysis towards knowledge creation. This chapter discusses the research approaches, procedures, and methods that will be employed for data collecting, processing, and analysis in order to meet the study's empirical objectives. The structure of Chapter 3 is presented in Figure 3.1



Part 3. Data analysis method and quality assessment	Data analysis method
	Pre-testing (pilot study) of the instrument
	Quality of the research model
	Moderator testing

Source: Compiled by researcher (2021)

Figure 3.1: Chapter structure

Figure 3.1 depicts the structure of this chapter whereby the chapter has been divided up into parts. The research lens is the first part of this chapter, and it comprises of the research philosophy and research approach. Part 2 explores the research design and instruments used, following an elaboration on the sampling design, the measurement instruments, and the operationalisation of the measurement instruments. Part 3 discusses the data analysis and quality assessment section by describing the data analysis methods performed in this study, the pre-testing (pilot study) that is actioned before the start of the actual fieldwork to assess if the survey and quality of the measurement instruments are up to the required standard, this is then followed by an assessment of the quality of the research model by testing the research model as well as the structural model. Lastly, the chapter concludes with how the influence of the moderating variables is measured.

3.2 Research philosophy

Research philosophy relates to the nature and knowledge development of the study (Bilau, Witt & Lill, 2018), hence, it sets the context for an investigators study (Ponterotto, 2005) and determines the research strategy (Saunders, Lewis & Thornhill, 2009). Saunders, Lewis, and Thornhill (2009) state that research is viewed as an onion-shaped phenomenon. The outer layer of the onion represents the research philosophy, and the layers inward represent the research approach. The purpose of this is to assist the researcher with philosophical assumptions whilst at the same time making sure that the tools, instruments, respondents and methods to be used in the study and correct and accurate (Ponterotto, 2005). In conclusion, the research philosophy helps the researcher on how to view knowledge or a specific phenomenon. Be that as it may, research philosophies are determined by the nature of the study and are in no way superior to each other (Saunders, Lewis & Thornhill, 2009).

A Research approach constitutes three approaches, namely ontology, epistemology, and axiology and a research philosophy has four philosophies which are pragmatism, interpretivism, realism, and positivism.

Table 3.1 explores each of these approaches and philosophies, adopted from Saunders et al., (2009:119).

Table 3.1: Research approaches and philosophies

	Positivism	Realism	Interpretivism	Pragmatism
Ontology: <i>the researcher's view of the nature of reality or being.</i>	External, objective, and independent of social actors.	Is objective. Exists independently of human thoughts and beliefs or knowledge of their existence (realist), but is interpreted through social conditioning (critical realist).	Socially constructed, subjective, may change, multiple.	External, multiple view chosen to best enable answering of research question.
Epistemology: <i>the researcher's view regarding what constitutes acceptable knowledge.</i>	Only observable phenomena can provide critical data, facts. Focus on causality and law-like generations, reducing phenomena to simplest elements.	Observable phenomena provide credible data, facts. Insufficient data means inaccuracies in sensations (direct realism). Alternatively, phenomena create sensations, which are open to misinterpretation (critical realism). Focus on explaining within a context.	Subjective meanings and social phenomena. Focus on the details of situation, a reality behind these details, subjective meanings motivating actions.	Either or both observable phenomena and subjective meanings can provide acceptable knowledge, dependent upon the research question. Focus on practical applied research, integrating different perspectives to help interpret the data.
Axiology: <i>the researcher's view of the role of values in research.</i>	Research is undertaken in a value-free way, the researcher is independent of the data and maintains an objective stance.	Research is value-laden; the researcher is biased by worldviews, cultural experiences, and upbringing. These will impact on the research.	Research is value-bound, the researcher is part of what is being researched, cannot be separated and so will be subjective.	Values play a significant role in interpreting results, the researcher adopting both objective and subjective points of view.
Data collection method.	Highly structured, large samples, measurement, quantitative, but can use qualitative.	Methods chosen must fit the subject matter, quantitative or qualitative.	Small samples, in-depth investigations, qualitative.	Mix of multiple method designs, quantitative and qualitative.

Source: Compiled by researcher, based on Saunders et al. (2009)

The proposed hypotheses based on the conceptual model of this study are tested to see if they are supported or not. For this very same reason, a positivist philosophy is appropriate. In essence, the positivist position depends on quantifiable observations that can be statistically analysed. It is an objectivist perspective with a belief that factual knowledge gained through measurements is trustworthy (Onwuegbuzie, Johnson & Collins, 2009). In simpler terms, this type of study would be considered causal reality due to a large sample with quantitative data (Saunders et al., 2009). The next section will now focus on the different types of research approach.

3.2.2 Research approach

As previously mentioned by Saunders et al., (2009), the research approach is the most crucial part of any study as it outlines the nature of the study. There are two sorts of research approaches, according to the literature. The first approach is deduction and the second approach is induction (Saunders et al., 2009). A deductive technique uses quantitative data to reason from general to specific, answering the question of whether a phenomenon occurred. An inductive approach reasons from specific to general and states that a certain phenomenon did occur using qualitative data (Babbie, 2008) (Saunders et al., 2009).

More so, for a study to undergo a deductive approach, a research question must be present. This is where a hypothesis is developed for testing (Babbie, 2008). In accord, Wilson (2014) explains that a deductive approach forms assumptions which are based on present and existing theories and in turn a research plan is formed to test the assumption. This study utilises a deductive approach.

The quantitative approach, allows for the measurement of many respondents' viewpoints using close-ended questions. Due to this reasoning, it enables a researcher to compare and analyse results statistically because the questions have a limited set of answers. Quantitative research differs from qualitative research in that it provides more depth and richness on a smaller group of people (Patton, 1987). Creswell, Hanson, Clark Plano and Morales (2007) explains a qualitative study as a type of educational research based on respondents' views, broad and general questions, and analyses the responses to these question for themes. This approach aims to provide more contexts to results by capturing the experiences of

respondents in their own words, in order to understand the motives that dictate why people act the way they do.

All in all, the constructs in a conceptual model need to be operationalised and measured using quantitative data and a deductive approach (Saunders et al., 2009). The process for operationalizing the constructs is described in section 3.3.

3.3 Research design

Research designs place certain procedures in place and dictate how a study will meet its objectives by identifying a research problem, the hypotheses and objectives (Creswell, Plano Clark, Gutmann & Hanson, 2003) (Rahi, 2017). In essence, this study is based on a positivist philosophy, hence the sample of customers was selected using a deductive approach and a quantitative method. The research method was cross-sectional in nature making it a descriptive study. A descriptive study is an examination of a group of people at a certain point in time (Babbie, 2008), in other terms, these statistics estimate a population and provide association between the variables (Kelley, Clark, Brown, & Sitzia, 2003).

3.3.1 Units of analysis

For the purpose of this study, the units of analysis is groups of people divided into different age groups of 40-55 , 25-39 and 18-24.

3.3.2 Sampling design

Sampling is essential to research studies as it assists researchers to obtain information on the whole population segment, by accurately acquiring results on the properties of a finite part of a statistical population (Webster, 1985). Sampling designs can be broken down into sub section namely, the population, sample size, sampling frame and sampling method. These are discussed below.

3.3.2.1 Population

Target population is a group of individuals to be investigated by a researcher. In order to conclude a population, a researcher considers many elements before making the final call. These elements include topic of interest, availability, time frame and geographical boundaries (Sekaran & Bougie, 2016). In accordance, Babbie (2008) states that a certain population is only finalized once all mandatory elements are present. Due to South Africa's ethnic

diversity, racial groups have been identified. According to Van der Berg, Siebrits and Lekezwa (2010) South Africa constitutes the following ethnic groups, namely blacks, coloureds, Indians, and whites. The target population for this study is Generation x (40-55 year olds), Generation y (25-39 year olds) and Generation z (18-24 year olds) South African social commerce users, of all ethnicities. Also, For the purpose of this study, the Asian race was also included.

3.3.2.2 Sampling frame

A sampling frame is defined as a specific group of the people from a population where a sample is taken (Zikmund, 2003). This study focuses on South African social commerce users of all ethnicities between the ages of 18 and 55.

3.3.2.3 Sample size

Sample size is determined by the sample size of the study at hand and refers to the number of respondents from whom the researcher collected information from for the study (Lamb, Hair, McDaniel, Boshoff, Terblanche, Elliott & Klopper, 2010). Babbie (2010) highlights that 100 respondents or less is not a good representation for a sample. The greater a study's sample size, the more accurate the data collections (Lamb et al., 2010). This study comprised a final sample size of 434 respondents whereby section A of the questionnaire consists of questions relating to the variables under investigation and section B comprises of questions pertaining to the demographic profile of the respondents. SmartPLS (Partial Least Squares) was the statistical programme used to obtain the results of this study. SmartPLS may only be used if the sample size is equal or larger than 10 times the largest number of indicators used to measure the constructs or 10 times the largest number of structural paths directed at a particular construct in the structural model (Hair et al., 2011). Furthermore, Barret (2007) states that a sample size should have at least 200 respondents and five to ten observations per item to be deemed reliable (Schreiber, 2008).

3.3.2.4 Sampling method

Sampling is the process of making observations for a study (Babbie, 2008). Because of the generalization of the sample, this study used a self-administered internet survey via a link emailed out to the population. The purpose of this method is to acquire a large number of responders while lowering the sampling error. The advantage of a random stratified sampling method is that no sample is selected from a total population and because of this a researcher can ensure that the information obtained will not be homogenous (Babbie, 2008) as the persons in the population are selected randomly. The rule of thumb for using the stratification method is including social class, race, gender and age (Babbie, 2008).

3.3.2.5 Measurement instrument

An online self-administered questionnaire was used in this investigation as the measurement tool because data collection in the form of a survey is executed by means of an online questionnaire which is “a structured technique for data collection that consists of a series of questions written or verbal, that a respondent answers” (Malhotra, 2006:335).

The process of data collection started off by sending the survey via an accessible link that to random respondents and these respondents responded to questions in the online survey which was divided into section A and section B. According to Babbie (2008) a respondent is someone who responds to a survey questionnaire whether that be online or offline. A respondent can also be referred to as a person who provides data for future analysis. The survey was closed after reaching 580 valid responses only from South African social commerce users.

Multiple factors were taken into consideration to create a well-structured and precise survey. The reason for why a survey was utilized for this study is because of its many advantages. Surveys are cheap to conduct, is able to reach a great number of people efficiently, due to the survey being online, border restrictions are none and lastly, this kind of data collection can be managed and collected quickly. To increase the response rate, the survey was kept simple with no unambiguous questions and included an Instagram visual to make sure that all the respondents understood the context of the study.

Likert scales were included and were the same for all constructs being tested. To ensure that the respondents felt they were participating in a credible survey, the logo of the University

was included on the first page of the survey. Lastly, a time of completion was provided to the respondents so they would feel more at ease.

The survey began with dichotomous questions to ensure that the correct respondent has been targeted for the study. The survey also used 5-point Likert scales to ensure respondents have more choices to choose from. Considering the fact that mobile devices are more commonly used, a Likert-scale worked well (Dawes, 2008) and all 7 constructs in the study were measured with a 5-point Likert scale.

The Likert scale dictates the level of respondent agreement or disagreement towards a construct. Each construct in the model, a 5-point Likert scale was used – ranging from 1= ‘strongly disagree’ to 5 = ‘strongly agree’ (Ryu & Yoon, 2009) whereby the respondent was asked to what extent they agreed or did not agree with the statement. The last section of the survey comprised of demographic questions to obtain personal information.

The first scale measures the brand innovativeness construct taken from Gözükarar and Çolakoğlu (2016). This evaluates the respondents’ opinion of brand innovativeness regarding the social commerce firm. A high score on this scale would mean the respondents think highly of the social commerce firms brand innovativeness, while a low score signified the opposite.

The second scale measures the personal innovativeness construct, and is taken from Lee, Qu and Kim (2007). This question evaluated the respondents’ personal innovativeness about new technologies. A low score would mean the respondent is hesitant to new innovations, while a high score would mean the respondent would be the first to accept and try new innovations.

The third scale measures the brand trust construct, and is taken from Delgado-Ballester and Munuera-Alemán (2001). This question evaluated the respondents brand trust towards the social commerce firm. A high score would display high levels of trust towards the firm whereas a low score would display low levels of trust towards the firm.

The fourth scale measures the brand reputation construct and is taken from Veloutsou and Moutinho (2009) and Jurisic and Azevedo (2011). The brands reputation of the firm was evaluated through the respondents own personal perspective. A high score would signify that the firm is a reputable brand in the eyes of the respondent and a low score would mean the opposite.

The fifth scale measures the brand quality construct and is taken and adapted from Severi and Ling (2013). A high score on the questions would mean the respondent thinks the social commerce firm delivers quality whereas if the score is low, the firm does not meet the brand quality requirements.

The sixth scale measures the brand credibility construct and is taken from Erdem and Swait (1998) and Kim, Morris and Swait (2008). A high score on the questions would mean that the firm is credible and a low score would mean the firm is not credible.

The seventh and last scale on the questionnaire measures the brand loyalty construct taken from Kim and Kim (2005). A high score would signify a high level of loyalty towards the firm and a low level would display the opposite.

The demographic items and the questions including their scales can be found in the Appendix.

3.3.3.6 Operationalisation of measurement instrument

Following an in-depth literature review after a well-designed conceptual model, the next step is measuring the constructs and collecting empirical data. A construct according to Babbie (2008) is a creation backed by theory and an observation for which cannot be observed directly or indirectly. This process is therefore called operationalisation and explains how the specific variables in a study will be measured (Babbie, 2008). The process of operationalisation follows suit with existing literature, hence this study adapted existing scales of each construct to suit the context of the study. The adopted scales used in this study were reliable and valid from past research mentioned below which proved to be reliable and valid. A pilot test was also conducted to ensure the above-mentioned.

3.3.4.1 Brand Innovativeness

To measure brand innovativeness, this study adapted and adopted Gözükarar and Çolakođlu (2016) items.

Table 3.2: Measurement items of brand innovativeness

ITEMS	MEASUREMENT ITEMS
BI1	This brand is more creative than its rivals.
BI2	This brand is pioneer in its category through its innovations.
BI3	This brand is the first thing to come to mind when the subject is innovation.
BI4	This brand is a pioneer in its category.

Source: Compiled by researcher (2021), based on Gözükarar and Çolakođlu (2016)

3.3.4.2 Personal Innovativeness

For the measurement of personal innovativeness, this study adopted and adapted Lee, Qu and Kim (2007) items.

Table 3.3: Measurement items of personal innovativeness

ITEMS	MEASUREMENT ITEMS
PI1	If I heard about a new technology, I would look for ways to experiment with it.
PI2	Among my peers, I am usually the first to try out new information technologies.
PI3	In general, I am hesitant to try out new information technologies.
PI4	I like to experiment with new information technologies.

Source: Compiled by researcher (2021), based on Lee, Qu and Kim (2007)

3.3.4.3 Brand trust

To measure brand trust, Delgado-Ballester and Munuera-Alemán (2001) measurement items were adopted and adapted.

Table 3.4: Measurement items of brand trust

ITEMS	MEASUREMENT ITEMS
BT1	The brand offers me a product with a constant quality level.
BT2	The brand helps me to solve any problem I could have with the product.
BT3	The brand offers me new products I may need.
BT4	The brand is interested in my satisfaction.
BT5	The brand values me as a consumer of its product.
BT6	The brand offers me recommendations and advices on how to make the most out of my product.

Source: Compiled by researcher (2021), based on Delgado-Ballester and Munuera-Alemán (2001)

3.3.4.4 Brand reputation

The measurement items of Veloutsou and Moutinho (2009) and Jurisic and Azevedo (2011) were adapted to measure brand reputation. Their scale consists of the following items:

Table 3.5: Measurement items of brand reputation

ITEMS	MEASUREMENT ITEMS
BR1	This brand is trustworthy.
BR2	This brand is reputable.
BR3	This brand makes honest claims.

Source: Compiled by researcher (2021), based on Veloutsou and Moutinho (2009) and Jurisic and Azevedo (2011)

3.3.4.5 Brand quality

For the measurement of brand quality, this study adapted Severi and Ling (2013) items.

Table 3.6: Measurement items of brand quality

ITEMS	MEASUREMENT ITEMS
BQ1	This brand provides prompt services at the promised time.
BQ2	This brand handles customer complained effectively.
BQ3	This brand gives individual customer attention.

Source: Compiled by researcher (2021), based on Severi and Ling (2013)

3.3.4.6 Brand credibility

For the measurement of brand credibility, this study adapted Erdem and Swait (1998) and Kim, Morris and Swait (2008) items.

Table 3.7: Measurement items of brand credibility

ITEMS	MEASUREMENT ITEMS
BC1	This brand delivers what it promises.
BC2	This brand's product claims are believable.
BC3	You just can't believe what the ads say about this brand.
BC4	My experiences with this brand make me wary of their claims.
BC5	This brand has a name you can trust.
BC6	This brand is at the forefront of using technology to deliver a better product.
BC7	This brand reminds me of someone who is competent and knows what he/she is doing.

Source: Compiled by researcher (2021), based on Erdem and Swait (1998) and Kim, Morris and Swait (2008)

3.3.4.7 Brand loyalty

The measurement items of Kim and Kim (2005) were adapted and adopted to measure brand loyalty. Their scale consists of the following items:

Table 3.8: Measurement items of brand loyalty

ITEMS	MEASUREMENT ITEMS
BL1	I regularly visit Woolworths.
BL2	I intend to visit Woolworths again.
BL3	I usually use Woolworths as the first choice compared to other ones.
BL4	I am satisfied with Woolworths.
BL5	I would recommend Woolworths to others.
BL6	I would not switch from Woolworths to another brand.

Source: Compiled by researcher (2021), based on Kim and Kim (2005)

3.5 Data analysis method

Structural Equation Modeling (SEM) and SmartPLS 3.0 software package were the two programmes used to analyse the data for this study. However, for this to be made possible data was imported from Qualtrics Software to Microsoft Excel for cleaning, coding and organising so it would be suitable for statistical analysis. Structural Equation Modeling (SEM) was the first programme used to test the relationships in the conceptual model. SEM is a widely used programme for research related purposes (Sarstedt, Ringle, Smith, Reams & Hair, 2014); (Hair, Ringle & Sarstedt, 2011). SEM allows “researchers to simultaneously examine a series of interrelated dependence relationships between a set of constructs, represented by several variables, while accounting for measurement error. SEM’s ability to simultaneously test relationships incorporated into an integrated model has contributed to its widespread application” (Sarstedt et al., 2014:105) and because of this it has become the mostly used programme to test cause-effect relationships between latent constructs (Hair et al., 2011). In essence, SEM allows models and theories to be tested (Hair et al., 2011), and its main advantage is the ability to test latent constructs on an observational level within the measurement model as well as the relationships of these latent constructs on a theoretical level within the structural model (Hair et al., 2012).

Despite the importance of using SEM which is a covariance- based approach, another type of approach was developed and introduced. This is a variance-based approach known as the Partial Least Squares approach (PLS) (Hair, Sarstedt, Hopkins & Kuppelwieser, 2014) and was the second programme utilised for this study. It is usually referred to as SmartPLS, and

the SmartPLS 3.0 software package was employed in this investigation (Ringle, Wende & Becker, 2015). Partial Least Squares Structural Equation Modeling (PLS-SEM) is a popular method used not only in marketing studies but in other disciplines too (Hair et al., 2012) (Henseler, Ringle & Sinkovics, 2009), because it is a reliable approach to measuring complex models and has the ability to overcome the challenges that researched face only using SEM (Hair et al., 2011). The advantage of PLS is that it can be used where other methods are not suitable, it also avoids problems from a sample size and it is able to analyse the reflective and formative sides of data (Henseler et al., 2009). PLS is able to analyse data even if the data is not distributed normally, this happens in the case of a small sample size or in a formative evaluation of latent constructs (Hair et al., 2014).

When data is not normal, it does not follow the rules of normal distribution, resulting in a formative variable in which the indicators cause the variable rather than the variable causing the indicators (Hair et al., 2014; Hair et al., 2012). According to literature, a latent construct cannot be observed directly (Diamantopoulos, 1999), hence why Hair et al., (2011) further highlights that in order to identify and measure key predictor variables, PLS-SEM method should be used. The aim of this research is to find out more about the moderating effect of age and personal innovativeness respectively on brand innovativeness and customer-based brand equity factors (brand trust, brand reputation, brand quality, brand credibility and brand loyalty) among South African social commerce users of all ethnicities. The PLS-SEM method was chosen over the covariance-based SEM due to its statistical power in parameter estimates and the ability to maximize the understood variance (Tajvidi et al., 2018) (Rigdon, Ringle & Sarstedt, 2010) (Sarstedt, Ringle & Hair, 2014). PLS-SEM also has a higher level of prediction over CB-SEM. PLS-SEM is able to perform multiple regression analysis and is far more effective to simultaneously estimate relationships between one or more independent and dependent variables (Hair et al., 2017). For the purpose of this study and its complicated model which involves moderation and small sample size, PLS-SEM is the most suitable approach making ordinary multivariate data less prone.

Prior to conducting the needed fieldwork, a pilot study was done to test the quality of the measurement instruments. Once the pilot test was approved, the fieldwork began and the data was collected, the results were analysed, the measurement model's reliability and validity were determined, and the hypotheses were tested.

3.6 Quality of the research model

The reliability and validity of a research model are the factors that determine its quality. Many measures are in place to allow for this type of testing.

To put this into perspective, a structural equation model and its latent constructs has two components. The first component is known as the outer model which is the measurement model, and this measurement model consists of the predictive relationships between the constructs and the indicators. The second component is the inner model, namely the structural model and this model depicts the paths and the relationships between the constructs (Hair et al., 2011). As previously mentioned, a pilot study was conducted to control the reliability and validity of the measurement instruments of this study and 40 respondents were used.

3.6.1 Testing the instrument

The pilot study was an important aspect of this study to assess the model's quality, thus 40 people took part in a pilot test to assess the measurement instruments' reliability before the survey was officially launched. The aim of any pilot test is to identify any errors and inconsistencies (Malhotra, 2010), this is the first advantage of performing a pilot test.

The second advantage is the gathering of data, which gives the researcher an idea of what will be learned from the data in order to answer the research question. This is a crucial phase as it will determine whether the researcher will need to redesign the study or perhaps fix minor errors that occurred (Adams, Khan & Raeside, 2014). The data obtained from the 40 respondents was collated, cleaned, coded and imported to the SmartPLS statistical programme. The programme based its measurements on the conceptual model and measured the Cronbach Alpha (CA) of all the constructs namely, personal innovativeness, age, brand innovativeness brand trust, brand reputation, brand quality, brand credibility and brand loyalty which should have a value of at least 0.70 (Chin, 2010). The Composite Reliability (CR) for all the constructs was also measured and where the value should also be of at least 0.70 (Chin, 2010), as well as the Average Variance Extracted (AVE) for all the constructs which should have a minimum value of 0.50 (Hair et al., 2012).

3.6.2 Measurement model

The relationships between the instruments and the constructs are formed by the measurement model, which is depicted as the outer model. To verify the quality of the measurement model,

the reliability and validity of the model needs to be measured (Hair et al., 2014). The reliability tests the consistency of the measurement and the validity tests whether or not the instruments of the study is measuring what needs to be measured. Considering the above mentioned, a PLS-SEM algorithm ensures the measurement of the reliability and validity of the study.

3.6.2.1 Reliability

To specifically test reliability, the CR and the CA is measured. These two tools measure the reliability of indicators and should both have a value of at least 0.70 as an acceptable threshold (Hair et al., 2012; Hair et al., 2011). If a value of below 0.60 is achieved for the CR, this means that there is no presence of reliability within the measurement instruments (Hair et al., 2011). The same applies for the CA which specifically measures the internal consistency of the instruments within the conceptual model (Chin, 2010). Hair et al., (2014) interestingly points out that CA is the standard approach when testing for internal reliability however, a CR is said to be a more accurate measure. The reason being that the indicator loadings from a CA measurement are equal in population thus do not portray an accurate measurement of internal reliability.

3.6.2.2 Validity

Upon testing the validity of a measurement model, two tests need to be performed namely, convergent validity and discriminant validity (Hair et al., 2011).

3.6.2.2.1 Convergent validity

The AVE is the tool used to measure convergent validity. The accepted value of the convergent validity needs to have a value of at least 0.50 (Hair et al., 2011). When such a value is achieved, the latent variable has explained more than half of its indicators variance which results in the measuring of the variance by a latent construct (Hair et al., 2012).

3.6.2.2.2 Discriminant validity

The primary use of testing the discriminant validity of a study is to test the relationships between the latent variable of the conceptual model (Henseler, Ringle & Sarstedt, 2015). The cross loadings approach and the Fornell-Larcker criterion (Henseler et al., 2015) are the tools used to measure discriminant validity. The purpose of the cross loading is to determine if a latent construct shares variance with its specific indicators in the conceptual model and not

with the other indicators present in the model (Hair et al., 2011). In simpler terms, the AVE of a latent construct has to be much higher than the latent constructs squared correlation than any other latent construct of the model (Hair et al., 2011) (Hsu, 2008). This is depicted on a cross loading table and enables the researcher to check if whether or not the root of the AVE has a higher value compared to the off-diagonal value. All in all, these results will show if measurements that are ment to be unrelated, are in fact related (Hair et al., 2011). However, a different way to test discriminant validity was introduced by Henseler et al., (2015) called the Heterotrait-Monotrait Ratio of Correlations (HTMT) and will be the tool used in this study, specifically HTMT.85 because of its conservative nature which consists of low specificity rates and strict standards. Therefore, this approach is sensitive in nature and more effective in determining weak discriminant validity (Henseler et al., 2015). The reason for choosing this approach is that the cross loadings and Fornell-Larcker criterion both lack the ability to effectively detect a lack of discriminant validity (Henseler et al., 2015). In order to use this model, the HTMT criterion needs to be selected to assess the discriminant validity using the selected HTMT criterion (Henseler et al., 2015).

3.7 Structural model

The structural model is referred to as the inner model and is where path coefficients are derived from. Path coefficients test the strength of the relationships between the variables (Hair et al., 2014). In order to establish the path coefficients of a model, Rsquare (R²) and Stone-Geisser's Q² are used. To put this into perspective, the R² testing tool estimates the significance of the relationships between the dependent and independent variables and the Q² estimates the amount of variance by the independent variable which is typically the extent to which a dependent construct is determined by the independent construct (Hsu, 2008).To specifically test for path coefficient significance, bootstrapping is used (Hair et al., 2011). According to Hair et al. (2014:112) "bootstrapping is a resampling technique that draws a large number of subsamples from the original data (with replacement) and estimates models for each subsample. This way, the researcher obtains a large number (typically 5,000 or more) of model estimates, which can be used to compute a standard error of each model parameter". The significance is then measured by t-values (Hair et al., 2014). A sample of at least 5 000 needs to be present for the bootstrapping technique to work because the number of cases need a set number of observations (Hair et al., 2011), and for this study a set number of 434 was used. After performing this technique, the researcher should keep all the indicators

that are the acceptable weight and load and discard the indicators that do not (Hair et al., 2011).

It is important to note that during this process path coefficients values can vary from -1 to 1 and this refers to how strongly negative or strongly positive an indicator is (Hair et al., 2014). The next step uses SmartPLS using the bootstrapping tool (Hair et al., 2012). In this next step R2 values and Q2 values are established. For the R2 test to be acceptable, values need to be between 0,75, 0.50, or 0.25 (Hair et al., 2011), however for this kind of research a value of 0.20 may be considered acceptable (Hair et al., 2011). The Q2 is tested by measuring each construct using a blindfolding tool. When using SmartPLS to obtain these values, the omission distance value (d) must be between 5 and 10 (Hair et al., 2012; Hair et al., 2011), in saying this, this study used the default d value of 7. Upon obtaining the results of the Q2, the results should be larger than 0. This means that the independent variable has power over the dependent variable (Hair et al., 2011). This study aims to achieve the required standard of reliability and validity by using existing and proven scale, more so by conducting a pilot study to test the accuracy of instruments and ensure a well conducted study overall.

3.8 Moderator testing

Studies conducted by Jianlin and Qi (2010) and Khan, Hollebeek, Fatma, Islam and Riivits-Arkonsuo (2020) used age and personal innovativeness as moderators. This study consists of the same moderators however in an entirely different context. To test for moderation, Baron and Kenny's (1986) method will be utilised with the study's final sample size of 434 (Frazier, Tix & Barron, 2004). The moderating test developed by Baron and Kenny's (1986) is made up of four steps. Step one identifies the significance of the relationship between the independent and dependent variable excluding the moderator. Step two, establishes if a relationship exists between the independent variables and the moderator, in this case age and personal innovativeness as previously mentioned. This step also reveals if the moderators are significant on the dependent variables. The final step measures the entire conceptual model to test the relationships between the independent and dependent variables. If the value of this final step is zero, this means full moderation exists and if the value is below zero, this signifies partial moderation.

3.9 Chapter Summary

This chapter provided a very complex explanation of the procedures and methods that will be used to achieve the required results of this study. The first part of the chapter discusses the research methodology and the second part the data analysis methods. The research methodology section covered and identified the research philosophy and approach of the study before anything, followed by a thorough research design, the chosen sampling design most appropriate to conduct this study and the operationalisation of the latent variables.

The study followed a quantitative approach and utilised self-administered online surveys of 434 respondents, and followed a PLS-SEM analysis method. Furthermore, the study targeted South African social commerce users of all ethnicities between the ages of 18 and 55. The data analysis method comprised of a pilot testing section to ensure the quality of the measurement instruments and the methods used to assess the quality of the research model followed by an explanation and justification of the use of the PLS-SEM statistical programme to obtain the results of this study. Lastly, the moderator testing method was explained. The next chapter, chapter 4 executed all the methods discussed in this chapter and presents the data obtained.

CHAPTER 4

DATA ANALYSIS RESULTS AND DISCUSSION

4.1 Introduction

The study's research design and methodology were discussed in the previous chapter. The sample selection and composition, questionnaire creation, data collection, and statistical analysis were all described thoroughly. The current chapter discusses the study's pilot and major survey empirical findings, as well as the analysis and presentation. The statistical analysis and results generated from the collected data are presented in this chapter. An overview of the descriptive statistics is provided, an analysis of the reliability and validity of the measurement instruments is examined, and structural equation modelling analysis is conducted and presented. Moreover, moderation analysis was conducted, to determine the moderating effect of age and personal innovativeness.

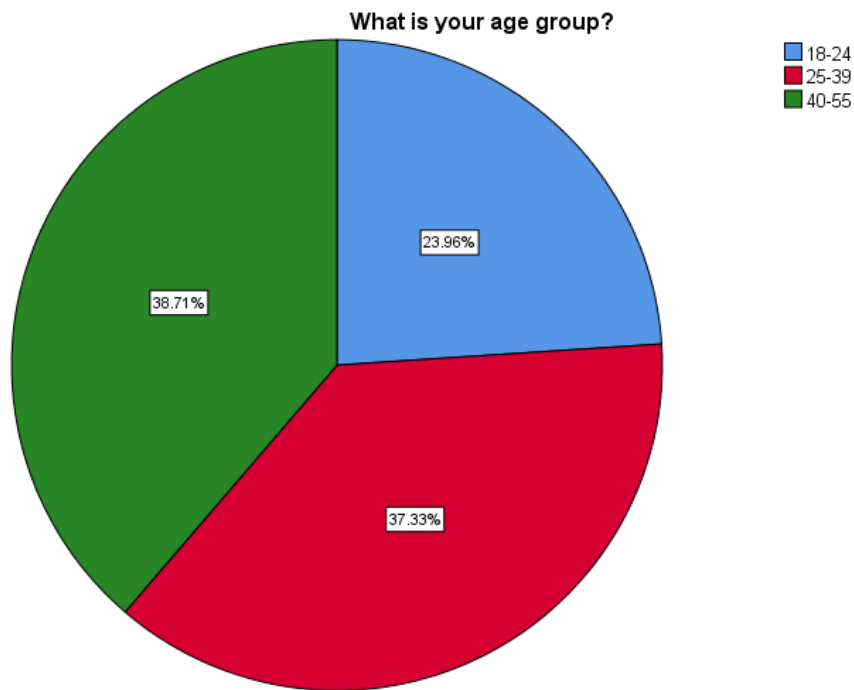
4.2 Main survey results

Out of the initial aimed sample size of 581 questionnaires, the realized sample size was 434 which were complete after missing values and outliers were checked, resulting in a response rate of 74.6 percent. 147 of them were invalid because several questions on the questionnaire were left unanswered. If respondents believe the study is significant and demands their participation, they are more likely to complete it.

4.3 Demographic statistics of the sample

The socio economic descriptors used in the survey are indicated by demographic data, which is referred to as information classification (Malhotra, 2010). Pie charts are used to illustrate the data gathered. Section A of the questionnaire relates to the demographic information of the total sample, which refers to the participants' age, gender, race, province of residence, highest qualification, current employment status, current household monthly gross income, citizenship status, status of having an active social media account, familiarity with the Woolworths brand and favourite social networking site frequently used. These are discussed below.

4.3.1 Age



What is your age group?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	104	24.0	24.0	24.0
	25-39	162	37.3	37.3	61.3
	40-55	168	38.7	38.7	100.0
Total		434	100.0	100.0	

Results in Figure 4.2.1 represent the parameters for what the study defines as age. In this study, age was considered across all age groups, namely generation z (18-24), generation y (25-39) and generation x (40-55). As is illustrated, 104 out of 434 participants were between the ages of 18 and 24. This age group represents 24% of the study's respondents. Note that all participants in this study were male and female. 37% of respondents were between the ages of 25 and 39, representing generation y, and 168 respondents were from generation x, which were the majority of respondents between the ages of 40 and 55 and constituted a total response rate of 38% of the study's participants. This shows that the majority (38%) of the respondents were from the eldest generation x between the ages of 40-55, referred to as young adults.

Other demographic information measured was gender, race, province of residence, highest qualification, current employment status, current household monthly gross income, citizenship status, status of having an active social media account, familiarity with the Woolworths brand and favourite social networking site frequently used. This information forms part of Appendix A – Breakdown of demographics.

The following section elucidates the descriptive statistics computed in this work.

4.4 Descriptive Statistical Analysis

The analysis proceeded to determine the level of respondents’ agreement or disagreement for each construct. Considering that a five-point Likert scale was applied in this work, the minimum and maximum values that were computed ranged between one (strongly disagree) and five (strongly agree), respectively. Nonetheless, mean scores of 3.0 and greater were maintained $[1+2+3+4+5) = 15 \div 5 = 3.0]$ in this study. On the other hand, values of ± 1 ranging between 0.640 and 1.149 were considered preferable along the standard deviation as they indicated close distribution of the variables around the arithmetic mean. The high standard deviation indicates that the respondents agreed with the variable although there is discriminance in terms of their responses per individual construct. Table 5.1 presents the results of the descriptive statistics at both item and construct level.

Table 4.1: Descriptive statistical results

Scale	N	Minimum	Maximum	Mean	Standard Deviation	Excess Kurtosis	Skewness
Brand innovativeness							
BI1	434	1	5	3.774	0.768	0.134	-0.295
BI2	434	1	5	3.719	0.779	0.200	-0.400
BI3	434	1	5	3.002	0.922	-0.206	-0.005
BI4	434	1	5	3.608	0.791	0.204	-0.444
Personal innovativeness							
PI1	434	1	5	3.809	0.799	1.199	-0.838
PI2	434	1	5	3.247	0.958	-0.756	-0.101
PI3	434	1	5	3.809	0.907	0.901	-0.951
PI4	434	1	5	3.735	0.883	0.210	-0.624
Brand trust							
BT1	434	1	5	4.230	0.729	1.255	-0.959
BT2	434	1	5	3.597	0.784	-0.077	-0.136
BT3	434	1	5	3.770	0.796	0.373	-0.581
BT4	434	1	5	3.800	0.831	0.276	-0.554
BT5	434	1	5	3.682	0.837	-0.185	-0.315

BT6	434	1	5	3.565	0.818	-0.313	-0.284
Brand reputation							
BR1	434	1	5	4.353	0.649	0.650	-0.756
BR2	434	1	5	3.892	0.743	0.153	-0.363
BR3	434	1	5	4.101	0.724	0.506	-0.631
Brand quality							
BQ1	434	1	5	3.742	0.736	0.155	-0.316
BQ2	434	1	5	3.505	0.838	0.458	-0.321
BQ3	434	1	5	3.359	0.872	-0.179	-0.014
Brand credibility							
BC1	434	1	5	3.894	0.707	0.988	-0.630
BC2	434	1	5	3.929	0.645	1.650	-0.654
BC3	434	1	5	3.896	0.662	0.881	-0.552
BC4	434	1	5	3.899	0.718	0.629	-0.598
BC5	434	1	5	4.182	0.663	0.818	-0.601
BC6	434	1	5	3.535	0.803	-0.040	-0.166
BC7	434	1	5	3.972	0.685	0.334	-0.396
Brand loyalty							
BL1	434	1	5	4.025	0.963	0.775	-1.044
BL2	434	1	5	4.373	0.640	2.307	-1.002
BL3	434	1	5	3.565	1.149	-0.920	-0.328
BL4	434	1	5	4.182	0.706	2.296	-0.944
BL5	434	1	5	4.203	0.712	0.898	-0.739
BL6	434	1	5	3.281	1.094	-0.853	-0.014

Table 4.1 (above) the brand innovativeness scale obtained a mean value between 3.002-3.774, indicating that respondents moderately agreed with the statements reflecting innovativeness in the social commerce firm on average. The standard deviation for brand innovativeness ranged from 0.768 – 0.922, thus indicating that all participants, more or less had the same response/point of view regarding each statement. None of the participants deviated far enough to be considered to have widely differing responses from the majority of respondents. The SD values for brand innovativeness are below two (2), hence indicating no issues of outliers.

In Table 4.1 (above) the scale measuring Personal Innovativeness in social commerce obtained mean values between 3.247 and 3.809 , indicating that the average respondents somewhat agreed with statements reflecting an open mind regarding new technologies in a social commerce environment. The standard deviation for Personal Innovativeness ranged from 0.799 – 0.958, thus indicating that all participants, more or less had the same response/point of view regarding each statement. None of the participants deviated far

enough to be considered to have widely differing responses from the majority of respondents. The SD values for brand innovativeness are below two (2), hence indicating no issues of outliers.

The scale measuring Brand Trust in Table 4.1 (above) obtained mean values between 3.565 and 4.230 indicating, that respondents moderately agreed with the statements reflecting Trust towards the social commerce firm. The standard deviation for Brand Trust ranged from 0.729 to 0.837, thus indicating that all participants more or less had the same response/point of view regarding each statement. None of the participants deviated far enough to be considered to have widely differing responses from the majority of respondents. The SD values for Brand Trust are below two (2), hence indicating no issues of outliers.

Table 4.1 (above) the Brand Reputation scale obtained mean values between 3.892 and 4.353, indicating that on average, respondents moderately agreed with the statements reflecting the reputation of the social commerce firm. The standard deviation for Brand Reputation ranged from 0.649 to 0.743, thus indicating that all participants more or less had the same response/point of view regarding each statement. None of the participants deviated far enough to be considered to have widely differing responses from the majority of respondents. The SD values for Brand Reputation are below two (2), hence indicating no issues of outliers.

The scale measuring Brand Quality in Table 4.1 (above) obtained mean values between 3.359 and 3.742, indicating that respondents moderately agreed with the statements reflecting quality in the social commerce firm. The standard deviation for Brand Quality ranged from 0.736 to 0.872, thus indicating that all participants more or less had the same response/point of view regarding each statement. None of the participants deviated far enough to be considered to have widely differing responses from the majority of respondents. The SD values for Brand Quality are below two (2), hence indicating no issues of outliers.

Table 4.1 (above) the Brand Credibility scale obtained mean values between 3.535 and 4.182, indicating that respondents moderately agreed with the statements reflecting a credible social commerce firm on average. The standard deviation for Brand Credibility ranged from 0.645 to 0.803, thus indicating that all participants, more or less had the same response/point of view regarding each statement. None of the participants deviated far enough to be considered to have widely differing responses from the majority of respondents. The SD values for Brand Credibility are below two (2), hence indicating no issues of outliers.

The scale measuring Brand Loyalty in Table 4.1 (above) obtained mean values between 3.281 and 4.373, indicating that respondents moderately agreed with the statements reflecting loyalty towards the social commerce firm. The standard deviation for Brand Loyalty ranged from 0.640 to 1.149, thus indicating that all participants more or less had the same response/point of view regarding each statement. None of the participants deviated far enough to be considered to have widely differing responses from the majority of respondents. The SD values for Brand Loyalty are below two (2), hence indicating no issues of outliers.

As shown in Table 4.1. (above) , the mean values for brand trust ranged from 3.565 to 4.230 (out of 5.0) and were computed for all the constructs examined in the study. This indicates an inclination of the ‘agree’ and ‘strongly agree’ positions on the Likert scales. Hair, Black, Babin, Anderson and Tatham (2014) state that a small SD value lies closer to the mean and shows respondents’ responses are consistent. On the contrary, a large SD value lies further away from the mean and shows that responses are varying (Hair et al., 2014). Furthermore, the value of an SD should be less than 1 however, Drost (2011) suggests that a value of less than 2 should be included to ensure there are no issues of outliers. In saying that, as per Table 4.1, brand trust had the highest SD value of 0.729 and the lowest SD value of 0.837. This shows that the data points are clustered around the mean. Brand trust consisted of SD values below 2, indicating that there was no presence of outliers for the brand trust variable.

4.5 Statistical analysis procedure

The most recent software version, SMART-PLS 3.2.7, was utilized to analyse the data collected. This method was chosen over the covariance-based SEM due to its statistical power in parameter estimates and the ability to maximize the understood variance (Tajvidi et al. 2018) (Rigdon, Ringle & Sarstedt, 2010) (Sarstedt, Ringle & Hair, 2014). PLS-SEM also has a higher level of prediction over CB-SEM (Hair et al. 2017). PLS-SEM is able to perform multiple regression analysis and is far more effective to simultaneously estimate relationships between one or more independent and dependent variables. The use of PLS-SEM assesses path coefficients, multi-linear regression and confirmatory factor analysis (CFA), a multivariate research technique. This enables variation in dependent variables using a structural template analysis (Hair et al., 2010, 2017). Partial Least Squares Structural Equation Modelling is best suited for complicated models which involve moderation and small samples making ordinary multivariate data less prone (Vlajčić et al., 2019). This research study consisted of a measurement model where the measurements represented the

latent variables as well as the direction of the connection from the construct or latent variable to the measure (Diamantopoulos & Winklhofer, 2001). The statistical analysis performed by PLS-SEM includes measures such as: the measurement model (testing of reliability analysis and validity analysis) and the structural model analysis (examining the path coefficients between observed coefficients).

4.6 Summary accuracy statistics for the model

The statistical measures of accuracy tests shown in Table 5.2 specify the different measures used to assess the reliability and validity of the study's constructs.

Table 4.2: Accuracy statistics analysis for the model

Research constructs	Variable	Cronbach's test		CR	AVE	Factor loadings
		Item total	α			
PI	-	-	0.845	0.895	0.681	-
	PI1	0.622	-	-	-	0.751
	PI2	0.687	-	-	-	0.830
	PI3	0.641	-	-	-	0.791
	PI4	0.781	-	-	-	0.919
BI	-	-	0.819	0.881	0.651	-
	BI1	0.544	-	-	-	0.721
	BI2	0.706	-	-	-	0.854
	BI3	0.588	-	-	-	0.774
	BI4	0.726	-	-	-	0.868
BT	-	-	0.831	0.876	0.542	-
	BT1	0.553	-	-	-	0.691
	BT2	0.615	-	-	-	0.732
	BT3	0.586	-	-	-	0.753
	BT4	0.685	-	-	-	0.793
	BT5	0.660	-	-	-	0.776
	BT6	0.515	-	-	-	0.666
BR	-	-	0.807	0.887	0.724	-
	BR1	0.556	-	-	-	0.786
	BR2	0.706	-	-	-	0.875
	BR3	0.725	-	-	-	0.887
BQ	-	-	0.839	0.903	0.756	-
	BQ1	0.639	-	-	-	0.851
	BQ2	0.738	-	-	-	0.872
	BQ3	0.743	-	-	-	0.886
BC	-	-	0.879	0.906	0.580	-
	BC1	0.661	-	-	-	0.757
	BC2	0.738	-	-	-	0.805
	BC3	0.691	-	-	-	0.768

	BC4	0.638	-	-	-	0.716
	BC5	0.736	-	-	-	0.814
	BC6	0.502	-	-	-	0.640
	BC7	0.717	-	-	-	0.815
BL	-	-	0.897	0.921	0.660	-
	BL1	0.707	-	-	-	0.776
	BL2	0.685	-	-	-	0.782
	BL3	0.765	-	-	-	0.816
	BL4	0.698	-	-	-	0.836
	BL5	0.742	-	-	-	0.864
	BL6	0.722	-	-	-	0.798

4.7 Measurement Model Assessment

The measurement model analysis provides a confirmatory assessment of reliability, convergent validity and discriminant validity.

4.7.1 RELIABILITY ANALYSIS

4.7.2 Cronbach's coefficient alpha test

The internal consistency of each construct in the study was tested using Cronbach's coefficient alpha. According to Malhotra (2010), the closer the co-efficient is to 1.00, the greater the internal consistency of the items in the scale. This study exceeded the recommended threshold of 7.0 where all the alpha values ranged from 0.807 to 0.897 as shown in Table 4.2. This showed that all the scale items aligned with the same underlying constructs (Hair et al., 2010). Furthermore, the item-total correlation values were between 0.502 and 0.781, above the cut-off point of 0.5 and revealed that convergence was present among the measured items (Anderson & Gerbing, 1988).

4.7.3 Composite reliability (CR)

The results of composite reliability are shown in Table 4.2. (above). The results revealed CR indexes between 0.876 and 0.921. These CR levels exceeded the criteria of greater than 0.70, which is recommended as adequate for the constructs' internal consistency (Nunnally, 1978; Chin, 1988), thus finding satisfactory support for the scales composite reliability. Average variance extracted (AVE). The AVE estimates in Table 4.2 reflected that the amount of variance in the indicators was accounted for by the latent construct (Neuman, 2006). All AVE values were above 0.4, thus acceptable (Fraering & Minor, 2006). AVE values indicated

indexes between 0.542 and 0.756. These results signify good levels of research scale reliability.

4.7.4 VALIDITY ANALYSIS

Convergent validity and discriminant validity were utilized to assess the validity of the latent constructs and their corresponding measurements.

4.7.5 Convergent validity

As shown in Table 4.2. (above) , the item loadings ranged from 0.640 to 0.919 and were above the recommended value of 0.5 (Aldalaigan & Buttle, 2002) and meaning that the instruments loaded well with their respective constructs, revealing an existence of convergent validity.

4.7.6 Discriminant validity: Correlation between constructs

The discriminant validity correlation coefficients of the study were below 0.70 which indicated that each variable is unique within this research (Field, 2013). As previously mentioned, the Hetero-Trait-Monotrait Ratio (HTMT) criterion (Table 4.3) (below) was used to evaluate the discriminant validity. Recent studies concluded by (Henseler, Hubona & Ray, 2016; Verkijika & De Wet, 2018) state that the HTMT method is more effective than the Fornell–Larcker’s commonly used criteria. In saying this, It is said that when taking a more conservative approach to determine discriminant validity, the HTMT value is below 0.9 or 0.85 (Maziriri, 2020; Neneh, 2019; Verkijika & De Wet, 2018). The highest obtained HTMT value in Table 4.3 is 0.889, which is below the conservative value of 0.90. As such, all the constructs meet the criteria for discriminant validity.

Table 4.3: The Heterotrait-Monotrait ratio of correlations (HTMT)

	Age	Brand credibility	Brand innovativeness	Brand loyalty	Brand quality	Brand reputation	Brand trust	Personal innovativeness
Age	1							
Brand credibility	0.175	1						
Brand innovativeness	0.138	0.631	1					
Brand loyalty	0.110	0.753	0.543	1				
Brand quality	0.065	0.752	0.488	0.563	1			

Brand reputation	0.102	0.889	0.490	0.702	0.634	1		
Brand trust	0.182	0.802	0.643	0.707	0.827	0.810	1	
Personal innovativeness	0.173	0.168	0.123	0.060	0.089	0.104	0.177	1

4.8 Structural model assessment

Inner model (structural model) Figure 6 was assessed to test the endogenous and exogenous variables' relationship. The path coefficients were obtained by applying a non-parametric, boot-strapping routine (Vinzi et al., 2010). Partial least squares – structural equation modelling technique suggested by Rigdon et al., (2010) was also used to check the moderating effect of age on the relationship between brand innovativeness and brand trust, brand reputation, brand quality, brand credibility as well as brand loyalty. Moreover, the moderating effect of age and personal innovativeness on the relationship between brand innovativeness and brand trust, brand reputation, brand quality, brand credibility, and brand loyalty was determined.

Figure 6: Structural model showing the moderation effect of personal innovativeness

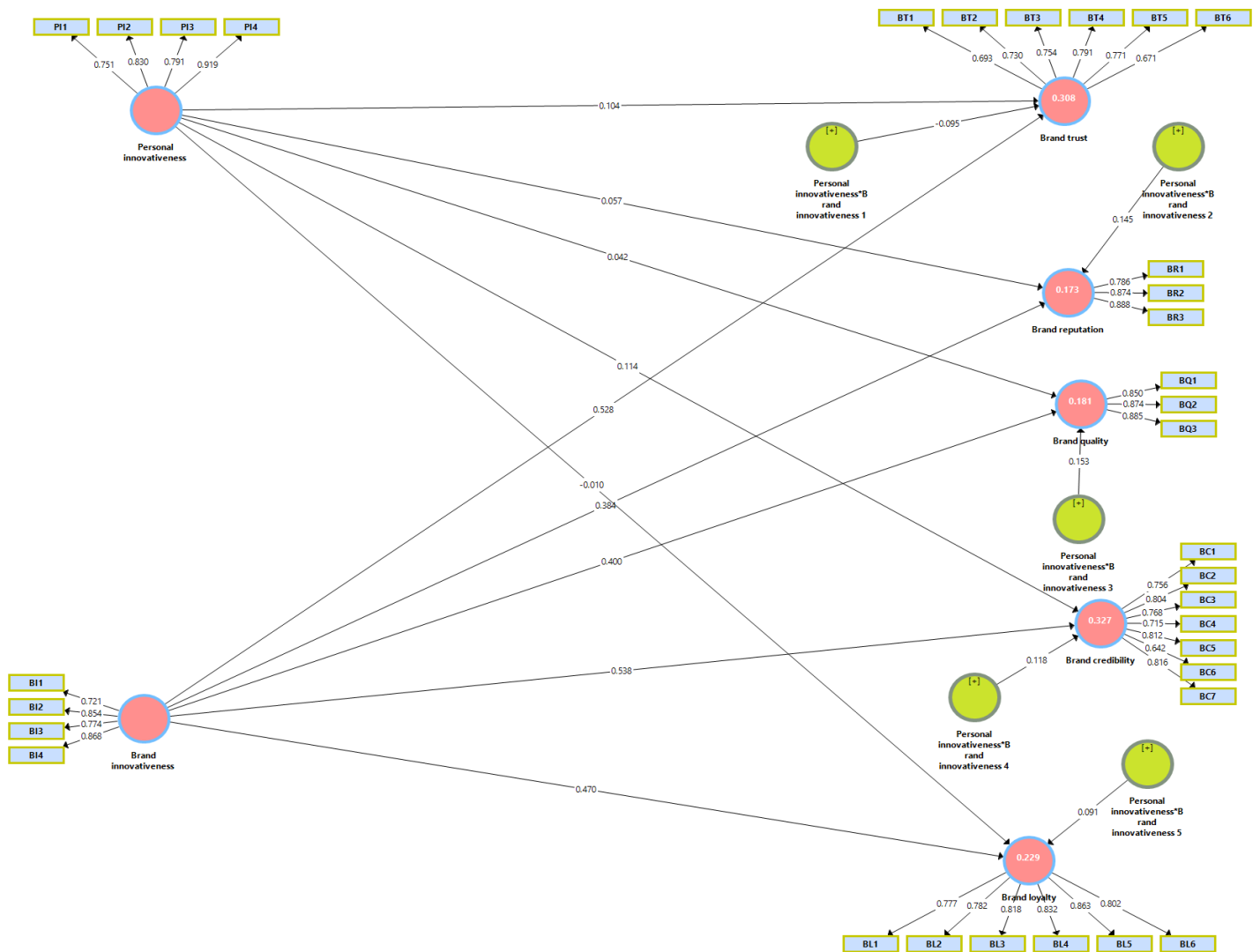


Table 4.4. Hypotheses

Hypothesis	Proposed relationship hypothesis	Beta coefficients (β)	T-statistics	P-values	Decision
H ₁	Personal innovativeness*Brand innovativeness 1 -> Brand trust	-0.095	0.651	0.515	Negative and insignificant
H ₂	Personal innovativeness*Brand innovativeness 2 -> Brand reputation	0.145	2.159	0.015	Positive and significant
H ₃	Personal innovativeness*Brand innovativeness 3 -> Brand	0.153	2.482	0.032	Positive and significant

	quality				
H4	Personal innovativeness*Brand innovativeness 4 -> Brand credibility	0.118	1.967	0.334	Positive and significant
H5	Personal innovativeness*Brand innovativeness 5 -> Brand loyalty	0.091	0.803	0.422	Positive and insignificant

4.9 Outcome of hypotheses testing

This study explored multi-dimensional constructs that of the moderating effect of personal innovativeness and age respectively, measured against brand innovativeness and customer-based brand equity within a social commerce context. A conceptual model was developed for investigating these main concepts using quantitative research methods. The goal of the study was to confirm and develop current theory surrounding the aforementioned constructs, as well as to motivate future research on these variables in the context of social commerce.

The path coefficient values and the t-values from the structural model acquired from the bootstrapping process were used to test the hypotheses in this study. According to Beneke and Blampied (2012), t-values reveal if there is a significant relationship between the variables in the model and path coefficients demonstrate the strength of the relationships in the model. Figure 6 and Table 5.4 show the standardised path coefficients and their corresponding t-values. A statistically significant relationship is expected to have a t-value that exceeds 1.96 at a 5% level of significance (Chin, 1998).

4.9.1. Outcome of testing Hypothesis 1: Personal innovativeness negatively and insignificantly moderates the relationship between brand innovativeness and brand trust.

The results obtained following the test of Hypothesis 1 confirmed that there is an unsupported relationship between the tested constructs; therefore personal innovativeness negatively and insignificantly moderates the relationship between brand innovativeness and brand trust. Personal innovativeness in the social commerce context is seen as risk-taking, and any form of online shopping involves unavoidable risk and uncertainty (Jianlin & Qi, 2010) (Amoroso & Lim, 2015). As a result of this, a path coefficient of -0.095 was realised and the T-value

obtained for this relationship was 0.651 and thus did not exceed the expected value of 1.96 to signify a significant relationship.

4.9.2 Outcome of testing Hypothesis 2: Personal innovativeness positively and significantly moderates the relationship between brand innovativeness and brand reputation.

The analysis found a remarkable result of Hypothesis 2 whereby personal innovativeness positively and significantly moderates the relationship between brand innovativeness and brand reputation showing a path coefficient of 0.145 and a T-value of 2.159. The results obtained in this study are in accord with literature, whereby Chun (2006) explores the belief that any company's reputation is built on virtuous character, which is one's accumulate perception of a firm's behaviour on the daily. Chun (2006) further explains that the concept of innovativeness in a business is a virtue that results in customer and employee satisfaction. This literature is in accordance with Gürhan-Canli and Batra, (2004) whom in their study established that the perception of innovation regarding corporate image of consumer goods affects attitudes positively. The afore-mentioned theory postulates the positive and significant moderating relationship of personal innovativeness between brand innovativeness and brand reputation.

4.9.3 Outcome of testing Hypothesis 3: Personal innovativeness positively and significantly moderates the relationship between brand innovativeness and brand quality.

Molina-Castillo and Munuera-Aleman (2009) stated that there are multiple reasons to expect that a significant relationship exists between quality and innovativeness. In contrast, the notion of quality usually takes place in a comparative context (Boisvert & Ashill, 2011). Hypothesis 3 revealed a positive and significant relationship thus the moderating effect of personal innovativeness on brand innovativeness and brand quality is positive and significant depicting the highest T-value of 2.482 and a path coefficient of 0.153. In accord with the results obtained, Agarwal and Prasad (1998) who created the adoption of innovation in information technologies (PIIT) highlight that innovative products' quality influences the innovative users' behaviour to adopt. This theory is further justified by Barnes and Hinton (2012) whereby the quality of innovations significantly influences the actual use of personal innovativeness and adoption intentions by a customer. In conclusion, according to Cho and Pucik (2005) innovativeness and quality contribute to business success.

4.9.4 Outcome of testing Hypothesis 4: Personal innovativeness positively and significantly moderates the relationship between brand innovativeness and brand credibility.

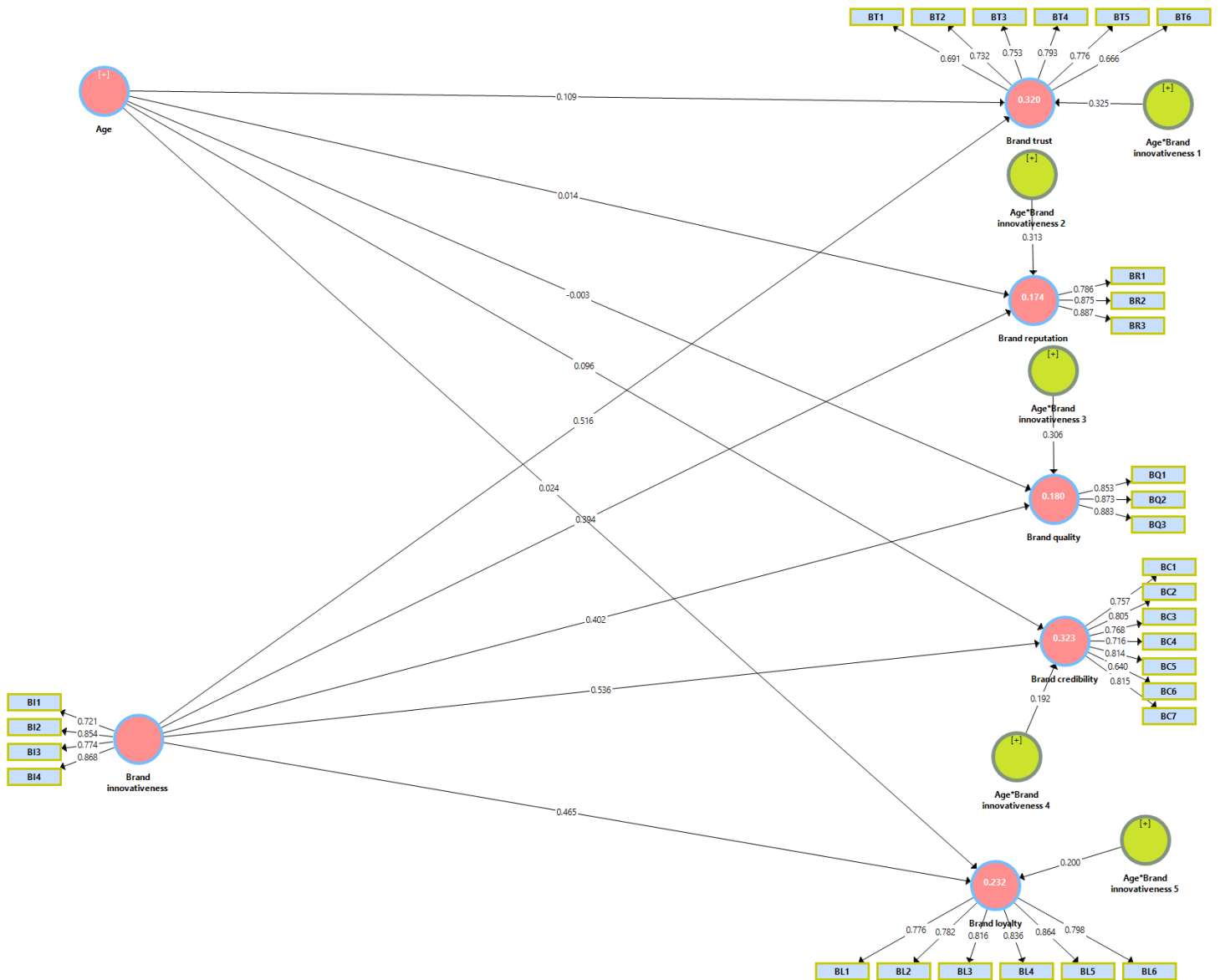
Overall, brand credibility is associated with a company's trustworthiness, which stems from other factors such as reliability, honesty, and benevolence (Gürhan-Canli & Batra, 2004). Sweeney and Swait (2008) further explain that brand credibility comprises of two components, trustworthiness and expertise. The results obtained following the test of Hypothesis 4 confirmed that personal innovativeness positively and significantly moderates the relationship between brand innovativeness and brand credibility with a path coefficient of 0.118 and a T-value of 1.967. In essence, this study was conducted on the basis of the Woolworths brand, a large retail business selling a wide range of products including clothing, food, homeware and general merchandise whom ensure consumers are aware of product authenticity and quality, and ensure that their products are safe, healthy, sourced ethically and without any harm to the environment (Dos Santos, Svensson, & Padin, 2013). Previous research outlines the essential advantages of consumers perceiving a company as trustworthy, especially because consumers are becoming more distrustful about corporate motives and conduct (Gürhan-Canli & Batra, 2004). A trustworthy reputation can help the survival of companies and build customer loyalty (Keller, 2003). Therefore if customers believe that a company is delivering on its promises, this directly contributes to higher customer satisfaction (Sweeney and Swait , 2008).

4.9.5 Outcome of testing Hypothesis 5: Personal innovativeness positively and insignificantly moderates the relationship between brand innovativeness and brand loyalty.

Hypothesis 5 poses a positive moderating effect of personal innovativeness on brand innovativeness and brand loyalty with a path coefficient of 0.091 but is deemed insignificant with a T-value of 0.803, which does not exceed the expected value of 1.96 to signify a significant relationship. Previous empirical research studies have backed up this conclusion such as that conducted by (Lian, Chen & Wang, 2012) stating that the use of information technologies in the context of personal innovativeness, showed a positive relationship towards online shopping, resulting in increased behavioural intent to use an online store. In light of the results obtained, a study conducted by (Pappu & Quester, 2016) concluded that innovativeness plays a moderating role to affect brand loyalty yet a recent survey conducted

by (Ali, 2018) showed that instead of personal innovativeness itself, perceived quality transmits the relation of brand innovativeness on brand loyalty. The theory of diffusion of innovations by Rogers, (2010) typically suggests that individual differences in personality can have an impact on their intentions to perform behaviour.

Figure 7: Structural model showing the moderation effect of age



Hypothesis	Proposed hypothesis relationship	Beta coefficients (β)	T-statistics	P-values	Decision
H6	Age*Brand innovativeness 1 -> Brand trust	0.325	2.851	0.000	Positive and significant
H7	Age*Brand innovativeness 2 -> Brand reputation	0.313	3.009	0.000	Positive and significant
H8	Age*Brand innovativeness 3 -> Brand quality	0.306	2.887	0.000	Positive and significant
H9	Age*Brand innovativeness 4 -> Brand credibility	0.192	2.704	0.041	Positive and significant
H10	Age*Brand innovativeness 5 -> Brand loyalty	0.200	2.713	0.047	Positive and significant

4.9.6 Outcome of testing Hypothesis 6: Age positively and significantly moderates the relationship between brand innovativeness and brand trust.

Hypothesis 6 confirmed that age positively and significantly moderates the relationship between brand innovativeness and brand trust with a path coefficient of 0.325 and a T-value of 2.851. Previous empirical research studies have supported this conclusion, such as that conducted by Mothe and N'Guyen (2021) who investigated the relationship between age diversity and innovation in a technological context and revealed a strong relationship between age and innovation. Greiner and Zednik (2019) concluded an investigation which examined the differences in trust and trustworthiness in age groups for which adulthood proved a positive relationship with trust and trustworthiness respectively.

4.9.7 Outcome of testing Hypothesis 7: Age positively and significantly moderates the relationship between brand innovativeness and brand reputation.

Results obtained for Hypothesis 7 showed that age positively and significantly moderates the relationship between brand innovativeness and brand reputation. The path coefficient value represented a figure of 0.313 and a T-value of 3.009. This study's findings also authenticate that age moderates the existence of a beneficial relationship between brand innovativeness and brand reputation. The present results are also backed up by empirical evidence.

Woolworths being the tested brand upholds its fundamental values of quality and style, value for money, service, innovation, integrity, energy, and sustainability in order to build long-term connections with its customers (Luiz, Bowen & Beswick, 2011) , and in so doing has created a positive attitude in consumers' of all ages that the brand is good and reliable, indirectly defining the purpose of any brands' brand reputation whereby reputation means trustworthiness, integrity and honesty (Afzal, Khan, Rehman, Ali & Wajahat, 2010).

4.9.8 Outcome of testing Hypothesis 8: Age positively and significantly moderates the relationship between brand innovativeness and brand quality.

Hypothesis 8 revealed a positive and significant moderating effect of age on brand innovativeness and brand quality with a path coefficient of 0.306 and a T-value of 2.887. This result is in line with the works of Chen and Green (2011) who examined three age groups (younger, middle and older) concerning brand equity, with one of the focuses being quality. All age groups proved a positive relationship with quality but showed different figures for each age group's outlook on quality. Woolworths Holdings Limited chosen as the brand of focus for this study has a well-known reputation of selling quality products, hence individuals from all age brackets and lifestyles purchase from Woolworths (Van der Haer, 2019) (Woolworths Annual Integrated Report, 2018).

4.9.9 Outcome of testing Hypothesis 9: Age positively and significantly moderates the relationship between brand innovativeness and brand credibility.

The results obtained for hypothesis 9 revealed that age as a moderator between brand innovativeness and brand credibility is positive and significant, showing a path coefficient of 0.192 and a T-value of 2.704. Recent studies revealed that individuals of all ages who purchase from Woolworths (Van der Haer, 2019) and credible brands may increase consumers' quality perceptions (Erdem, Swait & Louviere, 2002). Given the results about brand credibility, previous research shows that brand credibility effects on consumer utility transpire through perceived quality, perceived risk and information costs saved (Baek, Kim, & Yu, 2010) (Erdem & Swait, 2004) whereas the basis of credibility towards a brand emanates from high perceived quality, low perceived risk and low information costs. Woolworths is a trusted retailer and trustworthiness in a brand ultimately leads to the credibility of the brand, in simpler terms customers develop a sense of trust in the product and then start to value the products and the associated firm (Alam, Arshad & Shabbir, 2012).

4.9.10 Outcome of testing Hypothesis 10: Age positively and significantly moderates the relationship between brand innovativeness and brand loyalty.

This particular study's findings deemed age to have a positive and significant moderating relationship between brand innovativeness and brand loyalty with a path coefficient of 0.200 and a T-value of 2.713. These results are further justified and are in line with the works of Khan, Hollebeek, Fatma, Islam and Riiivits-Arkonsuo (2020) whom identified customer age as a key moderator in the relationship between affective commitment and brand loyalty. According to Molinillo et al., (2021) age moderates the customer-retailer relationship. Several studies have also shown that age does in fact affect consumer behaviour in social commerce (Huang & Benyoucef, 2017; Liebana-Cabanillas & Alonso-Dos-Santos, 2017).

4.10 Chapter Summary

This chapter presented results of data analysed from descriptive statistics, confirmatory factor analyses and structural equation modelling. Data was coded and the relevant frequencies were analysed to determine demographic profile descriptive statistics. The accuracy of the measurement instruments were assessed for reliability and validity. Confirmatory Factor Analysis then ensued, as well as structural equation modelling to determine the fitness of the measurement and structural models.

Results were presented from analysing the moderating effect of personal innovativeness and age separately on brand innovativeness and CBBE factors. The significance of the hypotheses were tested through path coefficient and t-value measures.

Personal innovativeness, individuals or customers' personal decision to adopt an innovation was tested as one of the moderators between brand innovativeness and CBBE factors. According to the results obtained from this study, personal innovativeness moderated the relationship between brand innovativeness and brand reputation, brand quality, and brand credibility. All three hypotheses H1, H2 and H3 proved to have a positive and significant relationship.

However, H4 the moderating relationship of personal innovativeness on brand innovativeness and brand trust tested negative and insignificant. Trust varies from person to person and users whether active or passive have different ways of evaluating trust, resulting in consumers becoming hesitant to purchase online due to the lack of trust in transaction security.

The final hypothesis H5 which also tested the moderating effect of personal innovativeness but on brand innovativeness and brand loyalty, revealed a positive yet insignificant relationship. The result of this finding may yield to be positive however, customer satisfaction and loyalty changes when consumers have different personal innovativeness.

The remainder of the hypotheses H6, H7, H8, H9 and H10 used age as the other moderator between brand innovativeness and the same CBBE factors - brand reputation, brand quality and brand credibility, brand trust and brand loyalty, respectively. Age plays an essential role in moderating whereby all five hypotheses results H6 to H10 depicted a positive and significant relationship with P-values under the 0.5 threshold. Age is also proven to moderate the relationship between positive emotions and loyalty in-store brands.

The final chapter, chapter 5 begins with an introduction to the purpose of the chapter and provides in-depth discussion of this study's theoretical and managerial contributions, followed by the limitations and recommendations for future research.

CHAPTER 5

DISCUSSION, CONCLUSIONS & RECOMMENDATIONS

5.1 INTRODUCTION

The results of this study are useful and may serve as a guide to assist companies in developing new strategies in line with the findings obtained throughout the study. Specifically, it sheds light on decisions regarding the moderating relationship of personal innovativeness and age respectively on brand innovativeness and CBBE which for the purpose of this study the variables tested were brand trust, brand reputation, brand quality, brand credibility and brand loyalty was investigated. Overall, this chapter expands on the topics discussed in this literature review and includes how this study can contribute to future marketing practitioners by discussing the theoretical and managerial implications as well as the limitations and future recommendations of the study.

5.2 CONTRIBUTIONS AND IMPLICATIONS

The following are the theoretical and managerial implications:

5.2.1 THEORETICAL IMPLICATIONS

This study adds new insight regarding personal innovativeness and age on brand innovativeness and CBBE variables in social commerce shopping behaviour. Social commerce has become the new way forward, and while studies on the topic have been undertaken in a global academic research setting, this topic and its components are still quite limited. Unlike previous studies on brand innovativeness and personal innovativeness that were investigated in different situations such as the impact of brand innovativeness and quality on attitude (Boisvert & Ashill, 2011) , Brand Equity and Innovation on the Long-Term Effectiveness of Promotions (Slotegraaf & Pauwels, 2008) , Consumer innovativeness in the context of a robotic restaurant (Hwang, Park & Kim, 2020), the effect of personal innovativeness for e-store loyalty (Jianlin & Qi, 2010) and Technological opinion leadership: the role of personal innovativeness, gadget love, and technological innovativeness_(Thakur, Angriawan & Summey, 2016). Upon concluding this study, it was found that there is no other study with this kind of context in literature. Ultimately, this study would form as a base for

further social commerce studies of this nature. Most studies have measured CBBE factors on brands and firms and their influences thereof. However, this study attempted to investigate innovativeness and CBBE through the lens of the consumer.

First, the results of the data analysis revealed for hypothesis 1, which proposed the moderating effect of personal innovativeness between brand innovativeness and brand trust, was not statistically supported. In essence, personal innovativeness is viewed as risk-taking in the context of social commerce, and any type of online shopping entails unavoidable risk and uncertainty (Amoroso & Lim, 2015).

Second, it was found that personal innovativeness positively moderates the relationship between brand innovativeness and brand reputation. A trustworthy reputation can help businesses create consumer loyalty, endure crises, and receive favourable treatment from the media (Chun, 2006). Consumers associate with brands that act with honesty and integrity, which opens the door to potential exchange (Idrees et al., 2015).

Third, the results of this study confirms the important role between quality and innovativeness whereby, hypothesis 3 proposed that personal innovativeness moderates the relationship between brand innovativeness and brand quality. In accordance with literature Agarwal and Prasad (1998), who developed the adoption of innovation in information technologies (PIIT), emphasize that the quality of innovative products influences the behaviour of innovative users to adopt. Therefore, the quality of innovations significantly influences the actual use of personal innovativeness and adoption intentions by a consumer.

Fourth, hypothesis 4, the results obtained confirmed that personal innovativeness positively moderates the relationship between brand innovativeness and brand credibility. This study was conducted on the basis of a large retail business selling a wide range of products. Once consumers perceive a brand to be trustworthy based on their corporate conduct, client loyalty is developed. Therefore, if consumers perceive that a company keeps its promises, this directly contributes to increased levels of customer satisfaction (Sweeney and Swait, 2008).

Fifth, another critical theoretical contribution of the current study was the identification of the important role of personal innovativeness on the relationship between brand innovativeness and brand loyalty that posed to be positive but insignificant with a T-value of 0.803. Individual differences in personality can have an impact on their intentions to perform

behaviour. In essence, perceived quality through the lens of the consumer is what transmits the relation of brand innovativeness and brand loyalty (Ali, 2018).

Lastly, the current study investigated the moderating role of age between brand innovativeness and all CBBE variables. All relationships with age as the moderator proved to be significant and positive, whereby age positively and significantly moderated the relationship between brand innovativeness and trust. This result has been reinforced by existing empirical research investigations, such as that by Mothe and N'Guyen (2021), who examined the relationship between age diversity and innovation and found a significant relationship between age and innovation. Greiner and Zednik (2019) reached the conclusion of a study that examined how trust and trustworthiness varied among age groups, with adulthood showing a relationship between the two. Age also positively moderated the relationship between brand innovativeness and reputation. Brand reputation is defined as reliability, sincerity, and honesty (Afzal, Khan, Rehman, Ali & Wajahat, 2010). Woolworths being the tested brand, consumers of all ages have a favourable perception of the brand and believe it to be trustworthy. All age groups demonstrated a favorable relationship with quality, albeit the outlook on quality varied for each age group. People from all age groups and lifestyles chose Woolworths because of its well-known reputation for offering high-quality goods (Van der Haer, 2019). (Woolworths Annual Integrated Report, 2018). The results also showed age having a positive and significant moderating effect on the relationship between brand innovativeness and credibility. According to recent studies, consumers of all ages who purchase from Woolworths and reliable brands may boost consumers' perceptions of quality (Erdem, Swait & Louviere, 2002). Furthermore, age also revealed to have a positive and significant moderating effect on brand innovativeness and brand loyalty. These findings were further supported by research by Khan, Hollebeek, Fatma, Islam, and Riiivits-Arkonsuo (2020), who identified consumer age as a significant moderator in the relationship between affective commitment and brand loyalty.

Furthermore, the findings of the insignificant relationship between personal innovativeness on brand innovativeness and brand trust as well as the insignificant relationship between personal innovativeness on brand innovativeness and brand loyalty found in the study raise interesting theoretical questions on personal innovativeness. This creates motivation for future studies.

5.2.2 MANAGERIAL IMPLICATIONS

Considering the conclusion of the study, managerial implications are important as it outlines how any firm can improve their current and future business practises. These recommendations can be used at any organisational level of a firm.

The results emphasise the insignificant moderating effect on personal innovativeness between brand innovativeness and brand trust. This calls for the attention of firms to reevaluate their current business strategies and to look at the development of strategies pertaining to social commerce where trust can be built using trust drivers in their respective platforms. One of the strategies applied in marketing is to focus on nurturing a positive brand reputation, which can develop into brand trust and at a later stage brand loyalty. In accordance, Nadeem, Khani, Schultz, Adam, Attar and Hajli (2020) highlight that social support and social presence increase trust and therefore firms should facilitate how social interactions takes place in the social commerce setting.

Second, the study also revealed that the moderating effect of personal innovativeness on brand innovativeness and brand loyalty, was not supported. It is no surprise that an individual's own perception of a brand is directly linked to one's personal innovativeness, which differs from person to person. Loyalty towards a brand can only occur once a customer has a relatively high attitude towards a brand and this is proven through repetitive buying behaviour. In essence, this result provides managerial implications. Given the fact that consumers who are loyal to a brand are more likely to recommend the brand to others. It is advised that a lifetime loyalty program be offered to both existing and new customers. Customers will consider the brand concerned about them in the long run. Such initiatives will increase the likelihood of consumers saying favourable things about the brand.

Third, Instagram is the new business channel for social commerce and was used as the social networking site in this study due to the way in which it is able to connect the buyer to consumers (Abed, 2018). Employing other social media platforms as a means of advertising can be advantageous in discovering reviews straight from consumers, thus allowing marketing practitioners to adjust products to consumers' satisfaction.

Fourth, this study was conducted through the consumer rather than the firm itself in terms of an individual's level of personal innovativeness to buy a product on a social commerce platform. Personal innovativeness is a personal attitude, and as a result, internal perceptions may differ. This is an intriguing topic with managerial implications, emphasizing the importance of ongoing market research and customer interviews to guarantee that all consumer wants are addressed to their own satisfaction.

Lastly, there is a revelation of new relationships between all the variables within the conceptual model, between brand innovativeness and CBBE variables and how personal innovativeness and age moderate each relationship respectively. This study aims to provide marketing practitioners and brands with more information on the market of social commerce. With these findings, brands can determine the appropriate tactics to this very specific online market, as well as devising the right marketing strategies to reach this market efficiently.

5.3 LIMITATIONS OF THE STUDY

The study's limitations are now explored. To begin, this study only used a single data collection strategy, which was a quantitative approach. Perhaps if a mixed method approach was used, the results could be a lot more insightful. Second, because the study concluded with 434 respondents after cleaning, the sample does not represent all South African social commerce shoppers. Another element to consider is the study's target audience, which was limited to South African social commerce users. The generalizability of social commerce studies in other countries will be limited as a result of this. Finally, the firm and brand that were used in this study (apparel, footwear, accessories, and homeware) may provide different outcomes than other brands.

5.4 RECOMMENDATIONS FOR FUTURE STUDIES

This study could be of help to explore age as the moderator even further by perhaps separating age into a younger and older generation, whereas Loureiro and Roschk (2014) conducted a study regarding atmospheric cues and emotions, concluding that a younger consumer is likely to be different from that of an older consumer and how age could generate different behaviour. Second, future research may use triangulation methodology to combine qualitative and quantitative research designs, with a qualitative design being used to provide

rich ideas and explanations. To support each other, it will be beneficial to use both qualitative and quantitative paradigms. A qualitative design may be useful for creating follow-ups to the quantitative design's responses. As a result, these follow-ups validate the quantitative responses. Thirdly, this study was conducted using a local retail store and the findings in the study revealed that personal innovativeness is an individual attitude and because of that very same reasoning, internal perspectives may differ in another industry. Perhaps if another store in competition with the chosen store had to be compared against each other in order to see in what direction innovation within consumers is headed at present.

Go Green movement has become a major trend in business whereas the concerns of environmentalism for many consumers, is a sensitive topic and could be another area to explore personal innovativeness and sustainable consumption.

As witnessed, innovativeness is a driving force behind economic and social change. However, there has been an increasingly interest in the management of innovation in terms of technological innovation. In today's modern society, a topic as such could definitely be a pioneer for future innovations as well as steering the economic and social change in the same direction.

Overall, additional research questions such as the following could be addressed in future:

1. Are there any downsides of innovation for brand equity?
2. Can innovation ever lead to consumer confusion, frustration or mistrust?
3. Can branding and design influence the consumer in terms of adoption of innovations?

These recommendations and future research questions can assist with new means of future research and will be helpful by reducing the pitfalls identified in this study.

5.5 CHAPTER SUMMARY

An investigation was concluded on the moderating effect that personal innovativeness and age respectively had on the relationship between brand innovativeness and CBBE variables (Brand trust, Brand reputation, Brand quality, Brand credibility and Brand loyalty). The findings established that all relationships with age as the moderator proved to have positive and significant relationships, whereas, unexpectedly, the moderating relationship of personal

innovativeness on brand innovativeness and brand trust and personal innovativeness on brand innovativeness and brand loyalty showed no positive or significant relationship. Overall, the results of this study contributed to how managers can put strategies in place to improve their relationships with social commerce users based on the recommendations and future research provided.

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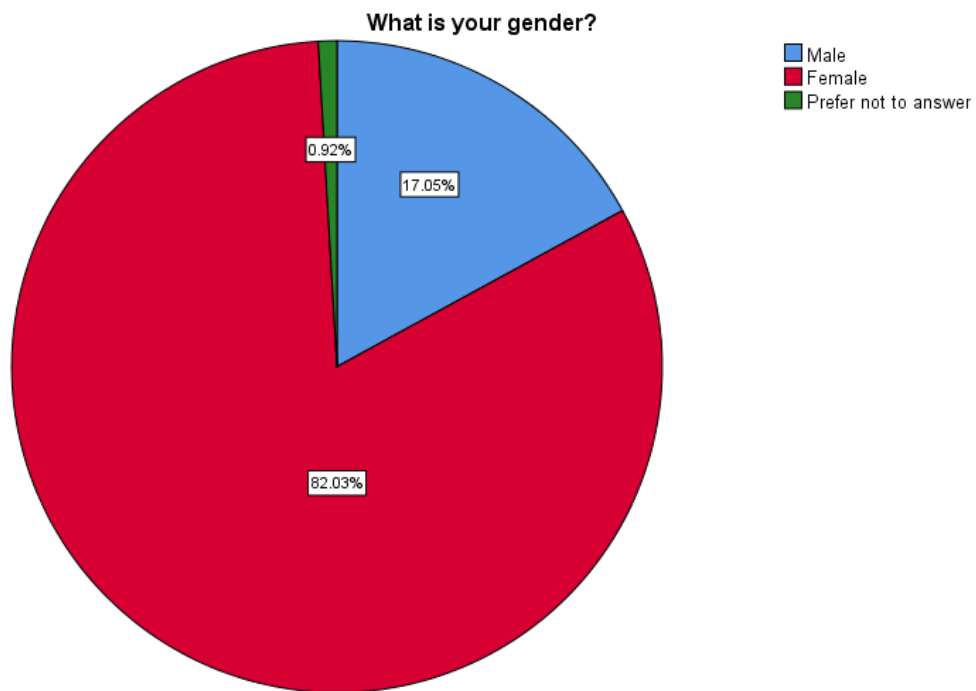
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APPENDIX A – BREAKDOWN OF DEMOGRAPHICS.

4.3.2 Gender

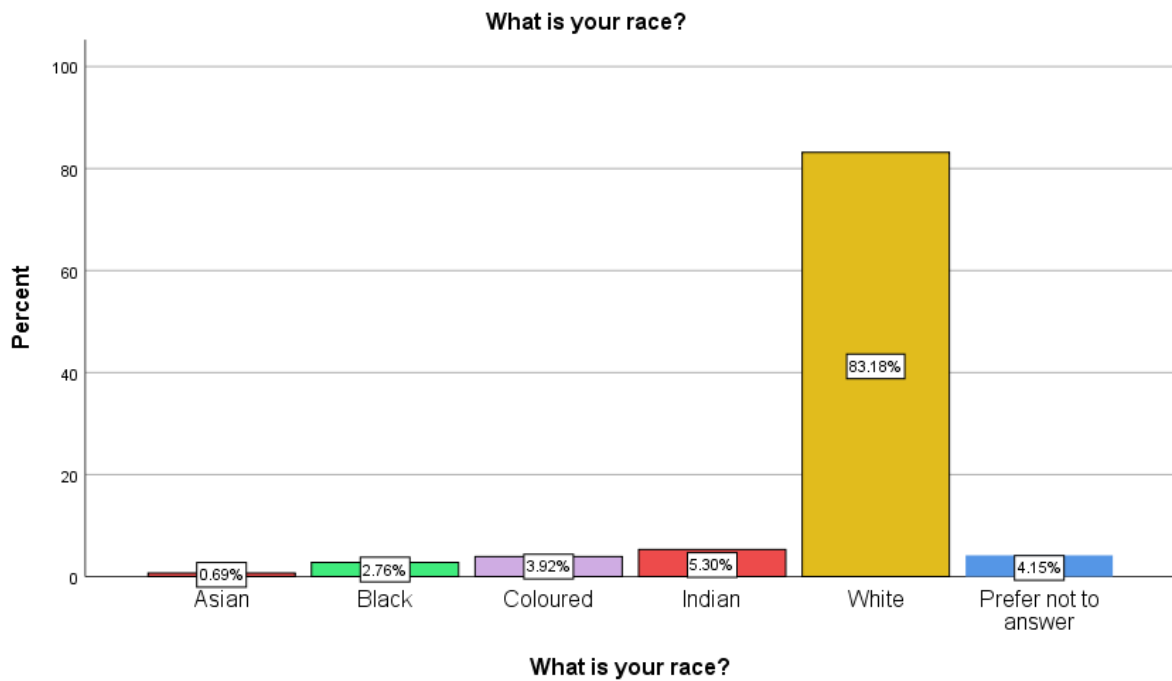


What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	74	17.1	17.1	17.1
	Female	356	82.0	82.0	99.1
	Prefer not to answer	4	.9	.9	100.0
Total		434	100.0	100.0	

According to Figure 4.2.2, 74 of the study's participants were male, resulting in 17%. The majority of the respondents were female which constituted a total percentage of 82% and the minority of respondents preferred not to disclose their gender which resulted in the remaining 0.9% of the study.

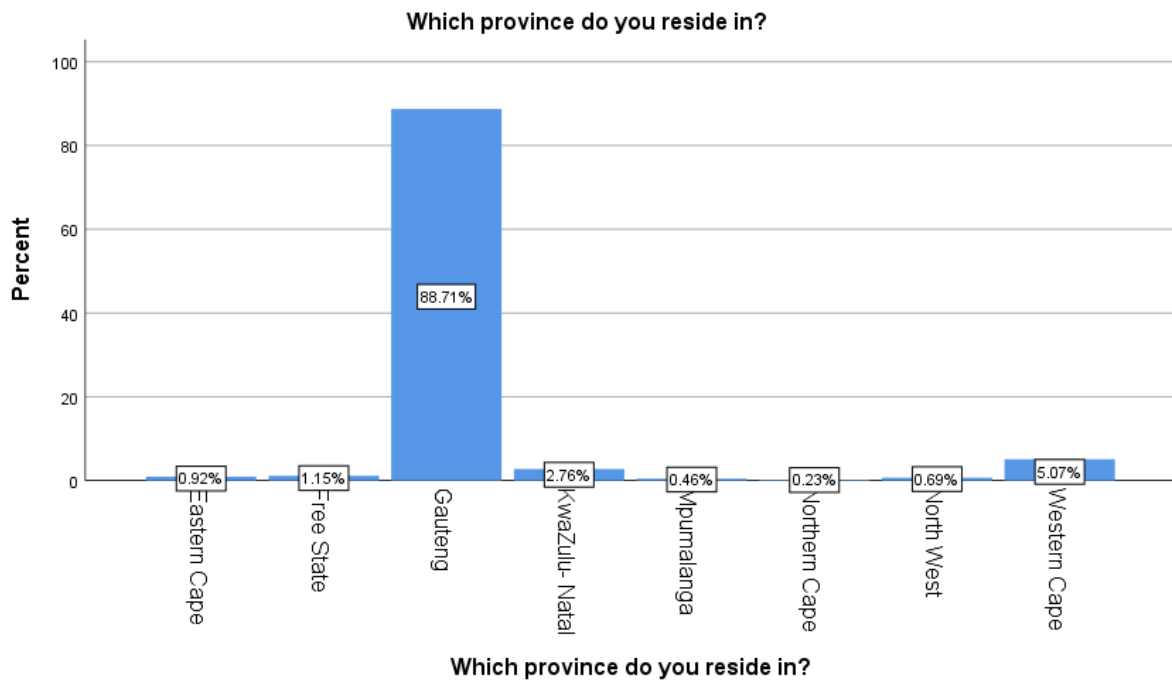
4.3.3 Race



		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Asian	3	.7	.7	.7
	Black	12	2.8	2.8	3.5
	Coloured	17	3.9	3.9	7.4
	Indian	23	5.3	5.3	12.7
	White	361	83.2	83.2	95.9
	Prefer not to answer	18	4.1	4.1	100.0
	Total	434	100.0	100.0	

Figure 4.3.3, illustrates the racial divide for this particular study. The majority of respondents were White, with a total of 361 out of 434 respondents. The Indian race was the second highest with a total of 5% response. 4% of the study participants preferred not to disclose their ethnicity. 3.9% of the study's participants were Coloured, 2.8% were Black, and the remaining 0.7% were Asian.

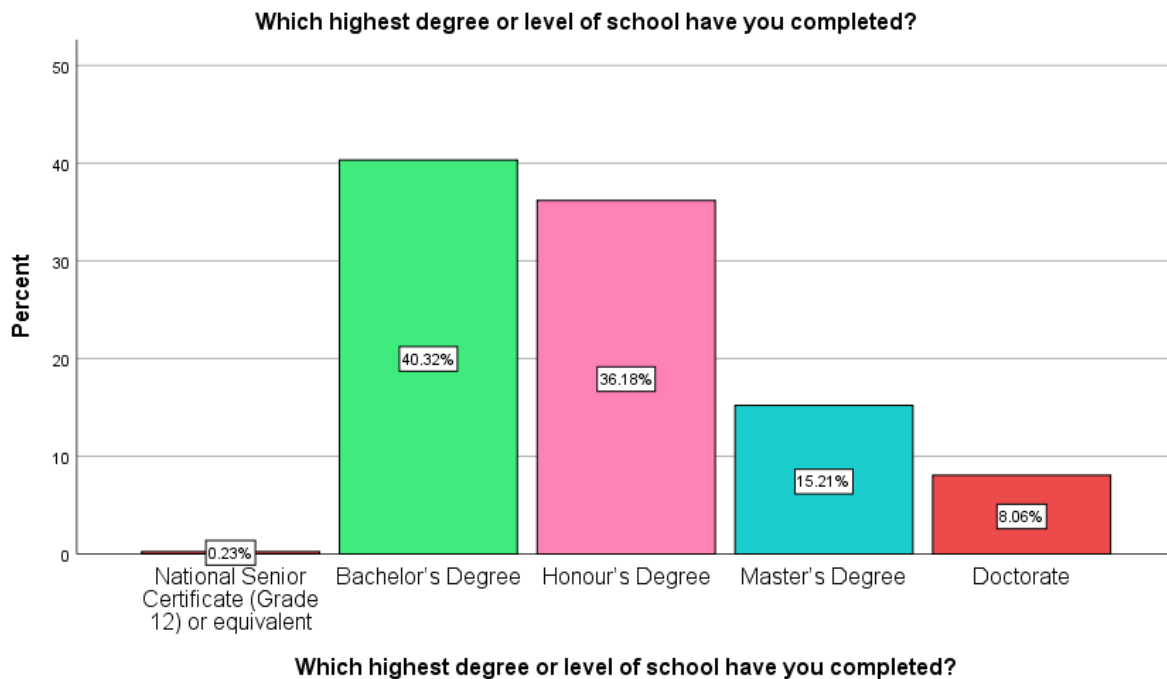
4.3.4 Province of residence



		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Eastern Cape	4	.9	.9	.9
	Free State	5	1.2	1.2	2.1
	Gauteng	385	88.7	88.7	90.8
	KwaZulu- Natal	12	2.8	2.8	93.5
	Mpumalanga	2	.5	.5	94.0
	Northern Cape	1	.2	.2	94.2
	North West	3	.7	.7	94.9
	Western Cape	22	5.1	5.1	100.0
	Total	434	100.0	100.0	

The study conducted was based in South Africa and only allowed South African citizens to take part in the study hence; the provinces listed are only within the country of South Africa. As illustrated by Figure 4.3.4 most of the respondents resided in Gauteng, with 385 respondents. Western Cape had the second-highest respondents totalling 22. 12 respondents lived in KwaZulu-Natal. 5 respondents lived in the Free State. 4 respondents lived in the Eastern Cape. 3 respondents lived in North West. 2 respondents lived in Mpumalanga, and the remaining 1 respondent lived in the Northern Cape.

4.3.5 Highest qualification

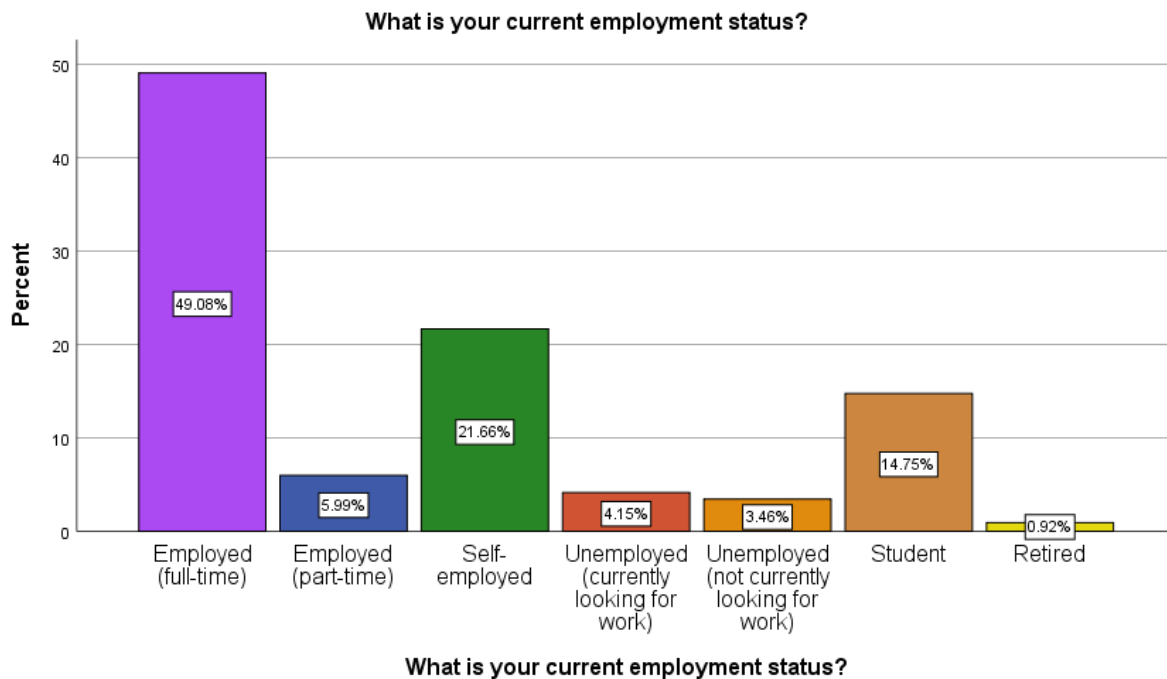


Which highest degree or level of school have you completed?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	National Senior Certificate (Grade 12) or equivalent	1	.2	.2	.2
	Bachelor's Degree	175	40.3	40.3	40.6
	Honour's Degree	157	36.2	36.2	76.7
	Master's Degree	66	15.2	15.2	91.9
	Doctorate	35	8.1	8.1	100.0
	Total	434	100.0	100.0	

Figure 4.3.5, illustrates the highest qualification level obtained by the respondents. Each respondent in the study was asked to indicate their highest degree or completed level of school. 0.2% of the respondents only completed their National Senior Certificate (Grade 12) or equivalent. 40% which was the majority of the respondents all held a Bachelor's degree qualification. 36% of the respondents were Honour's graduates. 15% of the respondents held a Master's degree, leaving behind the remaining 8% of the Doctorate degree respondents.

4.3.6 Current employment status

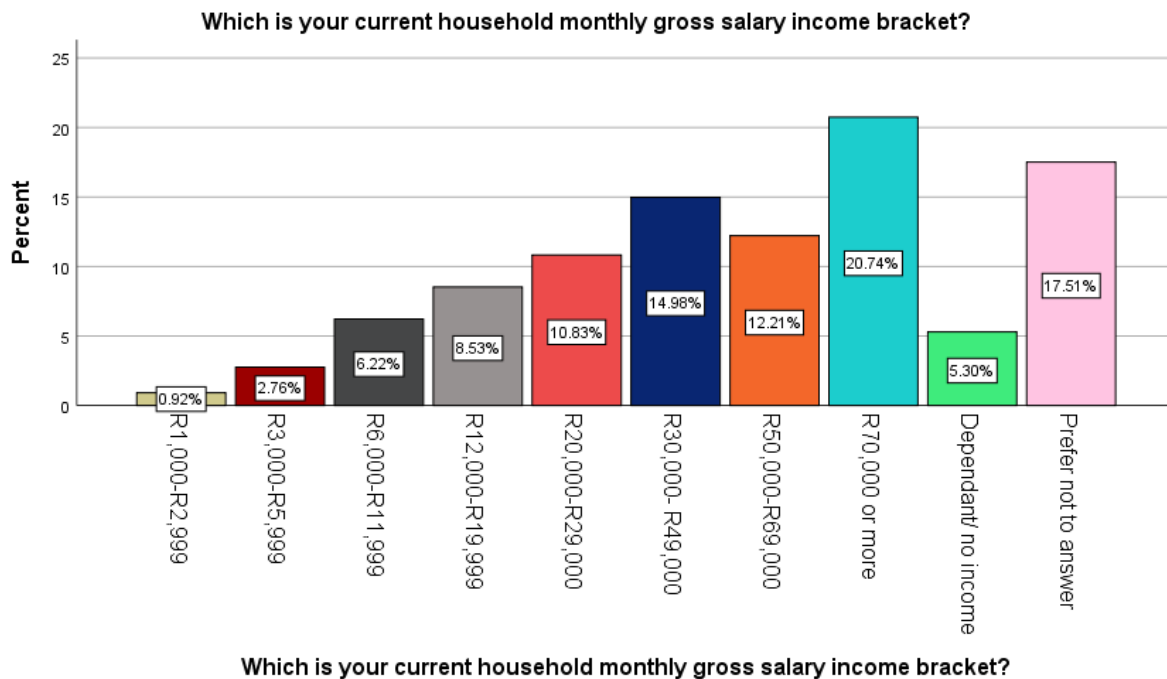


What is your current employment status?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed (full-time)	213	49.1	49.1	49.1
	Employed (part-time)	26	6.0	6.0	55.1
	Self-employed	94	21.7	21.7	76.7
	Unemployed (currently looking for work)	18	4.1	4.1	80.9
	Unemployed (not currently looking for work)	15	3.5	3.5	84.3
	Student	64	14.7	14.7	99.1
	Retired	4	.9	.9	100.0
	Total	434	100.0	100.0	

Figure 4.3.6 illustrates that most of the respondents were employed full time totalling 49% of the respondents. 6% of the respondents were used part time, and 21% were self-employed. 4% of the respondents were unemployed but currently looking for work whilst 3% were unemployed and not currently looking for work. The remaining 14% of the respondents were students, leaving behind the 0.9% who were retired.

4.3.7 Current household monthly gross income



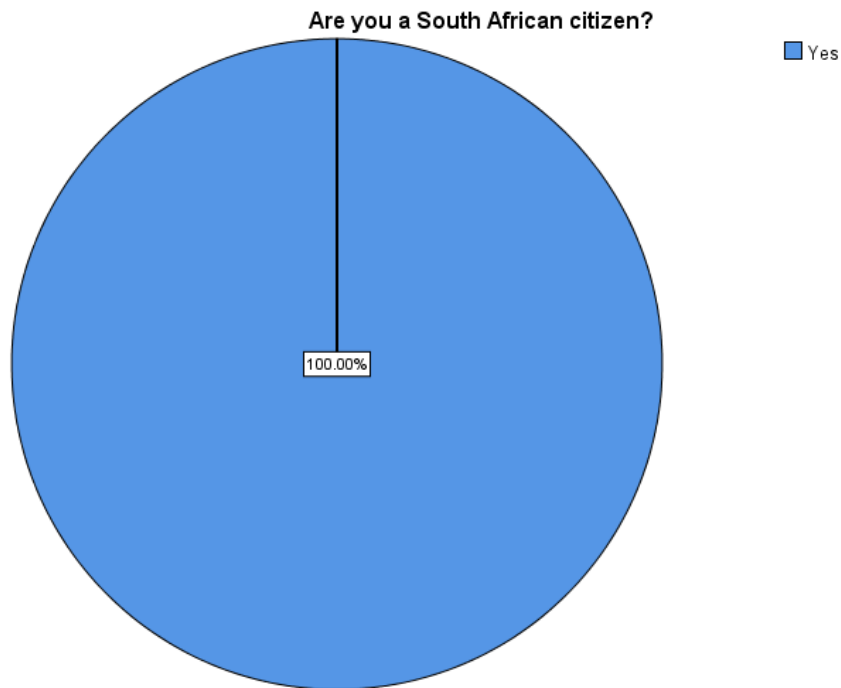
Which is your current household monthly gross salary income bracket?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	R1,000-R2,999	4	.9	.9	.9
	R3,000-R5,999	12	2.8	2.8	3.7
	R6,000-R11,999	27	6.2	6.2	9.9
	R12,000-R19,999	37	8.5	8.5	18.4
	R20,000-R29,000	47	10.8	10.8	29.3
	R30,000- R49,000	65	15.0	15.0	44.2
	R50,000-R69,000	53	12.2	12.2	56.5
	R70,000 or more	90	20.7	20.7	77.2
	Dependant/ no income	23	5.3	5.3	82.5
	Prefer not to answer	76	17.5	17.5	100.0
Total	434	100.0	100.0		

Figure 4.3.7 illustrates the current household monthly gross salary income bracket of the respondents. 0.9% of the respondents had a gross salary income between R1 000 and R2 999. 2.8% had a gross salary between R3 000 and R5 999. 6.2% of the respondents had a gross salary between R6 000 and R11 999. 8.5% of the respondents had a gross salary income between R12 000 and R19 999. 10.8% of the respondents had a gross salary between R20 000 and R29 000. 15% of the respondents had a gross salary between R30 000 and

R49 000. 12.2% of the respondents had a gross salary between R50 000 and R69 000. Majority of the respondents earned a gross salary of R70 000 or more. 5.3% of the respondents were dependants and therefore, did not make an income and the remaining 17.5% of the respondents preferred not to answer.

4.3.8 Citizenship status

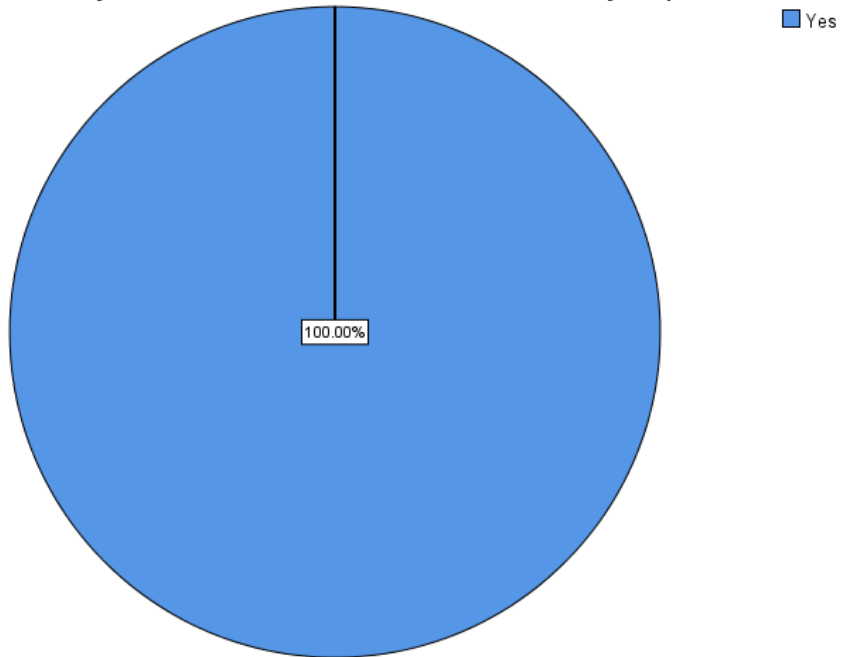


		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	434	100.0	100.0	100.0

This study was researched and conducted in South Africa, using a South African brand to measure the formulated research questions. Therefore it was vital for all respondents to be South African to achieve valid and congruent results. As illustrated in Figure 4.2.8, all respondents are South African citizens as the sample of the study represents South African social commerce shoppers.

4.3.9 Status of having an active social media account

Do you have an active social media account which you spend time on weekly?

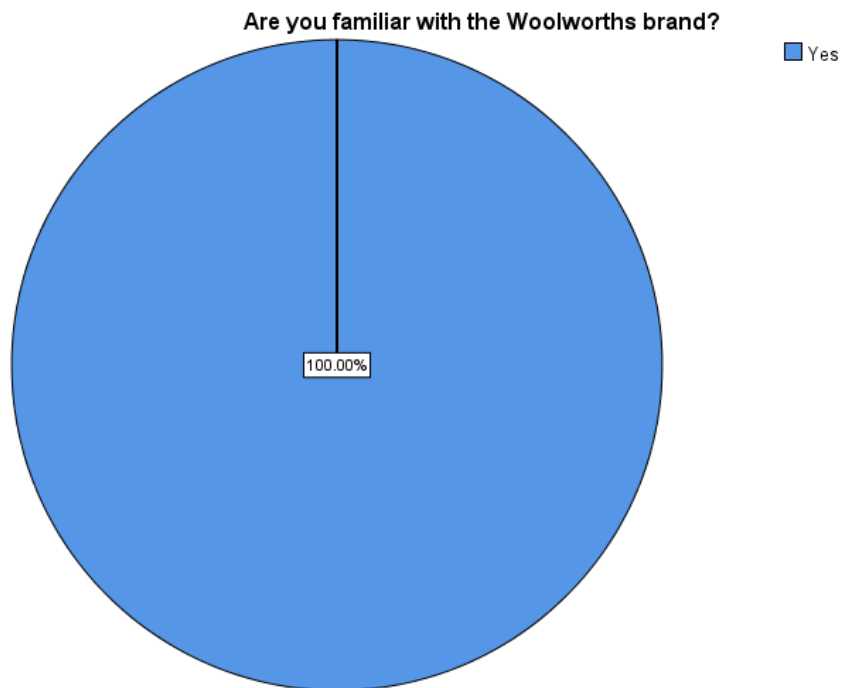


Do you have an active social media account which you spend time on weekly?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	434	100.0	100.0	100.0

The study's foundation is focused on social commerce and where the research question was derived. Therefore each and every respondent in the study needed to have an active social media account for which time was spent on every week. As illustrated in Figure 4.3.9, all respondents who formed part of the sample in this study owned a social media account and spent time on their social media weekly.

4.3.10 Familiarity with the Woolworths brand

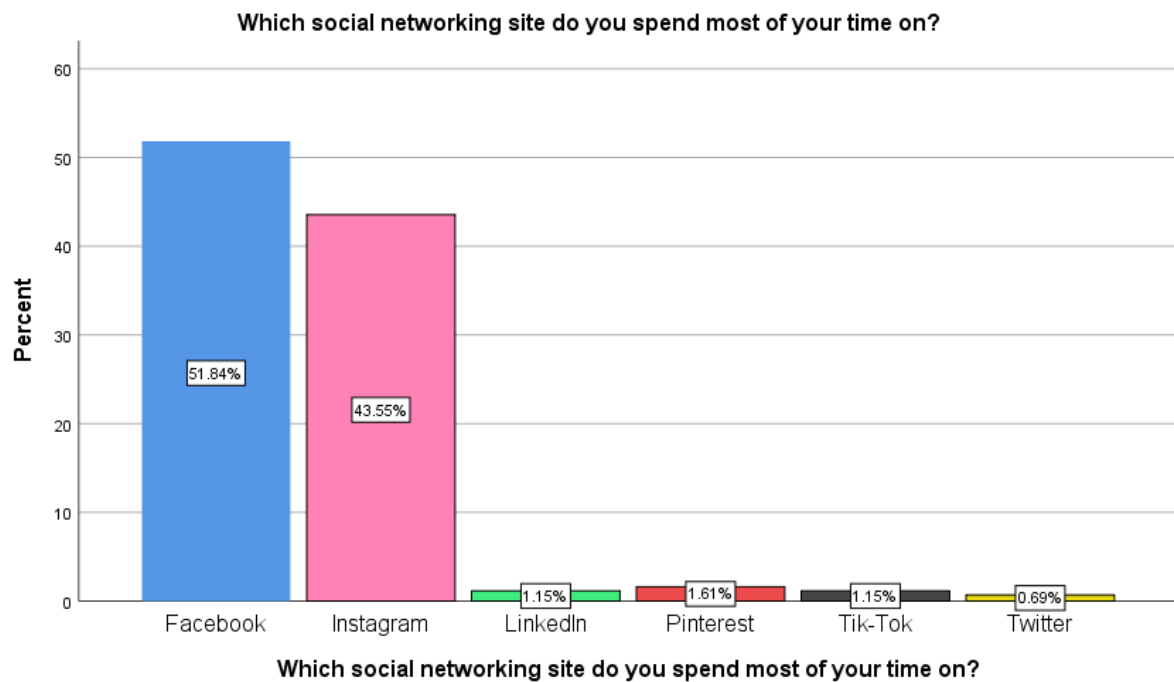


Are you familiar with the Woolworths brand?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	434	100.0	100.0	100.0

As illustrated in Figure 4.3.10 all respondents who formed part of the study sample were familiar with the Woolworths brand. Questions relating to the South African brand were asked in the questionnaire and tested for all the different constructs pertaining to the study.

4.3.11 Favourite social networking site frequently used



Which social networking site do you spend most of your time on?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Facebook	225	51.8	51.8	51.8
	Instagram	189	43.5	43.5	95.4
	LinkedIn	5	1.2	1.2	96.5
	Pinterest	7	1.6	1.6	98.2
	Tik-Tok	5	1.2	1.2	99.3
	Twitter	3	.7	.7	100.0
	Total	434	100.0	100.0	

As illustrated in Figure 4.3.11, more than half of the respondents were active Facebook users with a total of 51.8% however, the second most used social networking site by respondents was Instagram totalling 43.5%. 1.6% of the respondents were primarily active on Pinterest. 1.2% of respondents spent most of their time on LinkedIn, and another 1.2% of respondents spent their time on Tik-Tok. Twitter was the most minor social networking site spent time as the respondents totalled 0.7% from the entire sample.

APPENDIX B

Modelling the antecedents that influence brand innovativeness, age and personal innovativeness in social commerce shopping behaviour – FINAL SURVEY

Start of Block: Default Question Block

Dear Participant,

My name is Vanessa De Freitas and I am a Masters student in the Marketing department at the University of the Cape Town. I am conducting research on the influence of personal innovativeness and brand innovativeness on customer-based brand equity in a social commerce context. This research has been approved by the Commerce Faculty Ethics in Research Committee. I am inviting you to take part in my survey as you are the best suited candidate for me to perform my investigation because you are between the ages of 18 and 55. Your response is important and there are no right or wrong answers. This survey is anonymous. Anonymity is guaranteed by not needing to enter your name on the questionnaire. Your participation is completely voluntary and involves no risk, penalty, or loss of benefits whether or not you participate. You may withdraw from the survey at any stage. The entire survey should take between 5 to 10 minutes to complete. Thank you for considering participating. Should you have any questions, or should you wish to obtain a copy of the results of the survey, please contact me on dfrvan001@myuct.ac.za.

Thank you for your time!

End of Block: Default Question Block

Start of Block: Block 2

Q1 Are you a South African citizen?

Yes (1)

No (2)

Skip To: End of Survey If Are you a South African citizen? = No

Q2 Do you have an active social media account which you spend time on weekly?

Yes (1)

No (2)

Skip To: End of Survey If Do you have an active social media account which you spend time on weekly? = No

Q3 Are you familiar with the Woolworths brand?

Yes (1)

No (2)

Skip To: End of Survey If Are you familiar with the Woolworths brand? = No

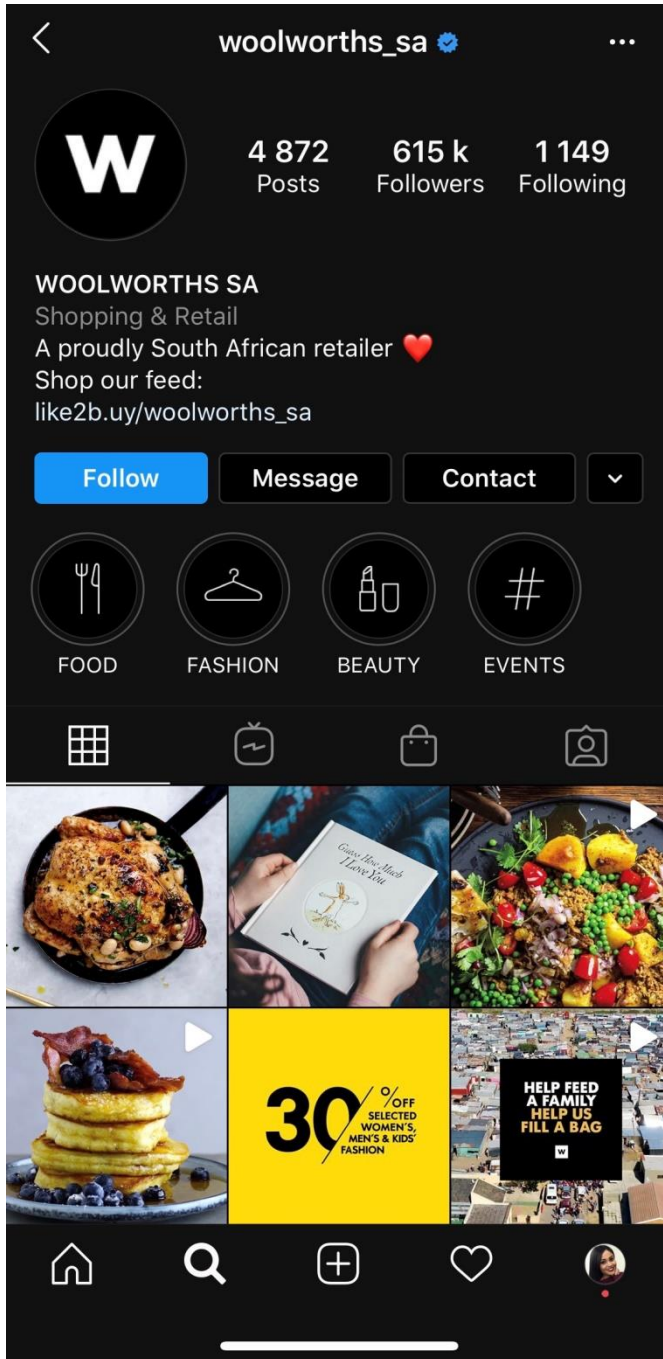
Q4 Please note: If you have answered 'No' to any one of these questions, you are not required to continue the questionnaire. Thank you for your time.

Q5 Which social networking site do you spend most of your time on?

- Facebook (1)
- Instagram (2)
- LinkedIn (3)
- Pinterest (4)
- Tik-Tok (5)
- Snapchat (6)
- Twitter (7)

Q6 In these fast, dynamic and changing times traditional retailers are moving towards more innovative ways to sell to consumers. Woolworths for example, has a shopping option on their Instagram account (see picture below). We call this social commerce as the brand is advertising its products through social media and provide you with a shopping tab where if a product is clicked on, you are able to engage with it and potentially purchase it. The questions that follow will evaluate Customer-Based Brand Equity (CBBE) towards Woolworths as a social commerce firm.

Q7



Q8 Please click on the response which you believe to be most reflective of your opinion to the statement.

	1=Strongly disagree (1)	2=Disagree (2)	3 =Neutral (3)	4=Agree (4)	5= Strongly agree (5)
Woolworths is more creative than its rivals. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woolworths is a pioneer in its category through its innovations. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woolworths is the first thing to come to mind when the subject is innovation. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woolworths is a pioneer in its category. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 Please click on the response which you believe to be most reflective of your opinion to the statement.

	1=Strongly disagree (1)	2=Disagree (2)	3 =Neutral (3)	4=Agree (4)	5=Strongly agree (5)
If I heard about a new technology, I would look for ways to experiment with it. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Among my peers, I am usually the first to try out new information technologies. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In general, I am not hesitant to try out new information technologies. (3)

I like to experiment with new information technologies. (4)

Q10 Please click on the response which you believe to be most reflective of your opinion to the statement.

	1=Strongly disagree (1)	2=Disagree (2)	3 =Neutral (3)	4=Agree (4)	5=Strongly agree (5)
Woolworths offers me a product with a constant quality level. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woolworths helps me to solve any problem I could have with their product. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woolworths offers me new products I may need. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woolworths is interested in my satisfaction. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woolworths values me as a consumer of their products. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woolworths offers me recommendations and advice on how to make the most out of my	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

product. (6)

Q11 Please click on the response which you believe to be most reflective of your opinion to the statement.

	1=Strongly disagree (1)	2=Disagree (2)	3 =Neutral (3)	4=Agree (4)	5=Strongly agree (5)
The Woolworths brand is reputable. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Woolworths brand makes honest claims. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Woolworths brand is trustworthy. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12 Please click on the response which you believe to be most reflective of your opinion to the statement.

	1=Strongly disagree (1)	2=Disagree (2)	3 =Neutral (3)	4=Agree (4)	5=Strongly agree (5)
Woolworths provides prompt services at the promised time. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woolworths handles customer complaints effectively. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woolworths gives individual customer attention. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13 Please click on the response which you believe to be most reflective of your opinion to the statement.

	1=Strongly disagree (1)	2=Disagree (2)	3 =Neutral (3)	4=Agree (4)	5=Strongly agree (5)
Woolworths delivers what it promises. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woolworths' product claims are believable. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You can believe what the ads say about Woolworths. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My experiences with Woolworths do not make me wary of their claims. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woolworths has a name you can trust. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Woolworths is at the forefront of using technology to deliver a better product. (6)

Woolworths reminds me of someone who is competent and knows what he/she is doing. (7)

Q14 Please click on the response which you believe to be most reflective of your opinion to the statement.

	1=Strongly disagree (1)	2=Disagree (2)	3 =Neutral (3)	4=Agree (4)	5=Strongly agree (5)
I regularly visit Woolworths. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I intend to visit Woolworths again. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually use Woolworths as the first choice compared to other ones. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with Woolworths. (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend Woolworths to others. (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not switch from Woolworths to another brand. (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Block 2

Start of Block: Block 3

Q15 Please answer the next questions about yourself for statistical purposes.

Q16 What is your age group?

- 18-24 (1)
 - 25-39 (2)
 - 40-55 (3)
-

Q17 What is your exact age?

Q18 What is your gender?

- Male (1)
- Female (2)
- Other (3)
- Prefer not to answer (4)

Q19 What is your race?

- Asian (1)
- Black (2)
- Coloured (3)
- Indian (4)
- White (5)
- Prefer not to answer (6)

Q20 Which province do you reside in?

- Eastern Cape (1)
- Free State (2)
- Gauteng (3)
- KwaZulu- Natal (4)

Limpopo (5)

Mpumalanga (6)

Northern Cape (7)

North West (8)

Western Cape (9)

Q21 Which highest degree or level of school have you completed?

National Senior Certificate (Grade 12) or equivalent (2)

Bachelor's Degree (3)

Honour's Degree (4)

Master's Degree (5)

Doctorate (6)

Q22 What is your current employment status?

- Employed (full-time) (1)
 - Employed (part-time) (2)
 - Self-employed (3)
 - Unemployed (currently looking for work) (4)
 - Unemployed (not currently looking for work) (5)
 - Student (6)
 - Retired (7)
 - Unable to work (8)
-

Q23 Which is your current household monthly gross salary income bracket?

- R1,000-R2,999 (1)
 - R3,000-R5,999 (2)
 - R6,000-R11,999 (3)
 - R12,000-R19,999 (4)
 - R20,000-R29,000 (5)
 - R30,000- R49,000 (6)
 - R50,000-R69,000 (7)
 - R70,000 or more (8)
 - Dependant/ no income (9)
 - Prefer not to answer (10)
-

Q24 Thank you for your time and please feel free to contact the researcher should you have any further questions.

End of Block: Block 3

APPENDIX B

Project title:: MODELLING THE ANTECEDENTS THAT INFLUENCE BRAND INNOVATIVENESS , AGE AND PERSONAL INNOVATIVENESS IN SOCIAL COMMERCE SHOPPING BEHAVIOUR.

Author: Vanessa Fernandes De Freitas

Reviewer: Signe Rousseau

Submitted: 2/18/2020

Review Completed?: True

Reviewer Score: 3

Overall Submission Score: 3

SUBMISSION:

A copy of the research proposal

Questionnaire to be used in the research (if needed)

Application signed by relevant authorities (e.g. supervisor)

SUPERVISOR SIGNATURE:

Yes

Is the application complete?:

Yes

Comments on the Submission:

All required documents submitted.

Explanation Ethics Issues:

Adequately covered in the proposal

Comments on Explanation of Ethics Issues:

Adequately considered and addressed in the proposal.

Risk:

Low risk data unlikely to cause harm

Comment on Risk:

Anonymous questionnaire with non-sensitive questions unlikely to cause harm.

Data Security:

Data stored securely and disposed of after use

Comments on the use of data:

Anonymised data to be cleaned, and original questionnaires to be stored securely (password protected) - only supervisor access,

Consent:

Consent is not required

Comments Informed Consent:

No active consent required for anonymous questionnaire (and sufficient details provided on the cover letter for participants to proceed with informed consent, and knowledge of the option to withdraw at any time).

Consent Organisation:

Consent is not required

International Research:

No

Further Comments:

Application in order for ethics approval.

RECOMMENDATION:

Approved
(Score: 3)